

CANADA FOUNDATION FOR INNOVATION

# Corporate plan 2021–22

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# THE ROLE OF THE CANADA FOUNDATION FOR INNOVATION

The Canada Foundation for Innovation (CFI) is a non-profit corporation created by the Government of Canada through the 1997 Budget Implementation Act. The CFI's mandate is to benefit Canadians by strengthening the capability and capacity of Canadian universities, colleges, research hospitals and non-profit research institutions to carry out world-class research and develop cutting-edge technologies.

The CFI invests in the infrastructure that Canada's best researchers require to conduct leading-edge research. The CFI generally funds up to 40 percent of the cost of any given infrastructure project. Institutions, in partnership with provincial and other governments, the private sector and other public and non-profit organizations, secure the remaining 60 percent of the required funding.

Canada's prosperity depends on the ability to generate knowledge and ideas that result in new products and services, create wealth, enhance social foundations, sustain the environment and ultimately improve the health and quality of life of all Canadians. By supporting the country's capacity for world-class research, the CFI plays a vital role in producing social, economic, environmental and health benefits for Canadians.

The Government of Canada has charged the CFI to pursue the following objectives:

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

Through its various funding activities, the Government of Canada expects the CFI to enhance the capacity of universities, colleges, research hospitals and non-profit research institutions to:

- Attract and retain the world's top research talent;
- Train the next generation of researchers;
- Enable researchers to undertake world-class research and technology developments that lead to social, economic and environmental benefits for Canada; and,
- Support private-sector innovation and commercialization.

## Funding and contribution agreements

The CFI currently operates under two funding agreements and three 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.

- The 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.
- 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. The CFI has committed all the funding available under this agreement.
- 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.
- In September 2015, the CFI signed a contribution agreement with the Government of Canada for \$1.33 billion. The CFI is now completing the funding competitions according to this contribution agreement.
- In January 2019, the CFI signed its most recent contribution agreement, one that represents a fundamental change in the way the Government of Canada will invest in research infrastructure. Following the announcement in the 2018 federal budget, the CFI will transition to permanent funding. Through the 2019 Contribution Agreement and two subsequent amendments signed in 2020–21, the Government of Canada provided the CFI with \$2 billion over eight years commencing in 2018–19, including permanent funding at an ongoing level of up to \$462 million per year starting in 2023–24. The 2019 Contribution Agreement covers the first eight years of this transition period. The CFI is currently delivering funding competitions according to this contribution agreement.

Please see [Appendix 1](#) for details on how we are implementing the financial aspects of these agreements.

## Strategic directions

The CFI prides itself on listening to Canada's research community and responding to its evolving needs. The CFI will continue to engage regularly with a broad range of stakeholders on the most pressing challenges and promising opportunities for Canadian research across a wide range of sectors, disciplines, agencies and research institutions.

Based on previous interactions and consultations with the research community, the CFI is focusing attention on four major trends that will help inform the way it provides research infrastructure support, as outlined in the organization's [Strategic Roadmap 2018–23](#).

The major trends identified in the Strategic Roadmap are convergence, collaboration, international engagement, and diversity. These trends represent the overall context in which the CFI established its specific strategic directions for 2018–23. The strategic directions identified embody the CFI's mandate, while also capturing the changing role of the CFI in research infrastructure funding across Canada. The CFI's four strategic directions are to:

- Support the full range of research infrastructures Canada's research institutions require to achieve excellence;
- Spark innovation by strengthening linkages and encouraging collaboration among research institutions, the private sector and not-for-profit organizations;
- Support global research to find solutions to Canada's and the world's most pressing challenges; and,
- Strengthen Canada's global competitive advantage by meeting the infrastructure needs of researchers throughout their careers.

## The CFI suite of funds

**Innovation Fund:** Provides funding for world-class, cutting-edge research infrastructure across all disciplines and areas of research.

**John R. Evans Leaders Fund:** Provides ongoing and consistent support for institutions in securing the infrastructure necessary to attract and retain top research talent.

**Major Science Initiatives Fund:** Provides unique, large-scale national research facilities with the operating and maintenance support necessary to produce excellent research and technology development.

**College-Industry Innovation Fund:** Supports applied research capacity in Canada's colleges and polytechnics, with the goal of assisting business innovation.

**Exceptional Opportunities Fund:** Gives institutions the opportunity to seek funding for exceptional and time-sensitive initiatives that would otherwise be missed within regular competition cycles.

**Infrastructure Operating Fund:** Offers a 30 percent supplement to CFI capital awards to cover a portion of the operating and maintenance costs of infrastructures to help ensure their optimal use.

# SHORT- AND MEDIUM-TERM OUTPUTS AND OUTCOMES FROM 2020–21

## Innovation Fund

Decisions for the 2020 Innovation Fund were made by the CFI's Board of Directors at its meeting on November 17, 2020.

The CFI Board of Directors approved an investment of \$393.7 million in 102 research infrastructure projects involving 29 CFI-eligible administrative institutions and 48 collaborating institutions based on recommendations of the Special Multidisciplinary Assessment Committee. An additional contribution of \$6.3 million was approved for 22 multi-institutional projects involving three or more collaborating CFI-eligible institutions to cover incremental administrative costs associated with the management and governance of those projects. This brought the investment of the 2020 Innovation Fund to \$400 million.

The Board also approved an investment of \$118.1 million under the Infrastructure Operating Fund to cover a portion of the operating and maintenance costs associated with the awarded projects.

As a result of the 40:60 funding formula, the combined contributions of institutions, their partners and the CFI will represent an overall investment of approximately \$1.04 billion in research infrastructure across the country.

The merit-review process for the 2020 Innovation Fund competition consisted of three stages, each building on the results of the previous one. The first stage was a review by 91 Expert Committees. This was followed by a review by 13 Multidisciplinary Assessment Committees. In the third stage, a Special Multidisciplinary Assessment Committee made the final selection of proposals recommended to the Board for funding.

Although the merit-review process started in March 2020 and took place during the COVID-19 pandemic, the CFI maintained the same process and timelines outlined in the call for proposal. The only changes to the process were transitioning all committee meetings from in-person to videoconferences and selecting only proposals whose ratings were above a threshold of excellence for consideration at the Multidisciplinary Assessment Committee review stage.

## John R. Evans Leaders Fund

This fund offers institutions the opportunity to create competitive research support packages that include infrastructure and a portion of the operating and maintenance costs, coupled with direct research costs from partner organizations. Individual and small teams of researchers conduct research across a wide variety of disciplines and areas of inquiry. The CFI caps these awards at \$800,000, which, along with matching funds of 60 percent, allows institutions to propose projects with a capital cost of up to \$2 million.

The CFI has allocated \$210 million to this fund for the period of April 2020 to March 2023.

As usual, the CFI has provided each eligible large institution a specific allocation of this funding, which they can draw down for infrastructure projects three times per year, to ensure a rapid response to proposals and an equitable distribution of funds. There is a separate allocation that is pooled and shared among small institutions.

The CFI also allocated an additional \$49.9 million to support the research infrastructure needs of 285 Canada Research Chairs that were created in the 2018 federal budget.

As of November 2020, \$10.7 million has been awarded for projects submitted before the end of 2019 and \$35.8 million for projects submitted in 2020. This corresponds to 18 percent of the total available funding for the three-year funding cycle from 2020 to 2023.

## Major Science Initiatives Fund

Through the MSI Fund, the CFI aims to:

- Secure and strengthen state-of-the-art national research facilities that enable Canadian researchers to undertake world-class research and technology development that leads to social, health, economic or environmental benefits to Canadians;
- Enable funded facilities to operate at an optimal level and to have their scientific and technical capabilities fully exploited; and,
- Promote the adoption of best practices in governance and management, including long-term strategic and operational planning in keeping with the scale and complexity of the facility.

Due to COVID-19, the annual performance reporting deadline for the MSI-funded facilities was extended from June 15, 2020 to September 15, 2020. CFI staff have assessed the performance of the 16 facilities, noting that the impact of the COVID-19 pandemic was felt at the end of the 2019–20 reporting period, resulting in reduction of activities at some facilities. Nevertheless, all facilities demonstrated satisfactory progress for the 2019–20 fiscal year.

The pandemic had an impact on the ability of staff and users to safely access research facilities, which also resulted in reduced user demand. Training and outreach plans for 2020–21 have also been reduced and some planned facility expansions are delayed. Many MSI-funded facilities, however, have been able to successfully transition their staff to working remotely and have developed tools to facilitate online activities. For example, the Canadian Cancer Trials Group (CCTG) is developing an online platform for patients, researchers and staff to monitor the progression of clinical trials. The Canadian Research Data Centre Network (CRDCN) is exploring options for remote access to Statistics Canada data. The Canadian Centre for Electron Microscopy (CCEM) is developing online training modules.

The COVID-19 pandemic has also been an opportunity for some facilities to demonstrate leadership in responding to the challenge. For example, Canada's Genomics Enterprise (CGen) has been tasked with sequencing the genomes of COVID-19 patients to provide insights into biomarkers that may help predict risk of illness. The Vaccine and Infectious Disease Organization – International Vaccine Centre (VIDO–InterVac) has made a significant contribution to the Canadian research response to COVID-19 and was the first to isolate, grow and develop an animal model of the disease in Canada. Additionally, both VIDO–InterVac and SNOLAB have supported medical personnel in their communities through the production and sterilization of personal protective equipment, such as N95 masks and ventilators.

## College-Industry Innovation Fund

There are two competition streams under the CIIF. Stream 1 provides funding for infrastructure needed to conduct applied research and technology development activities that respond to well-identified needs of the private sector. Stream 2 allows colleges to apply for a comprehensive funding package for both research costs and research infrastructure in support of applied research and technology development projects described in their College and Community Innovation Program – Build Innovation Enhancement (CCI-Build IE) Grant applications submitted to the Natural Sciences and Engineering Research Council (NSERC). The CFI expects proposals submitted to both streams to achieve the following objectives:

- Create and enhance college-industry partnerships leading to business innovation using industry-relevant, state-of-the-art research infrastructure;
- 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; and,
- Generate socioeconomic benefits in the region and nationally including the development of highly skilled personnel.

Institutions apply directly to the CFI for Stream 1 awards. For Stream 2 awards, institutions submit applications jointly to the CFI and to NSERC's College and Community Innovation Program.

In fall 2020, the programs team facilitated the merit-review process of the CIIF–Stream 1. The process comprises two stages: assessment by Expert Committees, followed by a review by a Multidisciplinary Assessment Committee. The CFI Board of Directors will make decisions at their March 2021 meeting for the 2020 round of funding.

The CFI also participated in the 18th College and Community Innovation Program (CCI) – Build Innovation Enhancement Grants competition managed by NSERC. The CCI review committee will meet in February 2021 to review and recommend joint CCI and CIIF proposals for funding. Projects recommended for funding will be presented for approval to the Board in March 2021.

## Infrastructure Operating Fund

The CFI contributes to the operating and maintenance costs of research infrastructure through the Infrastructure Operating Fund. The funds are committed at a rate of 30 percent of the CFI award under the John R. Evans Leaders Fund, the Innovation Fund and the College-Industry Innovation Fund.

## Exceptional Opportunities Fund – COVID-19 for universities and colleges

In response to the pandemic, the CFI launched two separate Exceptional Opportunities Fund (EOF) – COVID-19 competitions, one for universities and one for colleges.

For the EOF – COVID-19 competitions, the CFI received special authority from Treasury Board of Canada Secretariat to cover up to 100 percent of the eligible costs of a project, rather than the usual 40:60 funding model. The competition was open for proposals from all disciplines that could demonstrate a promise of direct and immediate impact on current and pressing research issues related to COVID-19.

At its special meeting held on October 28, 2020, the CFI Board approved 79 projects under the Exceptional Opportunities Fund –COVID-19 for universities and colleges for a total of \$27.6 million.

## Managing the financial aspects of the CFI's activities

All of the financial aspects of the organization's activities are under the responsibility of the CFI's finance team. The finance team is responsible for the general accounting functions of the CFI, including bookkeeping, payments, budgeting and cash-flow management, award finalization processes and payments to institutions that receive awards, and for ensuring that institutions have appropriate processes and controls in place for the management of CFI funds and that institutions spend funds appropriately.

**The CFI investment portfolio:** Following standard practice, the senior management team and the Board of Directors Investment Committee reviewed the CFI's investment strategy and investment policy in early fall 2020. Management presented the results of this review and recommendations to the Board of Directors in late fall 2020.

**Institutional monitoring visits:** The purpose of monitoring visits is to ensure that institutions receiving funding have proper practices and processes in place to manage awards and to share good practices from the various institutions visited. Over the course of fiscal year 2020–21, the finance team performed one monitoring visit, as planned.

**Contribution audits:** The finance team coordinated nine contribution audits of CFI-funded projects during 2020–21. The audits included a mix of low- to high-risk projects, including those where the CFI investment is \$10 million or more.

**Financial reports:** In addition to its other activities, the finance team reviewed more than 950 financial reports in 2020–21. These included both interim and final financial reports, and annual reports on expenditures claimed under the Infrastructure Operating Fund.

Despite the pandemic, the corporate finance group maintained its regular activities and was able to make all payments to institutions and suppliers and to proceed with the award finalization process.

## Communicating the value of CFI funding for Canada

As the pandemic took hold in the spring of 2020, the CFI shifted all of its communications efforts to online activities. Communications focused on researchers from different disciplines across the country who were tackling various challenges associated with the pandemic; from developing a vaccine and manufacturing personal protective equipment and ventilators, to the mental health and educational challenges arising from remote working and lockdown orders. The communications team launched a YouTube campaign, called #GoResearch, in which researchers from different disciplines were invited to submit short videos explaining their COVID-19-related research, from finding a vaccine to fabricating personal protective equipment and respirators, to the challenges that telecommuting and isolation present to mental health and education. A joint initiative with funded institutions, each video focused on the outcomes of pandemic-related research.

The communications team worked with the programs team to mobilize the research community around calls for proposals for the special EOF – COVID-19 competitions, collaborating with the Government of Canada to announce the results. The communications team also worked with the Government of Canada to announce more than \$500 million in funding for research infrastructure through the Innovation Fund, JELF and the CIIF.

The CFI held a virtual annual public meeting featuring a conversation between the CFI's President and CEO, Canada's 28th Governor General, David Johnston, and Catherine Girard, a microbiology professor from the Université du Québec à Chicoutimi. They discussed how Canada's tradition of innovation will carry us through these challenging times.

The communications team continued to expand the Research Facilities Navigator by onboarding federal labs open to working with all sectors. Almost 80 federal labs are now listed. The communications team surpassed 750 listings in total by the end of the fiscal year. The team was also able to add the first facility in Northern Canada — the Arts, Crafts and Technology Micro-Manufacturing Center at Aurora College in the Northwest Territories.

The Navigator's Twitter feed (@InnovationNAV), which features news and stories about the researchers and facilities listed in the Navigator, continued to grow its followers. The communications team ensured the Navigator had a virtual presence at key conferences, including Research Money, the Canadian Chamber of Commerce annual meeting, as well as the Canadian Science Policy Conference and the Prix d'Innovation de l'ADRIQ.

The CFI also undertook two promotional endeavours with the Navigator this past year: one that reached out to researchers working in CFI-funded labs in provinces where there is a lower number of labs listed, and a digital campaign that promoted the online database to users in the private sector.

The communications team also worked alongside other CFI teams regarding the planning of the International Conference on Research Infrastructures (ICRI), postponed from 2020 to 2021. The communications team worked with the planning committee, partner organizations and the international program committee to shift the event to a virtual platform, keeping delegates apprised of key decisions through the ICRI2021.ca website and Twitter feed (@ICRI2021).

### **Analyzing corporate performance, outcomes and impacts**

The performance, analytics and evaluation (PAE) team engaged an external consultant to examine the relevance and efficacy of the College-Industry Innovation Fund (CIIF). The CFI considered the findings and recommendations made in the final report to draft an action plan that addresses opportunities to improve the design, delivery and management of the CIIF.

During 2020-21, the PAE team finalized several reports describing the outcomes and impacts emanating from CFI investments in research infrastructure including the annual report on results, and a "focusing on results" report exploring how the CFI supports the world's top researchers located in Canada. A collaborative project with the Fonds de recherche du Québec and the Ministère de l'Économie et de l'Innovation was also undertaken with the support of an external consultant. The project explored the socioeconomic impact of common investments in the region of Estrie within the theme of aging and rehabilitation.

The Audit and Evaluation Branch (AEB) at ISED completed the third overall performance evaluation of the CFI. The evaluation examined the relevance, efficiency and effectiveness of the CFI from 2014 to 2019. The CFI's PAE team provided continuous support and guidance to ISED from the onset of the project, initiated in May 2019 and the report is expected by the end of fiscal year.

The PAE team also continued efforts to refine and improve data, data quality and data management practices through various information management initiatives. This included the deployment of the new Canadian Research and Development Classification standard in the CFI Awards Management System, and collaborative work with federal funders (the Natural Sciences and Engineering Research Council, the Canadian Institutes of Health Research and the Social Sciences and Humanities Research Council) to revise and harmonize questions for self-identification related to equity, diversity and inclusion. These initiatives will ensure comparable reporting across the CFI and the federal funders.

# SUCSESSES AND REMAINING CHALLENGES FROM 2020–21

While the global COVID-19 pandemic introduced a number of challenges to the CFI's usual business practices and operations, the organization responded by transitioning to remote work and was able to complete the review process for Innovation Fund applications via videoconference with international experts from different time zones. In addition, much effort was devoted during the year to enhancing the security of CFI's IT systems and integrating the values of equity, diversity and inclusion in our activities and programs. The lessons learned during the pandemic include ways to improve the efficiency of our operations for the future.

## Responding to the COVID-19 pandemic

The CFI seamlessly transitioned to remote work overnight. None of the CFI's major activities were delayed and program delivery was not interrupted. In addition, two unique EOF competitions were launched in a matter of months, supporting COVID-19 related research at universities, hospitals, colleges and polytechnics.

The CFI also made provisions to allow salary support for research personnel temporarily redeployed from CFI-funded infrastructure to support COVID-19 research, provided up to \$5 million to optimize the research services offered by VIDO-InterVac to the national research community working on COVID-19.

Chief Science Advisor Mona Nemer and CFI President and CEO Roseann O'Reilly Runte surveyed laboratories in universities, research hospitals and colleges to understand the level of readiness of level 2 and 3 facilities across the country, and learn what is needed to ensure they are equipped to respond to future pandemics. Existing strengths and areas requiring additional support were identified with a view to finding ways to build on existing capabilities and enhancing the already impressive levels of cooperation.

## Evaluating our performance and programs

The CFI is committed to maintaining the highest levels of administrative excellence and reducing the burden on applicants and, as such, carries out a detailed internal post-mortem analysis at the end of each competition to ensure continuous process improvement.

This year, we have undertaken a review of the Innovation Fund, Major Science Initiatives Fund and the College-Industry Innovation Fund. In addition, ISED completed a performance evaluation of the CFI, which included recommendations related to its competitions. Changes resulting from these two exercises will be integrated to the next scheduled competition of the funds.

## Ensuring our cybersecurity

The CFI takes cybersecurity very seriously and works to ensure our computer systems, the technology we deploy and the data and information we hold remain protected. This year, we undertook a risk assessment of cyber threats to our systems and an internal audit of our cybersecurity maturity.

The CFI has also implemented multifactor authentication on CFI staff and stakeholder accounts, and improved the protection of our systems given that staff are working from home during the pandemic.

In October 2020, the CFI introduced mandatory cybersecurity training for all CFI staff to help ensure we maintain the highest levels of cybersecurity within the organization. The Board of Directors has been apprised of all these activities.

## **International collaboration**

Following the International Framework submitted to and approved by the Canada Research Coordinating Committee (CRCC) last fiscal year, the CFI President and CEO was tasked to elaborate on the existing framework, with the aid of an expert committee of researchers and research administrators across the country, to provide a guide for the tri-agencies to use in planning and expanding international collaboration. The new document submitted to and approved by the CRCC enumerated the benefits of international partnerships, proposed basic principles and considerations for identifying potential collaborations, and outlined criteria for selecting successful projects.

The CFI also signed a Letter of Understanding with the UK Science and Technology Facilities Council (STFC). The agreement allows the two organizations — which share a mandate to invest in infrastructure necessary to support excellent research — to cooperate in areas of mutual interest. Through this agreement, the CFI and STFC will share information on their respective online infrastructure portals — the CFI's Research Facilities Navigator and the UK Research and Innovation (UKRI) Infrastructure Portal. The five-year agreement will foster international research and innovation by giving researchers and institutions from both countries more opportunities to collaborate. It will also strengthen the close relationship between the research communities in Canada and the UK.

## **Equity, diversity and inclusion**

As part of the CFI's commitment to the values of equity, diversity and inclusion (EDI) in all our business practices, all employees are asked to complete two EDI-related online training modules. By completing this training, CFI employees will be better equipped to understand the goals and benefits of EDI within Canada's research community, and to remove any barriers that may exist for underrepresented or disadvantaged groups interested in participating in research. In addition, the CFI requires that employees participating on hiring committees complete a course entitled "Interview Biases Training."

The CFI also integrated EDI principles in the latest Innovation Fund competition inviting institutions to identify two team leaders instead of one per research proposal. This allowed applicants to compose more diverse teams.

This is also the first Innovation Fund competition for which the CFI collected full self-identification data for applicants and reviewers. Preliminary reviews show that many institutions took advantage of the opportunity. Close to 70 percent of the Innovation Fund projects submitted included two team leaders. In addition, women accounted for 50 percent or more of the team leaders in 41 percent of proposals received (126 out of 307), and in 39 percent of funded projects (40 out of 102).

# PLANNED ACTIVITIES AND IMPLEMENTATION SCHEDULE FOR 2021–22

## Programs review

During 2021–22, the CFI will examine its suite of programs to ensure that collectively, the organization is effectively meeting its legislated mandate. This examination will be done in the context of:

- The transition to the permanent funding model that will take effect in 2023–24;
- The impact of the CFI's funding on the research community's ability to conduct excellent, world-class research;
- New and emerging research technologies; and,
- The evolving nature of Canada's research institutions.

To support this examination, CFI staff will gather information on the trends identified in the Strategic Roadmap 2018–23: the convergence of disciplines to address broad research challenges, the importance of collaboration and partnerships, the growing internationalization of Canadian research, and the increasing diversity of Canada's research community.

## Mining the 2020 Innovation Fund data

In preparation for future Innovation Fund competitions, the programs team will analyze and identify trends from the 2020 Innovation Fund competitions, providing detailed information on proposals, team leaders, team members, participants in the merit-review process, and supporting documentation. This exercise will enable the CFI to explore opportunities for improvement in the Innovation Fund review process.

## Launching the 2023 Innovation Fund competition

The 2019 Contribution Agreement provides the CFI with the ability to award funds through Innovation Fund competitions held every 24 to 30 months. The CFI will launch the 2023 Innovation Fund competition — the next Innovation Fund competition under the new funding model — with the draft call for proposals expected in fall 2021. Funding recommendations for this national competition will be presented to the Board of Directors in March 2023.

## John R. Evans Leaders Fund

The CFI has allocated \$210 million to the John R. Evans Leaders Fund (JELF) for the period April 2020 to March 2023. Overall, this represents a 30 percent increase compared to the funding initially available in the 2017–20 allocation period. Reviews of previous JELF competitions and evidence have shown that JELF awards contribute directly to an institution's ability to attract and retain excellent researchers to Canada, including Canada Research Chair (CRC) holders. This also reflects the growth in the number of eligible institutions and the size of institutions, as well as the support for the Canada Research Chairs Program.

## Major Science Initiatives Fund

In May 2018 the CFI initiated a targeted consultation to solicit suggestions for both short-term and long-term improvements to the Major Science Initiatives (MSI) Fund. The programs team will take the feedback from the research community into consideration when designing the next competition through this fund, which will be launched in 2021–22 covering the period from 2023 to 2029.

In light of the pandemic and its continued impact on travel and large-scale gatherings, the CFI will not hold its usual workshop for MSI-funded facilities in its traditional format in the foreseeable future. Instead, the CFI will host a series of virtual seminars, panels and forums spread over a two-month period from mid-February through mid-April 2021. The MSI-funded facilities will be engaged in the planning process to ensure that the most pertinent topics are covered.

### College-Industry Innovation Fund

Proposals for the next College-Industry Innovation Fund – Stream 1 competition are expected in May 2021. The Board of Directors will make final funding decisions on this stream in November 2021. The CFI will also participate in the 19<sup>th</sup> College and Community Innovation Program – Build Innovation Enhancement Grants competition managed by NSERC. For this competition, the deadline to submit letters of intent to NSERC is in May 2021, with full applications due the end of October 2021. Following NSERC's two-stage review process (expected to be completed by February 2022), the CFI Board of Directors will make funding decisions in March 2022.

### Northern Research Infrastructure Fund

In August 2019, the CFI received authorization from the Minister of Science and Sport to expend \$25 million in accrued interest income on a new funding initiative. Tentatively named the Northern Research Infrastructure Fund, it will support the building of capability to conduct high-quality research in Canada's northern regions, as defined in the Government of Canada's Arctic Policy Framework.

During 2021–22, CFI staff will engage with stakeholders to determine the most appropriate design for the new fund. The discussions will focus on how the Northern Research Infrastructure Fund can best meet the needs of northern institutions as they develop their research capabilities. The competition timeframe, as well as key program design elements, will be determined following these discussions.

### Managing the financial aspects of the CFI's activities

**The CFI investment portfolio:** Following standard practice, senior management and the Board of Directors Investment Committee will review the CFI's investment strategy and investment policy in mid-2021. Management will present the results of this review and any subsequent recommendations, to the Board of Directors in fall 2021.

**Institutional monitoring visits:** Over the course of fiscal year 2021–22, the finance team will perform between two and five monitoring visits. The purpose of these monitoring visits is to ensure that institutions receiving funding have proper practices and processes in place to manage awards and to share good practices noted at the various institutions visited.

**Contribution audits:** The finance team is planning to conduct between five and nine contribution audits of CFI-funded projects during 2021–22. As usual, these audits will include a mix of low- to high-risk projects, including those where the CFI investment is \$10 million or more.

**Financial reports:** In addition to its other activities, the finance team expects to review more than 1,000 financial reports in 2021–22. These include both interim and final financial reports, and annual reports on expenditures claimed under the Infrastructure Operating Fund.

## Communicating the value of the CFI's funding for Canada

The COVID-19 pandemic has raised awareness about the importance of science in the search for solutions to global challenges. In 2021–22, the CFI will mark its 25th anniversary. This is a significant milestone for an organization initially imagined as a short-term endeavour. To celebrate, the CFI is committed to communicating to the Canadian public the value and impact of CFI funding and the importance of Canada's research enterprise.

This will be accomplished by:

- **Promoting the CFI's role in ensuring Canada remains prepared for future challenges:** Over 25 years, Canada has built tremendous research capacity in universities, colleges, research hospitals and non-profit research organizations. These investments ensure that Canada remains future-ready for any challenge. In cutting-edge labs and facilities across the country, researchers are pushing boundaries to help build healthy, sustainable, technologically advanced, safe, secure, diverse and culturally rich communities. Forward-thinking research allows Canada to effectively address both domestic and international challenges.
- **Refreshing the CFI website:** The communications team will launch a refreshed, user-centric website that highlights key funding programs and results, and showcases the impacts of CFI funding and thought leadership.
- **Demonstrating return on investment:** The communications team will continue to demonstrate the CFI's value and impact in all our communications. This is key given the significant investments made through the CFI by the Government of Canada, and those made by funding partners, for infrastructure at universities, colleges, research hospitals and non-profit research organizations across Canada.
- **Increasing users on the Research Facilities Navigator:** The CFI will continue to enhance the value of the Navigator by on-boarding new facilities from all corners of Canada that contribute to Canadian innovation. The communications team will take targeted action to increase traffic to and engagement with the Navigator by connecting with like-minded organizations and business groups and promoting the Navigator as a useful resource. This includes connecting Canadian entrepreneurs with researchers in Canada, as well as in countries like the United Kingdom, where the CFI is establishing a collaboration with the Science and Technology Facilities Council (STFC).
- **Measuring success:** The communications team will continue to integrate metrics into all its activities to gauge the impact of communications on key audiences and to ensure the CFI is successfully communicating the value of Government of Canada funding in supporting research.
- **Promoting equity, diversity and inclusion (EDI):** The CFI will continue to promote EDI in its communications activities.
- **Virtual International Conference on Research Infrastructures (ICRI):** The communications team will support the CFI and the European Commission in hosting delegates from around the world for a virtual international conference on research infrastructure.

## International Conference on Research Infrastructures 2020

Due to the pandemic, and in consultation with partners in the European Commission and Government of Canada, the CFI decided to postpone ICRI to June 2021 and hold a virtual conference. It was originally scheduled to be held in person in Ottawa in the fall of 2020. The CFI is leading the organization of this unique, large-scale international gathering under the theme “The role of research infrastructures in building bridges to a sustainable and resilient world.”

At ICRI 2021, the CFI hopes to bring together approximately 500 policy experts, facility managers, leading researchers and a wide variety of stakeholders to discuss challenges and emerging trends for research infrastructures around the world.

The specific objectives of ICRI 2020 are to:

- Provide an international forum for discussion on the development of global research infrastructures as well as on issues of common interest such as the internationalization of research infrastructures and assessing their impact on society and the economy;
- Facilitate and promote international cooperation between research infrastructures and their counterparts in all regions of the world; and,
- Identify best practices and effective approaches to determine how research infrastructures can best enable research excellence.

The ICRI conferences are a unique opportunity for the global community to learn about new approaches to all of these matters, share successes and lessons learned with organizations facing similar challenges and build collaborations that would not occur otherwise.

The CFI is collaborating with NSERC, SSHRC and CIHR along with the National Research Council of Canada, the Labs Canada division of Public Works and Government Services Canada, and ISED in addition to the European Commission to organize and fund ICRI 2021.

## Analyzing corporate performance, outcomes and impacts

In 2021–22, the PAE team will continue to track performance data as outlined in the 2020 Performance evaluation, risk and audit framework. In keeping with established practices, the PAE team will prepare an annual performance report for the CFI management team with evidence to explore areas for improvement and efficiency. In addition, the PAE team will analyze approximately 1,500 project progress reports and summarize findings in the annual report on results.

The PAE team will complete a study related to organizational objectives and expected results that will examine the role the CFI plays in supporting the establishment of productive teams, networks and collaborations.

In the early months of 2022, the CFI will undertake its fourth survey of CFI stakeholders. The individuals to be surveyed include administrators and researchers at eligible institutions, federal and provincial governments, and other funders and partners in the Canadian science and technology ecosystem. The main objectives of the survey are to capture stakeholder views regarding the CFI's progress in fulfilling its legislated mandate and the effectiveness and efficiency of activities and funds.

To support the CFI's efforts toward improving data management and data quality, the PAE team will deploy the new set of questions for self-identification related to equity, diversity and inclusion allowing for harmonized data collection efforts across the CFI and the federal funders. The PAE team will also complete an overhaul of its strategy to monitor the progress of projects funded by the CIIF.

# APPENDIX 1: FINANCIAL CHARTS

Table 1: Investment plan (commitments) for contributions under each agreement

First funding agreement (\$4,390M)*							
	Cumulative March 31, 2020 (\$M)	2020-21 (\$M)	2021-22 (\$M)	2022-23 (\$M)	2023 and later (\$M)	To be determined (\$M)	Total (\$M)
Fund	Commitments** (Actual)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	
Automotive Partnerships Canada	9						9
Canada Research Chairs	194						194
Career Awards	6						6
College Research Development	16						16
Cyberinfrastructure Initiative	70						70
Digging into Data/ Discovery Frontiers	1						1
Exceptional Opportunities Fund and other	23						23
Exceptional Opportunities Fund – COVID-19 (universities)		27					27
Exceptional Opportunities Fund – COVID-19 for colleges, polytechnics and Cégeps		1					1
Infrastructure Operating Fund	1,034	3					1,037
Innovation Fund (1998–2005)	1,758						1,758
Innovation Fund 2015	54						54
Innovation Fund 2017	2						2
International funds	202						202
John R. Evans Leaders Fund (and Leaders Opportunity/New Opportunity funds)	878	9					887
Leading Edge/ New Initiatives funds	832						832
Major Science Initiatives Fund 2014 Special Competition	24						24
National Platforms	84						84
Northern Research Infrastructure Fund						25	25
Research Development Fund	35						35
Research Hospital Fund	488						488
Thirty Meter Telescope	25						25
Operating expenditures	245	14	4				263
Contingency for wind-down expenses						10	10
<b>Total</b>	<b>5,980</b>	<b>54</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>6,073</b>

<b>2010 Funding Agreement (\$600M)*</b>							
	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Commitments** (Actual)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	
College-Industry Innovation Fund	25						25
Infrastructure Operating Fund	97						97
John R. Evans Leaders Fund	140						140
Leading Edge/ New Initiatives funds	158						158
Major Science Initiatives Fund	183						183
<b>Total</b>	<b>603</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>603</b>

<b>2014 Contribution Agreement (\$499.85M)*</b>							
	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Commitments** (Actual)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	
College-Industry Innovation Fund	39						39
Infrastructure Operating Fund	116						116
Innovation Fund 2015	207						207
John R. Evans Leaders Fund	139						139
<b>Total</b>	<b>501</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>501</b>

<b>2015 Contribution Agreement (\$1,330M)*</b>							
	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Commitments** (Actual)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	
College-Industry Innovation Fund	10	15	15	5			45
Infrastructure Operating Fund	190	15	5	2			212
Innovation Fund 2017	426						426
John R. Evans Leaders Fund	216	33					249
Major Science Initiatives Fund	400						400
<b>Total</b>	<b>1,242</b>	<b>63</b>	<b>20</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1,332</b>

<b>2019 Contribution Agreement (\$2,004.37M)*</b>							
	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Commitments** (Actual)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	Commitments (Projected)	
College-Industry Innovation Fund				9			9
Infrastructure Operating Fund		130	22	160			312
Innovation Fund 2020		400					400
Innovation Fund 2022				400			400
John R. Evans Leaders Fund		32	68	110			210
Major Science Initiatives Fund — top-up	160						160
Major Science Initiatives Fund (2017-2023)	49	1					50
Major Science Initiatives Fund (2023-2029)				369			369
Funds set aside for Digital Research Infrastructure and John R. Evans Leaders Fund				18			18
Operating expenditures			12	16	48		76
<b>Total</b>	<b>209</b>	<b>563</b>	<b>102</b>	<b>1,082</b>	<b>48</b>	<b>0</b>	<b>2,004</b>

\* The first funding agreement has \$1.7 billion of generated interest income, the 2010 Funding Agreement has \$3.1 million, the 2014 Contribution Agreement has \$1.4 million, the 2015 Contribution Agreement has \$1.5 million, and the 2019 Contribution Agreement has \$0.5 million directed to project funding. There are no anticipated revenues from other sources expected in future years other than interest income.

\*\* Actual committed amounts are net of amounts that will be unused by eligible recipients, as confirmed through final financial reports for infrastructure projects submitted as of September 30, 2020. As well, \$10 million previously committed to the High-Luminosity Large Hadron Collider has now been reallocated to operating expenses due to an amendment to the 2019 Contribution Agreement, signed 2020-21.

**Table 2: Planned expenditures (disbursements) detailed by fund**

<b>First funding agreement (\$4,390M)</b>							
	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Expenditures (Actual)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	
Automotive Partnerships Canada Fund	9						9
Canada Research Chairs	194						194
Career Awards	6						6
College Research Development	16						16
Cyberinfrastructure Initiative	61	4	5				70
Digging into Data / Discovery Frontiers	1						1
Exceptional Opportunities Fund and other	23						23
Exceptional Opportunities Fund – COVID-19 (universities)		24	3				27
Exceptional Opportunities Fund – COVID-19 for colleges, polytechnics and Cégeps		1					1
Infrastructure Operating Fund	993	16	16	12			1,037
Innovation Fund (1998–2005)	1,758						1,758
Innovation Fund 2015	45	5	2	2			54
Innovation Fund 2017	2	1					2
International funds	202						202
John R. Evans Leaders Fund (and Leaders Opportunity/ New Opportunity funds)	874	6	6		1		887
Leading Edge/ New Initiatives funds	830	1	1				832
Major Science Initiatives Fund 2014 Special Competition	24						24
National Platforms	84						84
Northern Research Infrastructure Fund						25	25
Research Development Fund	35						35
Research Hospital Fund	488						488
Thirty Meter Telescope	25						25
Operating expenditures	245	14	4				263
Contingency for wind-down expenses						10	10
<b>Total</b>	<b>5,915</b>	<b>71</b>	<b>37</b>	<b>14</b>	<b>1</b>	<b>35</b>	<b>6,073</b>

<b>2010 Funding Agreement (\$600M)</b>							
	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Expenditures (Actual)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	
College-Industry Innovation Fund	25						25
Infrastructure Operating Fund	97						97
John R. Evans Leaders Fund	140						140
Leading Edge/ New Initiatives funds	156	2					158
Major Science Initiatives Fund	182	1					183
<b>Total</b>	<b>600</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>603</b>

<b>2014 Contribution Agreement (\$499.85M)</b>							
	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Expenditures (Actual)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	
College-Industry Innovation Fund	33	2	2	2			39
Infrastructure Operating Fund	57	28	23	8			116
Innovation Fund 2015	190	7	7	3			207
John R. Evans Leaders Fund	136	2	1				139
<b>Total</b>	<b>416</b>	<b>39</b>	<b>33</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>501</b>

<b>2015 Contribution Agreement (\$1,330M)</b>							
	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Expenditures (Actual)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	
College-Industry Innovation Fund		5	19	14	7		45
Infrastructure Operating Fund	8	26	32	38	108		212
Innovation Fund 2017	237	51	43	41	54		426
John R. Evans Leaders Fund	128	71	39	4	7		249
Major Science Initiatives Fund	225	87	88				400
<b>Total</b>	<b>598</b>	<b>240</b>	<b>221</b>	<b>97</b>	<b>176</b>	<b>0</b>	<b>1,332</b>

## 2019 Contribution Agreement (\$2,004.37M)

	<b>Cumulative March 31, 2020 (\$M)</b>	<b>2020-21 (\$M)</b>	<b>2021-22 (\$M)</b>	<b>2022-23 (\$M)</b>	<b>2023 and later (\$M)</b>	<b>To be determined (\$M)</b>	<b>Total (\$M)</b>
<b>Fund</b>	Expenditures (Actual)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	Expenditures (Projected)	
College-Industry Innovation Fund					9		9
Infrastructure Operating Fund					312		312
Innovation Fund 2020		5	75	120	200		400
Innovation Fund 2022					400		400
John R. Evans Leaders Fund		2	45	74	89		210
Major Science Initiatives Fund (top-up)	39	32	33	56			160
Major Science Initiatives Fund (2017-2023)				50			50
Major Science Initiatives Fund (2023-2029)					369		369
Funds set aside for Digital Research Infrastructure and John R. Evans Leaders Fund					18		18
Operating expenditures			12	16	48		76
<b>Total</b>	<b>39</b>	<b>39</b>	<b>165</b>	<b>316</b>	<b>1,445</b>	<b>0</b>	<b>2,004</b>

Table 3: Annual cash flow requirements

Cash flow requirements*							
	Cumulative March 31, 2020 (\$M)	2020-21 (\$M)	2021-22 (\$M)	2022-23 (\$M)	2023 and later (\$M)	To be determined (\$M)	Total (\$M)
<b>Disbursements</b>	Actual	Projected	Projected	Projected	Projected	Projected	
2010 Funding Agreement	600	3					603
2014 Contribution Agreement	416	39	33	13			501
2015 Contribution Agreement	598	240	221	97	176		1,332
2019 Contribution Agreement	39	39	165	316	1,445		2,004
<b>Total disbursements</b>	<b>1,653</b>	<b>321</b>	<b>419</b>	<b>426</b>	<b>1,621</b>	<b>0</b>	<b>4,440</b>
Received from the Government	1,724	324					2,048
Generated interest income	6						6
Expected Government payments as per cash flow requirements**			339	426	1,621		2,386
<b>Total funding available***</b>	<b>1,730</b>	<b>324</b>	<b>339</b>	<b>426</b>	<b>1,621</b>	<b>0</b>	<b>4,440</b>
<b>Difference for the period</b>	<b>77</b>	<b>3</b>	<b>-80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Cumulative difference</b>	<b>77</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\* Funds for the first funding agreement and the 2010 Funding Agreement have all been received from the Government of Canada. Therefore, there are no future cash flow requirements for these agreements.

\*\* This reflects the cash flow requirements.

\*\*\* Of the amount of \$339 million for 2021-22, \$170 million is needed in early April 2021 to cover expenses of April 2021 to September 2021. The balance of \$169 million can be paid during summer 2021. Of the amount of \$426 million for 2022-23, \$213 million is needed in early April 2022 to cover expenses of April 2022 to September 2022. The balance of \$213 million can be paid during summer 2022.

There are currently no amounts owing by the CFI to the Government of Canada.

## APPENDIX 2: KEY RISKS AND MITIGATION MEASURES

In 2019, the CFI engaged KPMG LLP to assist with the update of key risks facing the organization. Management reviewed these key risks in the fall of 2020 to ensure they were still relevant to the evolving context. As a result of this exercise, the management team identified 10 primary risks and related mitigation measures. These are summarized in the table below. Information on secondary risks is available upon request.

### STRATEGIC RISKS

- 1. Alignment with needs of funder:** Risk that the CFI is unable to align its activities with the evolving needs of the federal government in a difficult fiscal context

#### Mitigation measures:

- The CFI undertakes regular, ongoing discussions with Government of Canada (Innovation, Science and Economic Development (ISED) Canada) officials on the requirements for research infrastructure, the leveraging of benefits, the multidisciplinary reach and impacts of investments and ideas for the future of the CFI and the research and innovation ecosystem.
- The CFI regularly provides parliamentarians with evidence on the ways infrastructure investments assist in attracting and retaining top research talent, enables world-class research and supports innovation.
- The CFI leads and participates in outreach and communications activities specifically targeted to parliamentarians.
- The CFI issues material to demonstrate how infrastructure funding has been and continues to be responsive to government priorities and research community requirements.
- The CFI disseminates success stories and results of performance and evaluation assessments to demonstrate the results of investments.
- Responsibilities for conducting engagement activities have been defined within the management team.
- Funders are given opportunities to provide input on activities, processes and funding mechanisms.
- The CFI periodically assesses whether funding mechanisms are addressing stakeholder needs and, when necessary, makes appropriate adjustments in the program architecture and fund delivery mechanisms.

**2. Understanding:** Risk that key stakeholders, including federal and provincial funders do not understand the activities, outcomes and impacts (i.e. benefits) associated with funding and the CFI's progress against its strategic priorities

**Mitigation measures:**

- The CFI reports on and communicates to federal and provincial funders on the outputs, outcomes and impacts of the research they have enabled.
- The CFI maintains a dialogue with the Government of Canada and with other funding agencies on its role and programs and on the level of funding provided.
- The CFI Research Facilities Navigator fosters and enables communication and linkages between CFI-funded institutions and external stakeholders in the private and public sectors.
- The CFI encourages the research community to communicate with government about the value of CFI funding.
- Funders are given opportunities to provide input on activities, processes and funding mechanisms.

**3. Inability to measure and promote value:** Risk that the CFI is unable to effectively measure, demonstrate and promote the value of its funding and related return on investment (end results, economic and social impacts, institutional success rates and value proposition)

**Mitigation measures:**

- The Performance, Evaluation, Risk and Audit Framework (PERAF) exercise periodically reviews and updates information requirements needed to inform strategic business decisions and directions.
- The CFI consistently reviews and updates the information captured for both structured data and unstructured data to support impact analysis.
- The CFI identifies information to measure and demonstrate the value of its funding.
- To articulate its value, the CFI develops reports on the outputs, outcomes and impacts of the research enabled by infrastructure.

## GOVERNANCE RISKS

**4. Turnover at Board of Directors:** Risk of excessive turnover of Board Directors in any one year, resulting in a number of new Directors and having an impact on the ability of the Board to provide quality oversight

**Mitigation measures:**

- The CFI promotes Governor in Council (GIC) appointment openings through its network.
- The CFI has an established on-boarding process and orientation materials for new Board Directors.
- The CFI has created candidate profiles to support the replacement process.
- The CFI has developed comprehensive Board materials.

## INSTITUTIONAL/OPERATIONAL RISKS

**5. Sufficient capacity at institutions:** Risk that institutions do not have sufficient capacity to support current and future CFI-funded projects

**Mitigation measures:**

- Institutional capacity is assessed by both the CFI and matching funders at the application phase.
- The CFI conducts risk-based monitoring of projects in accordance with the Tool for Risk Assessment and Management (TRAAM), and conducts midterm reviews for facilities funded through the Major Science Initiatives (MSI) Fund.
- The CFI conducts consultations with the research community to determine programming needs.
- The CFI implemented an increase of funding from the MSI Fund from 40 percent to 60 percent of the funding needs for some facilities, as supported in Canada's Fundamental Science Review (2017) and approved by the Government of Canada.
- The CFI provides funding competitions at recurring intervals through the Innovation Fund.

**6. Matching funding:** Risk that partner and matching funding are not secured or sustained in a timely manner due to changes in partners' needs, provincial government mandates, priorities, economic downturn, and/or limited uptake

**Mitigation measures:**

- The CFI provides provincial partners with opportunities to provide input on activities, processes and funding mechanisms.
- The priorities of provincial partners are taken into consideration in the application review process.
- The CFI communicates the value of the 40 percent funding it provides.
- The CFI communicates with the provinces on funding parameters and competition schedules to assist them in their planning.
- CFI funding is provided only when partner funding has been secured. There is flexibility on timelines when needed.

## OPERATIONAL RISKS

**7. Business continuity:** Risk that the CFI is not able to recover/continue key systems (i.e. the CFI Awards Management System (CAMS)) and critical operations in a timely manner in the event of an incident

**Mitigation measures:**

- Regular data backup plans (e.g. for delays or new releases) and maintenance operations are in place.
- Manual processes exist that can be relied on in the event of business interruption.
- Key systems and documents are stored in a cloud storage and mirror backups are available on different servers.
- Management has identified the organization's key business continuity time as before applications are due and before a Multidisciplinary Assessment Committee (MAC) meeting.
- A key priority for the information technology group is to look at continued system availability.

## INFORMATION TECHNOLOGY/INFORMATION MANAGEMENT RISKS

**8. Security:** Risk of security breach and loss of, or inappropriate access to, personal or confidential data (e.g. researcher data, banking, human resources or travel information)

**Mitigation measures:**

- The CFI has conducted two security reviews on the CFI Awards Management System (CAMS).
- A spam filter is in place to screen email communications received by the CFI.
- Management and improvement in level of staff security and awareness.
- Staff are required to complete mandatory training sessions on cybersecurity and IT risks, therefore raising awareness.
- The CFI has implemented multifactor authentication for staff to access CFI accounts.
- Increased monitoring and alerting put in place, including a security event monitoring (SEM) tool.
- Microsoft Data Loss Prevention policies in place on Office 365 environment to alert on bulk sharing of sensitive information (personally identifiable information and financial data).
- Several conditional access policies protect Office 365 environment. Higher risk logins or users are required to further confirm their identity. Logins are allowed only from trusted locations.

**9. Information management:** Risk that information is not managed and/or accessible in a manner that supports and enables effective and timely decision-making

**Mitigation measures:**

- A Data Governance Committee has been established.
- The Information Management (IM) Project is ongoing and IM is a regular agenda item at Steering Committee meetings, led by two champions.
- A Customer Relationship Management (CRM) tool was implemented to improve centralized access to files and information through electronic media.
- The CFI's business units consistently review and update the information captured for both structured data (i.e. corporate database systems) and unstructured data (i.e. business-unit-specific activity) to support their operational and strategic business decisions.
- The Performance, Evaluation, Risk and Audit Framework (PERAF) exercise periodically reviews and updates information requirements needed to inform strategic business decisions and directions.
- Information access follows a decentralized approach. Business units have staff with advanced-level expertise using the CFI Business Information (BI) tools to effectively support decision making. All BI users are supported by the IM team. BI training is available on an ongoing basis, and specialized training sessions are provided as needed.
- All information captured at the CFI occurs within a secure and protected environment using up-to-date industry-standard technology and infrastructure and software supported by contracted experts. Regular data-backup schedules and maintenance operations are in place.

## HUMAN RESOURCE RISKS

**10. Wellbeing of CFI employees:** Risk that CFI employees may become unavailable to perform their duties during and after the pandemic, which may impact ongoing operations

### Mitigation measures:

- The CFI has conducted an employee survey to assess the concerns of CFI staff and gain insight into their needs and interests and to gauge how the CFI may approach a gradual return to the office during or after the pandemic.
- The CFI has allowed all employees to work from home until at least spring 2021. This has alleviated some of the worries for employees with family obligations and for employees using public transportation to come to the office.
- The CFI has provided a special allowance to all employees to set up an appropriate workspace in their homes.
- The CFI has allowed employees to have flexible hours when needed because of family obligations.
- The CFI has provided employees with two additional days off in the summer to recognize exceptional efforts and extra hours devoted by all CFI team members since the start of the pandemic.
- CFI employees have unlimited access to an employee assistance program 24 hours a day, seven days a week.
- The CFI operations committee (directors, vice-presidents and president) meets every week to discuss issues related to the pandemic and possible implications for the CFI and its employees.
- Several business units have periodic virtual get-togethers to allow employees to interact socially and keep in touch with their colleagues.
- A newsletter updates all staff on a weekly basis to ensure continuous communication and sharing of information.
- Management and human resources have participated in several webinars and are keeping informed of best practices to promote employee wellbeing throughout the pandemic.
- Supervisors regularly check with staff to ensure they are aware of concerns and can adjust accordingly.

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