

# Corporate Plan 2015-16

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#### 1.0 – 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. Its mission is to benefit Canadians by strengthening the capacity of Canadian universities, colleges, research hospitals and non-profit research institutions to carry out world-class research and technology development.

The CFI invests in state-of-the-art research infrastructure, funding up to 40 percent of a project's costs. Institutions, in partnership with provincial governments and other public, private and non-profit organizations, must secure the remaining 60 percent of the required funding.

Canada's prosperity depends on its 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 quality of life for all Canadians. By supporting the country's capacity for world-class research, the CFI is playing a vital role in producing social, economic, environment and health benefits for Canadians. In addition, the development, purchasing and use of state-of-the-art research equipment and the construction of world-class research facilities help provide value-added employment and create the highly skilled workforce necessary to drive innovation and economic growth over the long term.

# 1.1 – CONTRIBUTING TO CANADA'S SCIENCE, TECHNOLOGY AND INNOVATION STRATEGY

The Government of Canada's 2014 Science, Technology and Innovation (S, T&I) Strategy, Seizing Canada's Moment: Moving Forward in Science, Technology and Innovation, articulates a framework based on three specific pillars:

- People: attracting and retaining highly qualified and skilled individuals, as well as top experts and leaders, needed for Canada to thrive in a global knowledge economy;
- Knowledge: supporting excellence across the spectrum of discovery-driven and applied
  research activities to achieve world-leading research strengths in recognized areas of
  current advantage and emerging opportunities; and
- Innovation: bringing new ideas and knowledge to market by stimulating more demand for innovation from firms of all sizes and influencing more innovation-focused business strategies.

In all its funding, communicating and reporting activities, the CFI actively contributes to the implementation of the Government of Canada's S,T&I Strategy by increasing and sustaining the capacity of Canadian researchers to undertake world-class research and technology development that benefits Canadians, by providing institutions with the means to attract and retain their top research talent and by facilitating collaboration and the transfer of research knowledge from researchers to businesses to stimulate private-sector innovation.

#### 1.2 - THE CFI'S FUNDING AND CONTRIBUTION AGREEMENTS

The CFI currently operates under two *Funding agreements* and one *Contribution agreement* with the Government of Canada as represented by, and under the authority of, the Minister of Industry. All three agreements are currently active. Under these agreements, the Government of Canada has committed \$5.49 billion in grants to the CFI since the CFI's inception.

• The first *Funding agreement* specifies the conditions under which all funds allocated to the CFI between 1997 and 2009, totaling \$4.39 billion, were distributed to eligible recipients.

- The 2009 Federal Budget allocated \$150 million to the CFI under the first *Funding* agreement and \$600 million to be distributed under a second *Funding agreement*, which was signed in July 2010.
- In March 2014, the CFI signed a *Contribution agreement* with the Government of Canada for \$499.85 million allocated through Economic Action Plan 2012. The CFI is now delivering the funding competitions according to this *Contribution agreement*.

In 2014-15, as announced in the Government of Canada's Economic Action Plan 2013, the CFI also launched competitions in connection with the \$225 million of interest income accrued under the first *Funding agreement*. These funds are being used to enrich the 2015 Innovation Fund competition, augment the Major Science Initiatives Fund, sustain the CFI's operations and support a Cyberinfrastructure Initiative.

#### 1.3 – THE CFI'S STRATEGIC DIRECTIONS

In 2011, the CFI Board of Directors engaged in a process to update the CFI's 2009 strategic plan in light of the 2010 CFI *Funding agreement*, the ongoing economic uncertainty around the globe and an increasing need to address Canada's productivity issues through innovation in the private and public sectors. The updated strategic plan was approved by the CFI Board of Directors in March 2012 and subsequently issued as the *CFI Strategic Roadmap 2012-17*.

The Board identified three specific areas of opportunity where the CFI's funding activities can contribute to a better understanding of the world in which we live, address social, economic and environmental challenges, and improve the health and well-being of Canadians:

- Sustaining and enhancing the world-class capacity of Canada's research institutions;
- Fostering collaboration and integration between academic research and the private and non-profit sectors; and
- Increasing the global influence of Canadian research in ways that benefit Canadian society.

In its funding initiatives, the CFI addresses these opportunities by applying the principle of excellence to a range of research and research management activities, including the governance of large-scale research facilities, the quality of the relationships between research collaborators in both the public and private sectors and institutional planning. The CFI also focuses its programs and policies to support the full range of activities across the research spectrum, from discovery to innovation. Finally, the CFI coordinates its activities with other funding agencies in order to sustain the capacity of research institutions and help meet the knowledge and innovation needs of private industry, government and the non-profit sectors.

In delivering on its core mandate to support and enhance world-class research, world-class talent and world-class innovation, the CFI's Board of Directors defined six specific strategic directions:

- 1. Invest in the highest levels of excellence to ensure that Canadian researchers are internationally competitive and that innovators benefit from their research.
- 2. Sustain and enhance Canada's research capacity to ensure that Canada's research enterprise continues to have the capacity to perform at world-class levels.
- 3. Forge productive partnerships to ensure that CFI infrastructure investments achieve maximum leverage and impact through partnerships.
- 4. Build global influence to ensure that Canadian researchers have access to the infrastructure necessary to make important and influential contributions to the global research enterprise while maximizing the benefits for Canada.

- 5. Establish a trusted voice to ensure that the CFI shares its unique expertise in matters related to research infrastructure; to communicate the results of its extensive consultation efforts; to explain the value and impact generated by its infrastructure investments; and to advance understanding and support for research enabled by state-of-the-art infrastructure.
- 6. Track impacts to ensure that the CFI is a trail-blazing organization by developing innovative ways of assessing the outcomes and impacts of its infrastructure investments.

During 2014-15, the CFI undertook a number of specific actions to implement the strategic directions adopted by the CFI Board of Directors at its March 2012 meeting. These actions included:

- Maintaining the integrity of the CFI adjudication process to ensure that only those research infrastructure projects that meet the highest levels of excellence receive support;
- Placing greater emphasis on sustainability in projects that receive CFI funding;
- Exploring the possibility of additional funding partnerships with the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes of Health Research (CIHR), the Social Sciences and Humanities Research Council (SSHRC) and Genome Canada to improve the efficiency and effectiveness of research support application processes and increase the impact of federally funded research and technology development;
- Continuing to engage with researchers and research funding agencies in the United States
  and Europe to learn about best practices in large-scale research facility management,
  gather insights on research trends and trajectories related to key challenges and discuss
  how to maximize collaboration for the purposes of increased use of, and impact from,
  research infrastructure; and
- Conducting a second Platform outcome measurement study (POMS) to assess, understand and communicate the overall impact of the CFI's major investments in research infrastructure.

#### The CFI suite of funds

#### Core funds

<u>Innovation Fund:</u> the CFI's flagship support mechanism provides a broad range of awards for leading-edge research infrastructure across all disciplines and areas of research.

<u>John R. Evans Leaders Fund:</u> a responsive funding mechanism designed to ensure that institutions have the infrastructure resources necessary to attract and retain top research talent.

<u>Major Science Initiatives Fund:</u> provides unique, large-scale national research facilities with the operating support necessary to produce excellent, world-class science and technology development.

<u>College-Industry Innovation Fund:</u> supports emerging applied research capacity in Canada's colleges and polytechnics, with the goal of assisting business innovation.

<u>Infrastructure Operating Fund:</u> provides a 30 percent supplement to CFI capital awards to cover a portion of the operating and maintenance costs of the projects the CFI funds to help ensure their optimal use.

#### Ongoing special initiatives

<u>Cyberinfrastructure Initiative:</u> supports Canada's advanced research computing network through Compute Canada and cutting-edge, domain-specific research data management projects.

<u>Automotive Partnership Canada Fund:</u> provides essential infrastructure support for leading-edge automotive research initiatives.

# One-time strategic partnerships

<u>Discovery Frontiers:</u> a joint funding initiative with the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes of Health Research (CIHR) and Genome Canada to support innovative research on computationally intensive genomics challenges.

#### 2.0 - RESULTS 2014-15

The past year saw the CFI in full competition mode, conducting the merit-review process for no less than five competitions concurrently, including almost 400 proposals under the John R. Evans Leaders Fund, 305 proposals under the 2015 Innovation Fund, 23 proposals under the Major Science Initiatives (MSI) 2014 Special Competition, three proposals under the Major Science Initiatives Fund and three proposals under the College-Industry Innovation Fund Stream 2.

In addition, after extensive consultation activities with institutions, the research community and other key stakeholders, the CFI launched two new funding opportunities: the third College-Industry Innovation Fund Stream 1 competition and the Cyberinfrastructure Initiative.

The CFI continued to work closely, consult and interact with its key stakeholders to continuously improve its policies, processes and practices. Over the past year, the CFI was an active participant at meetings and conferences with the Association of Universities and Colleges of Canada, Polytechnics Canada, Colleges and Institutes Canada and l'Association pour la recherche au collégial. The CFI was also a presenter at the annual national and regional meetings of the Canadian Association of University Research Administrators, the annual colloquium held by l'Association des Administratrices et Administrateurs de Recherche Universitaire du Québec and the Canadian Science Policy Conference. In November 2014, the President of the CFI accompanied the Governor General of Canada on his official state visit to Chile to promote international collaboration in education, innovation and trade.

The CFI continued its pan-Canadian consultation process to further refine and finalize the parameters of the draft Call for Proposals for the Cyberinfrastructure Initiative. This process included discussions with Compute Canada, Canada's Advanced Research and Information Network (CANARIE) and provincial officials and the CFI's participation in a number of "big data" conferences and meetings. The CFI also held discussions with senior officials of the Division of Advanced Cyberinfrastructure of the National Science Foundation as well as senior officials involved in developing Australia's National Research Data Strategy.

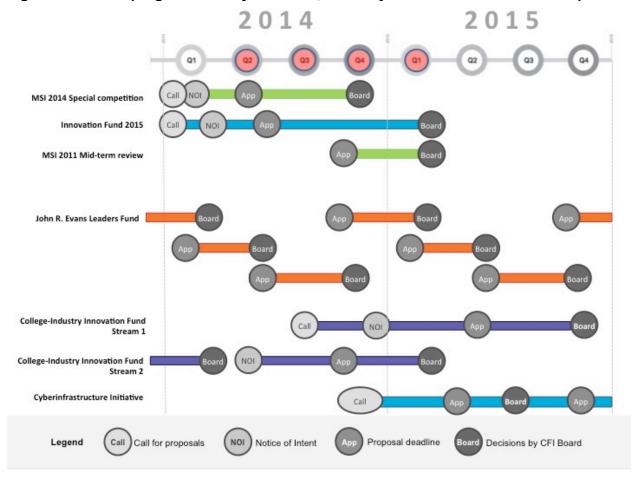


Figure 1: 2014-15 program delivery timelines, with major milestones and decision points

# 2.1 – OBJECTIVE 1: ATTRACT AND RETAIN THE WORLD'S TOP RESEARCH TALENT

#### John R. Evans Leaders Fund (JELF)

The John R. Evans Leaders Fund provides awards to outstanding researchers through two funding streams: 1) an unaffiliated stream where institutions submit proposals directly to the CFI; 2) a partnership stream that allows institutions to submit proposals in conjunction with the Canada Research Chairs Program and the Canada Excellence Research Chairs Program or jointly with NSERC and SSHRC. Designed to reduce applicant burden, these collaborative measures simplify the application process.

In previous years, the CFI held a separate annual competition for projects in the \$1 million to \$2 million range. This year, these proposals were fully integrated into the two other streams in response to a desire for greater flexibility for institutions to submit these in a timely manner, while allowing the CFI to maintain its high standards of accountability.

From the March 2014 Board of Directors meeting to January 31, 2015, the CFI committed approximately \$62.4 million to 377 projects to assist universities in attracting and retaining highly qualified researchers.

# 2.2 – OBJECTIVE 2: ENABLE WORLD-CLASS RESEARCH AND TECHNOLOGY DEVELOPMENT THAT LEADS TO SOCIAL, ECONOMIC, ENVIRONMENTAL AND HEALTH BENEFITS FOR CANADA

#### 2015 Innovation Fund

Supporting innovative and transformative infrastructure projects leads to scientific breakthroughs and produces social, economic, environmental and health benefits for Canada. To this end, the CFI launched the 2015 Innovation Fund to capitalize on sustained investment in research infrastructure over the past 15 years. Open to all disciplines and eligible institutions, the 2015 Innovation Fund competition enhances Canada's capacity for leading-edge research and technology development. The three broad objectives of the Innovation Fund competition are to enable institutions and their best researchers to:

- Strive for global leadership by conducting world-class transformative research and technology development in areas of institutional strategic priority;
- Forge productive, value-added partnerships within and among institutions, sectors and disciplines to nurture creativity and innovation that will result in the effective and sustainable use of the research infrastructure and facilities; and
- Identify and develop plans and potential pathways to social, health, environmental and economic benefits for Canada, including better training and improved skills for highly qualified personnel.

The CFI received 305 proposals, requesting over \$819 million, with an available competition budget of \$250 million. Following a long-established, three-stage merit-review process, the CFI convened 61 expert committees to conduct an initial assessment of the proposals. This assessment focused on the proposed project's strengths and weaknesses in relation to the competition evaluation criteria. The expert committees met between August and October 2014. In the second stage, conducted in January 2015, nine Multidisciplinary Assessment Committees (MACs) undertook a comprehensive merit review of proposals and determined funding recommendations. The MACs examine proposals of similar size and scope in relation to the overall objectives of the competition. In the third stage, a Special Multidisciplinary Assessment Committee (S-MAC) will review all MAC funding recommendations and, through a portfolio lens, make final funding recommendations within the available competition budget to the CFI Board of Directors. These funding recommendations will be considered by the Board at its March 2015 meeting.

### Major Science Initiatives (MSI) Fund

The MSI Fund provides contributions to help cover a portion of the operating and maintenance costs of unique, large-scale national research facilities. The four MSIs<sup>2</sup> that were successful in the 2012 competition have finalized their awards and are now using the funding to optimize their operations, management practices and governance structures with a view to fully exploit their scientific capabilities. All four MSIs have secured partner funding for at least the first three years of the award. Furthermore, they are developing the performance metrics and implementing the recommendations and corrective measures that were directed in the initial award conditions.

<sup>&</sup>lt;sup>1</sup> The 2015 Innovation Fund competition budget is \$250 million. An additional \$75 million is added to this amount through the Infrastructure Operating Fund, which results in an overall competition allocation of \$325 million.

<sup>&</sup>lt;sup>2</sup> The four CFI MSIs include Compute Canada, Ocean Networks Canada, SNOLab, and the Canadian Light Source.

The CFI continues to meet regularly with each of the four MSIs to help identify best practices for using their funds and conducting their activities, as well as to discuss the integrated oversight framework and annual financial and performance reporting requirements.

The CFI also held its second annual MSI workshop in Ottawa during the spring of 2014. This event brought together delegations from each of the four MSIs, along with internationally recognized experts in the fields of governance, management and operations of large-scale science facilities. The purpose was to share experiences, expertise and best practices in the operations and governance of major science facilities. To help set the stage for the December 2014 mid-term reviews; this year's workshop theme was "Enabling world-class science." These reviews focused on the impact of MSI funding on the facilities' ability to fully exploit their scientific and technological capabilities. The result of the mid-term reviews will set recommended funding levels for the final two years of MSI funding (2015-16 and 2016-17). These recommendations will be considered by the CFI Board of Directors at its March 2015 meeting.

# Major Science Initiatives (MSI) 2014 Special Competition

In 2014, using accrued interest income, the CFI conducted a special one-time competition under the MSI Fund with an available budget of \$25 million, to be dispersed over three years. This competition broadened the eligibility criteria to include a greater range of unique national research facilities, in both size and complexity, across all research disciplines with diverse levels of CFI investment (i.e. not restricted to a one-time \$25 million capital investment, as was the case for the initial MSI Fund competition). In addition, facilities without previous CFI investments were eligible to apply. The support provided through this competition is intended to enable unique national research facilities to operate at an optimal level, to fully exploit their scientific capabilities and to 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.

Following the launch of the draft Call for Proposals in December 2013 and the submission of 100 expressions of interest requesting over \$200 million, the CFI held nine meetings across the country to further clarify the intent, objectives and guidelines for the special competition. The CFI received 59 formal notices of intent in late February 2014, and 23 were invited to submit full proposals. In May and June, 13 expert committees conducted the first stage of the merit-review process for these proposals. For the second stage, a single Multidisciplinary Assessment Committee (MAC) reviewed the proposals and provided final funding recommendations. These were presented to the CFI Board of Directors at its November 2014 meeting. The Board approved nine proposals for a total of \$25 million in infrastructure funding.

#### **Cyberinfrastructure Initiative**

In December 2014, as announced in the 2013 Federal Budget, the Minister of Industry authorized the CFI to use \$50 million of accrued interest income for a Cyberinfrastructure Initiative. Following an extensive consultation process with institutions and the research community, the CFI issued a preliminary draft Call for Proposals. The principal objective of the CFI's Cyberinfrastructure Initiative is to enhance the capacity of Canadian institutions and researchers to conduct leading-edge research in areas of demonstrated strength by supporting the infrastructure needs of data and computationally intensive research. Launched in mid-December 2014, the Cyberinfrastructure Initiative will enable the CFI to support these needs by investing in:

• A limited number of research data infrastructure projects that, in collaboration with Compute Canada, enable communities of researchers, along with data scientists, data analysts,

- software developers and other experts, to devise optimal ways of organizing and using research data resources (Challenge 1); and
- Upgrading and modernizing the computational and data storage capacities of the pan-Canadian advanced research computing platform, managed by Compute Canada (Challenge 2).

A series of meetings were held across the country in January 2015 to gauge interest and solicit feedback on the draft objectives and guidelines for the initiative. The CFI plans two competitions under each challenge, with funding decisions expected in March 2016 and 2017 for Challenge 1 and in June 2015 and 2016 for Challenge 2.

## **Infrastructure Operating Fund (IOF)**

In accordance with the active *Funding* and *Contribution agreements*, the CFI continued to provide partial support for the operating and maintenance costs of CFI-funded research infrastructure. These funds are committed at the rate of 30 percent of the original CFI award under the John R. Evans Leaders Fund, the Leading Edge Fund/New Initiatives Fund (now named the Innovation Fund), the Automotive Partnership Canada Fund and the College-Industry Innovation Fund.

### Discovery Frontiers: Advancing big data science in genomics research

CFI is one of four funding agencies partnering in the Discovery Frontiers program. Led by the Natural Sciences and Engineering Research Council (NSERC), this funding program also involved Genome Canada and the Canadian Institutes of Health Research (CIHR). The objective was to support one major research initiative with strong international linkages to develop tools and methodologies for integrating various types of "-omics" data (e.g. genomics, proteomics, metabolomics) and datasets originating from diverse scientific disciplines. This initiative brought together experts from a wide range of disciplines to focus on exploring and developing diverse computational and mathematical approaches and techniques. Of the 11 notices of intent received, six were invited to submit a full proposal in November 2013. The CFI funding decision for the successful proposal was made in February 2014 for approximately \$1 million.

### Research Hospital Fund (RHF)

Post-award activity related to the Large-Scale Institutional Endeavours component of the fund continued throughout 2014-15. These activities included the ongoing monitoring of project implementation to ensure accountability. For these exceptionally large-scale infrastructure projects involving complex construction and renovation, the CFI monitored a set of key performance indicators to measure and improve the performance of governance structures, implementation plans and budgeting and risk management practices for each funded project. Final disbursements for the few remaining projects are expected in 2015.

# 2.3 – OBJECTIVE 3: SUPPORT PRIVATE-SECTOR INNOVATION AND COMMERCIALIZATION

In addition to its overall strategic approach to fostering innovation and technology development across all sectors and in all funding activities, the CFI remained directly involved in two initiatives specifically designed to enhance the capacity of eligible institutions to support private-sector innovation and commercialization.

# College-Industry Innovation Fund (CIIF)

The ongoing CIIF provides research infrastructure awards to colleges that have developed research partnerships with the private sector. The CIIF consists of two separate streams: 1) the CFI receives proposals directly from colleges that have established partnerships with private-sector organizations; and 2) the CFI receives proposals that are jointly submitted to the Natural Sciences and Engineering Research Council's College and Community Innovation (CCI) Program – Innovation Enhancement Grants.

The 11th competition under Stream 2 was launched in spring 2013. In March 2014, the CFI Board of Directors approved funding for three proposals for \$1.48 million. Under the 12th competition, 46 letters of intent were received by the Natural Sciences and Engineering Research Council (NSERC) in May 2014, of which only 18 included a CIIF request (39 percent). Following the CCI Committee's review, 12 were invited to submit full proposals for five-year Innovation Enhancement Grants. Of these, seven proposals requested CFI funding under Stream 2 of the CIIF. Funding decisions will be made at the March 2015 CFI Board of Directors' meeting.

Finally, the third CIIF Stream 1 competition was launched in November 2014 and is ongoing.

# **Automotive Partnership Canada (APC)**

At the request of the Minister of Industry, the CFI Board of Directors allocated \$15 million to support the Automotive Partnership Canada Initiative. All applications to the CFI under this initiative are subject to a merit-based review and approval by the CFI Board. Requests for research infrastructure funding under the APC are considered when the applicants demonstrate that the infrastructure is an essential part of a larger integrated project involving research activities supported by other partner agencies. Between February 2014 and January 30, 2015, the Board of Directors approved three APC proposals with a CFI research infrastructure component for funding, for a total investment of \$727,093. Given that funds set aside by funding agencies under the APC are almost exhausted, the CFI is not expecting any APC proposals in 2015-16.

# 2.4 – OBJECTIVE 4: ENHANCE ACCOUNTABILITY TO RESPONSIBLY MANAGE PUBLIC FUNDS

#### A) ASSESSING IMPACTS

# Operational efficiency and impact

In 2014-15, the CFI explored different reporting and data visualization approaches to maximize the ease of use, and therefore the utility, of the CFI Balanced Scorecard. The Board responded positively to the high-level dashboard visuals and appreciated that the CFI was capturing information important to management.

In 2014-15, the CFI refreshed and updated its *Performance*, *evaluation*, *risk* and audit *framework* (PERAF). This was required by the 2014 *Contribution agreement*, and the final version will be submitted to the Minister by March 31, 2015. In completing the update, the CFI improved alignment with both its objectives and the expected results and streamlined and simplified the performance framework.

The Overall performance evaluation and value-for-money audit (OPEA) was completed in 2014-15. The draft reports were presented to the CFI Board of Directors in November 2014 and also shared with the evaluation unit at Industry Canada. The project benefited from the oversight of a Steering Committee with expertise in both evaluation and the Canadian research system. The

reports have been finalized and will be submitted to the Minister of Industry and posted to the CFI website by March 31, 2015.

### **Project progress reports**

The CFI prepared and released its annual *Report on results* (see Appendix 4) based on annual *Project progress reports* (PPRs) data. In 2014-15, the CFI continued to work collaboratively with institutions and their provincial partners to share relevant information and data to continue to reduce the reporting burden for institutions. In addition, based on PPR data, the CFI has completed an infrastructure-use assessment. This assessment confirmed that CFI infrastructure is being well used by a broad and diverse community of researchers across all sectors. PPR data were also highlighted in other CFI publications, including the annual report.

#### **Outcome assessment**

In 2014-15, the CFI decided that the next national *Outcome measurement study* (OMS) will focus on agricultural research. Due to competing priorities, only limited progress has been made on this new study. A bibliometric project has been undertaken to identify subthemes of study and the leading researchers and institutions and to confirm which institutions to approach for participation in the OMS. This project will continue into 2015-16.

In 2014-15, the CFI completed a *Platform outcome measurement study* (POMS) on the research icebreaker CCGS *Amundsen*. An international expert panel visited the icebreaker in November 2014, and its report will be finalized by spring 2015. Once completed, the report will be posted to the CFI website.

The CFI began working with the three federal funding agencies this year to identify possible topic areas for a new socio-economic impact assessment project. Since the successful socio-economic impact assessment on medical imaging (2013) was built from two OMS studies, the CFI decided to explore the possibility of using the information gathered from the POMS as a starting point. To this end, the CFI invited an economist to the expert panel meeting for the CCGS *Amundsen* POMS. Based on existing information, the economist then prepared an assessment of possible topics and applicable approaches. The CFI and the granting agencies are currently discussing the next steps.

### B) MONITORING AND REPORTING FINANCIAL RESULTS

#### Investment plan

In compliance with its active *Funding* and *Contribution agreements*, the CFI continued to invest funds allocated by the Government of Canada in accordance with its established investment strategy and investment policy. The principal objective of the investment strategy and subsequent investment decisions has always been the preservation of capital to meet future cash requirements. Consequently, the CFI adheres to a buy-and-hold strategy to ensure that investment maturities match the forecasted cash requirements of the CFI. Both the CFI investment strategy and investment policy were reviewed in the fall of 2014 by the CFI Investment Committee. This Board of Directors committee is charged with overseeing the management and investment of CFI funds.

Since 2006, the Government of Canada has changed the way it makes payments to the CFI. Instead of being provided in a single lump-sum payment, federal funding is now provided in annual instalments based on the estimated cash requirements for the year. Consequently, the CFI's investment balance will decrease over the next few years. Investment income is also expected to decrease in the coming years as higher-earning investments mature and the

investment balance decreases. As well, any new funding received will be invested on a shorter-term basis with lower rates of return.

The CFI anticipates that disbursements of funds in 2015-16 will remain at a high level (approximately \$382 million).

Appendix 1 provides a summary of the CFI investment portfolio as of December 31, 2014.

### **Monitoring visits**

Monitoring visits are routinely conducted at recipient institutions to assess the adequacy of policies, processes and controls in place for the management of CFI-funded projects. During these visits, the CFI shares examples of good practices used by recipient institutions in managing CFI funds and highlights opportunities to increase efficiencies to reduce the administrative burden. As well, the CFI gathers information and gains community knowledge in specific areas of interest to the CFI. In 2014-15, the financial monitoring team conducted three monitoring visits.

#### Contribution audits and other cost reviews

The CFI routinely conducts contribution audits to ensure that the funding received by an institution for a given project has been used in accordance with the agreed-upon terms and conditions of the *Award agreement* and with all other applicable CFI policies and guidelines. The CFI uses a risk-based approach to select which institutions are visited and which projects are subjected to audit or other cost reviews. In 2014-15, the CFI performed 11 contribution audits or other cost reviews.

### **Financial reports**

The CFI requires institutions to submit interim and final financial reports for each CFI-funded project. Institutions submit the reports at specific intervals, based on the risk of each project. Each financial report submitted is reviewed by the CFI, and any issues identified are addressed. Almost 850 financial reports were received and reviewed in 2014-15.

#### C) COMMUNICATING WITH CANADIANS

In 2014-15, the CFI focused its communications activities on strengthening its role as a trusted voice in the national conversation on research and innovation in Canada.

It did so by continuing to bolster its online presence, producing rich multimedia material that showcased Government of Canada investments in science and technology through the CFI and highlighted research that was relevant and meaningful to Canadians. It disseminated these success stories through mainstream and social media and through a number of topical opinion pieces.

The CFI continued to reinforce the important role that research infrastructure funding plays in the country's research and innovation ecosystem, in supporting both discovery and applied research in all disciplines. As well, the CFI continued to build relationships with business groups, national industry organizations, provincial innovation councils and industry-facing liaisons to encourage the use of the CFI Research Facilities Navigator as a tool to foster productive research partnerships and collaborations.

#### The CFI Research Facilities Navigator: Connecting business with research

It can be challenging for companies to tap into the research resources at postsecondary institutions, often because they are just not aware of the resources that are available.

Addressing this is the driver behind the CFI's Research Facilities Navigator, a searchable directory of research labs and facilities in universities, colleges and research hospitals across Canada that are open to working with business. The Navigator was launched late in 2013 and is already sparking new partnerships.

Early indications suggest the Navigator is helping to make connections. The Additive Manufacturing Resource Centre at Hamilton's Mohawk College, for example, has received about a dozen inquiries from companies seeking its 3-D prototyping infrastructure and expertise.

Collaborating with researchers in state-of-the-art research facilities helps businesses grow, stay competitive, design new or better products, access the latest equipment and foster relationships with some of Canada's brightest minds. For research facilities, the Navigator is a way to inform the private and public sectors about the world-class expertise and infrastructure available to them; for companies, it is a venue to find the research facilities that can help their business be innovative.

Since its launch, the Navigator has grown to include listings from more than 425 labs from every province and across virtually every discipline, from engineering, agricultural, social and health sciences and much more. And the interest continues to grow.

The CFI also coordinated national funding announcements for the results of both the John R. Evans Leaders Fund competition and the Major Science Initiatives (MSI) 2014 Special Competition and prepared communications plans for announcing the results of the Innovation Fund and the College-Industry Innovation Fund competitions in 2015.

### D) IMPROVED PROGRAM DELIVERY AND SERVICES

The CFI carried out a variety of initiatives designed to improve program delivery in 2014-15, ensure accountability and adjust existing processes to better meet objectives. The most significant achievement was the full implementation of the CFI Awards Management System.

### **CFI Awards Management System (CAMS)**

The CFI completed the development of the final release of CAMS, which culminated in full deployment in December 2014. This release includes all the post-award functionalities required to administer CFI projects:

- Decisions the administration of CFI recommendations and Board decisions, including the release of the awards to institutions.
- Award finalization the flow of award finalization information between institutions and the CFI. The streamlined award finalization process has significantly reduced the administrative burden for most awards. In addition, documents that were previously managed entirely offline are now displayed in CAMS and available to institutions for reference. These include the award finalization forms and the Award agreements.

- Amendments submission amendment requests and the subsequent administration of these requests.
- Payments and forecasting the recording of payments information and expenditure forecasts. Greater visibility on the status and scheduling of payments is provided to institutions.
- Financial reporting (interim and final) entry and submission of financial reports and their subsequent administration by the CFI. Improved interaction capabilities between institutions and the CFI have been incorporated, and tools for the management of partners have been improved.
- Infrastructure Operating Fund (IOF) administration of *IOF agreements*, IOF allocations, IOF annual reporting and IOF payments; improved interaction with institutions, including greater visibility of information.
- Overview provides enhanced summary information at the level of the overall institutions and in relation to specific projects. At their option, institutions can allow these overviews to be available to a greater audience within their organizations. The overviews will help improve the efficiency of the institutions in their administration of CFI awards. This module is scheduled for deployment in March 2015.

The final CAMS release included the migration of all necessary data from the previous legacy application to the new CAMS system. All legacy applications are now decommissioned. In summary, CAMS is now the one-stop interaction point for CFI awards, encompassing the full life cycle of funded projects, with a single unified interface providing improved usability for institutions and greater flexibility and control of their interactions with the CFI.

# Information technology strategy

During 2014-15, the CFI implemented a project management office and completed the Information Services Training Strategy, including the identification and implementation of training options and instructional tools. Further work will be undertaken to develop and implement a comprehensive information management strategy and conduct the first annual review of the information technology roadmap.

#### 3.0 - CORPORATE PLAN 2015-16

To effectively communicate the CFI's goals for 2015-16, this section of the corporate plan is organized according to the specific objectives that stem from the CFI's active *Funding* and *Contribution agreements* and the CFI's activities to ensure accountability and effective communication. All CFI funding activities are designed to attract and retain top research talent, enable world-class research and technology development, enhance the capacity of institutions to support private-sector innovation, help train the next generation of researchers and create economic opportunity for Canadians. To achieve these objectives, the CFI is guided by the strategic directions adopted by the Board of Directors in 2012.

As part of the CFI's commitment to continuous improvement, these objectives are accompanied by a description of initiatives the CFI will undertake to improve its program and service delivery.

In addition to the actions outlined here, the CFI will continue to work with other federal research support agencies to identify and define the infrastructure needs of the Canadian research community and will engage with international counterparts in the United States and Europe to maximize the use and impact of research infrastructure.

# 3.1 – OBJECTIVE 1: ATTRACT AND RETAIN THE WORLD'S TOP RESEARCH TALENT

# John R. Evans Leaders Fund (JELF)

The CFI will continue to receive and review JELF applications and will, with the Board of Directors' approval, grant infrastructure awards to candidates who have been recommended by research institutions. This fund provides awards to outstanding researchers through two funding streams: 1) a stand-alone stream where institutions submit applications directly to the CFI for proposals up to \$2 million in total costs; and 2) a partnership stream that operates in conjunction with the Natural Sciences and Engineering Research Council (NSERC), the Social Sciences and Humanities Research Council (SSHRC) and the Canada Research Chairs and Canada Excellence Research Chairs programs. This partnership stream is designed to reduce the administrative burden placed on applicants.

# 3.2 – OBJECTIVE 2: ENABLE WORLD-CLASS RESEARCH AND TECHNOLOGY DEVELOPMENT THAT LEADS TO SOCIAL, ECONOMIC, ENVIRONMENTAL AND HEALTH BENEFITS FOR CANADA

#### 2015 Innovation Fund

With the bulk of the three-stage merit-review process completed over the past six months, the special Multidisciplinary Assessment Committee (MAC) will meet in February 2015 to review the funding recommendations of the nine MACs. Final funding recommendations will be submitted to the CFI Board of Directors for its March 2015 meeting.

# Major Science Initiatives (MSI) Fund

The CFI will continue to work closely with the four original MSI awardees and the nine new awardees under the Major Science Initiatives (MSI) 2014 Special Competition as they work to optimize their operations, management and governance to fully exploit their scientific capabilities. A third annual MSI workshop is in the planning stages. This event will include representatives of all 13 MSIs.

#### **Cyberinfrastructure Initiative**

The CFI will continue to work closely with Compute Canada, institutions, the research community and other key stakeholders to ensure that the final formal Call for Proposals is closely aligned with the requirements and expectations of the community. The CFI will complete the competition design following the feedback received on its draft Call for Proposals. In May 2015, the CFI will convene an expert committee to assess the first proposal to address pressing immediate requirements for the modernization and upgrading of the pan-Canadian advanced research computing platform under Challenge 2 and will convene expert committees in late 2015 to conduct the merit review for domain-specific data project proposals submitted under the first competition for Challenge 1.

### **Infrastructure Operating Fund (IOF)**

In accordance with current *Funding agreements*, the CFI will continue to provide partial support for the operating and maintenance costs of CFI-funded research infrastructure. These funds are committed at the rate of 30 percent of the original CFI award under the John R. Evans Leaders

Fund, the Innovation Fund, the Automotive Partnership Canada Fund, the College-Industry Innovation Fund and the Cyberinfrastructure Initiative (for Challenge 1 awards<sup>3</sup>).

# 3.3 – OBJECTIVE 3: SUPPORT PRIVATE-SECTOR INNOVATION AND COMMERCIALIZATION

# College-Industry Innovation Fund (CIIF)

For the CIIF, the CFI solicits infrastructure funding proposals under two separate streams: 1) directly from colleges that have established partnerships with private-sector organizations; and 2) proposals that are jointly submitted to the Natural Sciences and Engineering Research Council's College and Community Innovation Program – Innovation Enhancement Grants. The CFI expects to make funding decisions for the 12th competition of Stream 2 in March 2015 and for the third Stream 1 competition in November 2015.

As a result of limited uptake under Stream 2, the CFI will make a decision regarding the longer-term viability of maintaining two separate funding streams under the CIIF.

# 3.4 – OBJECTIVE 4: ENHANCE ACCOUNTABILITY TO RESPONSIBLY MANAGE PUBLIC FUNDS

# A) ASSESSING IMPACTS

### Operational efficiency and impact

In 2015-16, the CFI will capitalize on the work related to its balanced scorecard and the refresh of the *Performance*, *evaluation*, *risk* and *audit framework* (PERAF) to develop a corporate performance report. The CFI will continue to explore approaches and identify best practices for the synthesis and reporting of corporate data to provide accurate and meaningful information that is aligned with the needs of internal and external stakeholders.

The CFI will be actively exploring optimal approaches to performance measures for projects funded under the Major Science Initiatives (MSI) 2014 Special Competition and the Cyberinfrastructure Initiative.

In 2015-16, the CFI will analyze data on the early outcomes related to the College-Industry Innovation Fund. In 2014-15, the CFI began interviewing recipients to discuss progress to date related to their self-identified targets. Interviews from the first two rounds of reporting will be completed in late summer 2015. The initial interviews have produced important contextual information not captured in regular reporting activities.

#### **Project progress reports**

The CFI will prepare and release its annual *Report on results* based on annual *Project progress reports* data and will continue to explore ways of maximizing the use and value of the data, including providing stakeholders with customized analyses of subsets of data. As well, in 2015-16, the CFI will develop a strategy to maximize the use of the qualitative data collected through annual reporting and will undertake a project to examine the specific benefits related to innovation that are being reported.

<sup>&</sup>lt;sup>3</sup> Compute Canada, the managing organization of Canada's advanced computing network, already receives operating and maintenance support from the CFI through the MSI Fund and therefore will not receive such support through the Cyberinfrastructure Initiative.

#### **Outcome assessment**

In 2015-16, the CFI will complete its new national *Outcome measurement study* in agricultural research. Building on the initial bibliometric project completed in 2014-15, the evaluation team will engage a group of national and international subject-matter experts to design the study. The team will also seek to engage the other federal funding agencies in this project, as it may provide opportunities for a joint socio-economic impact assessment.

In 2015-16, the CFI will complete the *Platform outcome measurement study* (POMS) on the CCGS *Amundsen* and initiate work on another POMS. The CFI will continue to work closely with the selected infrastructure platforms to ensure that the process is as efficient as possible and that the tools used are customized to each platform's unique context. The CFI also intends to undertake an informal assessment of the process after completing the first three or four POMS to ensure that it is adequately managing the burden placed on platform managers.

### **B) COMMUNICATING WITH CANADIANS**

Canadians are among the most connected people in the world. To communicate effectively in an age of information overload, websites must keep up with quickly evolving trends and must offer not only a clearly intuitive user experience but also customized multimedia content. This is essential to ensure that Canadians can access the information they need in order to understand and appreciate the outcomes of the research enabled by the Government of Canada through the CFI. In 2015-16, leading up to its 20th anniversary in 2017, the CFI will undertake a redesign of its website, with a view to offering an innovative user experience that showcases its activities and the outcomes of its investments. This significant project will unfold over 2015-16, with a launch early in the following fiscal year.

State-of-the-art research facilities at universities, colleges and research hospitals represent a valuable resource for companies seeking solutions to their business problems and for creating a competitive advantage for users in all sectors. To this end, in 2014-15, the CFI expanded its Research Facilities Navigator to help companies identify, locate and connect with cutting-edge research expertise and facilities across the country. In 2015-16, the CFI will continue to build relationships with business groups, national industry organizations, provincial innovation councils and industry-facing liaisons while continuing to grow the listings in the online database.

Seizing Canada's Moment: Moving Forward in Science, Technology and Innovation, the Government of Canada's newly released Science, Technology and Innovation Strategy, highlights the complementarity among all federal actors in the national landscape of research and innovation. Through success stories, multimedia content and opinion pieces in various media outlets, the CFI will continue to reflect its alignment with the Government of Canada's strategies and demonstrate the tangible outcomes of the research enabled by CFI funding.

To remain a trusted voice, the CFI will continue to engage in public and policy discussions about research and innovation and its contributions to the health, prosperity and quality of life of Canadians. The CFI will also seek opportunities to address research and business forums, opinion leaders and influencers beyond the research community. Fostering a dialogue with groups such as the Federation of Canadian Municipalities, l'Association pour le développement de la recherche et de l'innovation du Québec (ADRIQ) and the Association of University Research Parks will help demonstrate the direct connection that exists between CFI-funded facilities and the communities in which they are located.

# C) IMPROVING PROGRAM DELIVERY AND SERVICES

# Best practices: managing for success

As in previous years, the CFI will continue to pursue coordinated efforts to gather information and intelligence on evolving best practices in the effective and efficient management of research facilities. To this end, the plan is to draw on the analyses of CFI data contained in annual *Project progress reports* and financial reports and on intelligence gathered by attending focused workshops and through institutional visits. The overriding objective is to keep abreast of changes in the management of unique and complex facilities, both in Canada and abroad. The intelligence gathered will also serve as a resource for Canadian research facilities.

# **CFI Awards Management System (CAMS)**

With the completion of the final CAMS release, the CAMS system now moves into an operations and maintenance mode. Given the significant investment that has been made in this application, ongoing maintenance and enhancement opportunities are a CFI operational priority. The intent is to both sustain and continue improving what is now the CFI's primary online awards administration system.

For the coming year, initial focus will be on completing and expanding the overview functions, responding to institutional feedback and enhancing operational efficiencies. Other potential improvements include enhanced tools for the management of the John R. Evans Leaders Fund allocations and continued enhancements to the CFI's ability to manage new and emerging types of proposals and projects.

### D) SUMMARY OF PLANNED EXPENDITURES AND COMMITMENTS

The following tables provide a summary of the CFI's planned expenditures under the three distinct *Funding agreements* with Industry Canada, as well as the committed and projected amounts for two fiscal years.

Please refer to Appendix 2 for the cash flow statement and commitments vs. cash.

**Table 1: Planned expenditures** 

		Original Fu	nding Agreemen	t		
		3-14 al - \$M)		4-15 M)		5-16 ted - \$M)
Fund	Board Commitments	Disbursements	Commitments (Projected 12 months)	Disbursements (Actual 7 months)	Board Commitments	Disbursements
Canada Research Chairs		0.1	,	/		
Digging into Data / Discovery Frontiers	1.1			0.1		1.0
Exceptional Opportunities						2.8
Innovation		2.9		2.5		1.6
International		6.2		0.3		1.2
John R. Evans Leaders Fund (JELF)	1.9	28.2		3.8		4.8
Leading Edge/New Initiatives		84.4		31.0		58.0
National Platforms		0.2		0.2		
New Opportunities		0.5				
Research Hospital		31.5		25.4		4.6
Automotive Partnerships Canada	3.7	1.1		2.2		1.4
Infrastructure Operating	2.1	79.4	14.0	45.4	6.0	88.0
Major Science Initiatives (MSI) 2014 Special Competition and future pressures			25.0		25.0	10.0
Cyber infrastructure					20.0	7.7
Innovation Fund 2015			46.0		20.0	6.9
			10.0			0.0
Total awarded/disbursed	8.8	234.5		110.9		
Projected 12 months			85.0	229.2	51.0	188.0
		2010 Funding	Agreement (\$60	OM)		
John R. Evans Leaders Fund (JELF)	80.9	60.3		37.9		8.4
Leading Edge/New Initiatives		65.6		27.2		36.5
College-Industry Innovation	1.5	12.2		1.0	2.0	3.1
Major Science Initiatives (MSI)		34.3		15.4	6.0	43.8
Infrastructure Operating	24.7				1.0	14.2
Total awarded/disbursed	107.1	172.4		81.5		
Projected 12 months				136.4	9.0	106.0
	20	014 Contribution	Agreement (\$49	9.85M)		
John R. Evans Leaders Fund (JELF)			66.0	3.3	66.0	59.6
College-Industry Innovation					8.0	
Innovation Fund 2015 Infrastructure Operating			206.0 81.0		22.0	30.9
			<u> </u>			
Total awarded/disbursed				3.3		

Table 2: Committed and projected amounts 1998 to 2016 and later

Original Funding	g Agreement
Fund	Cumulative commitments to October 31, 2014 (\$M)
Innovation	1,782
Canada Research Chairs Infrastructure	199
John R. Evans Leaders Fund (JELF) and New Opportunities	844
Leading Edge/New Initiatives	851
Research Hospital	499
International	202
National Platforms	84
Infrastructure Operating	1,006
Other Funds	30
Total – Cumulative commitments (\$M)	5,497
2010 Funding Agre	eement (\$600M)
John R. Evans Leaders Fund (JELF)	140
Leading Edge/New Initiatives	155
College-Industry Innovation	23
Major Science Initiatives (MSI)	179
Infrastructure Operating	95
Total – Cumulative commitments (\$M)	592
2014 Contribution Agr	eement (\$499.85M)
John R. Evans Leaders Fund (JELF)	19
College-Industry Innovation	
Innovation	
Infrastructure Operating	5
Total – Cumulative commitments (\$M)	24

	Original Fund	ing Agreement		
Projected com	mitments — rema	inder of 2014-15 to	o 2016 and later	
Fund	2014-15	2015-16	2016 and later	Total
John R. Evans Leaders Fund (JELF)			71	71
Infrastructure Operating	14	6	27	47
Digging into Data/ Discovery Frontiers				
Innovation Fund 2015	46			46
Cyber-Infrastructure		20	19	39
2014 MSI Special Competition and Future Pressures	25	25		50
Total- Projected (\$M)	85	51	117	253
	2010 Funding Ag	greement (\$600M)		
John R. Evans Leaders Fund (JELF)				
College-Industry Innovation		2		2
Major Science Initiatives		6		6
Infrastructure Operating		1		1
Total- Projected (\$M)		9		9
2	2014 Contribution A	greement (\$499.85M	)*	
Projected com	mitments — rema	inder of 2014-15 to	o 2016 and later	
Fund	2014-15	2015-16	2016 and later	Total
John R. Evans Leaders Fund (JELF)	47	66	8	121
Innovation Fund 2015	206			206
College-Industry Innovation		8	30.5	38.5
Infrastructure Operating	76	22	12.35	110.35
Total- Projected (\$M)	329	96	50.85	475.85

Table 3: Summary of committed and projected amounts (\$M)

Fund	Original Funding Agreement	2010 Funding Agreement	2014 Contribution Agreement
Committed by CFI Board	5,497	592	24
Projected	253	9	475.85
Total (\$M)	5,750	601	499.85



	Market Value		Limit
	(\$)	%	%
AAA Government			
CMHC and Canada Housing Trust	34,163,633	4.03%	
Canada and Government Agencies	34,163,633	4.03%	
MBS (guaranteed by CMHC)	309,574,856	36.55%	
Total AAA Government	343,738,489	40.58%	No Limit
AA O			
AA Government	00 704 700	44.000/	00.000/
Ontario and Ontario Electricity Finance Corp.	98,794,728	11.66%	20.00%
New Brunswick	41,289,945	4.87%	
Quebec and Quebec Hydro	24,055,853	2.84%	
Manitoba Total AA Government	18,470,302 182,610,828	2.18% 21.55%	40.00%
Total An Government	102,010,020	21.5570	40.0070
Provincial/Municipal Financing Authorities			
None	-	0.00%	10.00%
Total Provincial/Municipal Financing Authorities	-	0.00%	15.00%
Municipal		0.000/	1.00%
None Total Municipal	<u>-</u>	0.00%	5.00%
i otal mancipal	_	0.0070	3.00 /0
AAA Corporate			
Imperial Oil - Commercial Paper	25,994,900	3.07%	10.00%
Royal Bank of Canada - Covered Bond	5,064,425	0.60%	
OMERS Realty Corp & Finance Trust CP	3,298,838	0.39%	
Total AAA Corporate	34,358,163	4.06%	40.00%
AA Corporate			
Canadian Imperial Bank of Commerce	82,937,562	9.79%	10.00%
Royal Bank of Canada	79,728,903	9.41%	10.00 /0
Bank of Nova Scotia	49,198,559	5.81%	
Caisse Centrale Desjardins	32,668,543	3.86%	
Bank of Montreal	26,772,286	3.16%	
Toronto Dominion Bank	5,785,934	0.68%	
HSBC Bank Canada	3,997,108	0.47%	
Total AA Corporate	281,088,895	33.18%	40.00%
Portion of portfolio invested	841,796,375	99.37%	
·			
Portion of portfolio in cash	5,299,955	0.63%	
Total Portfolio	847,096,330	100.00%	



# **Original Funding agreement**

Cash flow for the period April 1, 2014, to March 31, 2016 (\$M)

Fiscal year	2014-15	2015-16
Fund/Cumulative as at April 1	921.5	693.6
Less:		
Expected disbursements - Projects		
John R. Evans Leaders Fund (JELF)	(6.3)	(4.8)
Leading Edge/New Initiatives funds (LEF/NIF)	(54.5)	(58.0)
Infrastructure Operating Fund (IOF)	(86.4)	(88.0)
Research Hospital Fund (RHF)	(56.7)	(4.6)
Others*	(25.3)	(32.6)
Subtotal	(229.2)	(188.0)
Budgeted operating expenses	(15.6)	(15.2)
Subtotal	(244.8)	(203.2)
Add:		
Anticipated investment income	16.9	8.8
Anticipated fund as at March 31	693.6	499.2

<sup>\*</sup> Includes International Fund, National Platforms, Exceptional Opportunities, Canada Research Chairs, Innovation Fund, Automotive Partnership Canada, Digging into data/Discovery Frontiers, Major Science Initiatives 2014 Special Competition, Cyber-infrastructure and Innovation Fund 2015.

# **Original Funding agreement**

Commitments vs. cash for the period April 1, 2014, to March 31, 2016 (\$M)

Fiscal year	2014-15	2015-16
Commitments/Board-approved amounts		
Cumulative Board approved amounts at April 1	5,495.5	5,580.5
Add:		
Expected commitments - Projects		
Infrastructure Operating Fund (IOF)	14.0	6.0
Cyberinfrastructure		20.0
Major Science Initiatives 2014 Special Competition and		
Future Pressures	25.0	25.0
Innovation Fund 2015	46.0	
Expected total committed amounts as at March 31	5,580.5	5,631.5
Add:		
Remaining JELF allocation	71.0	71.0
IOF on remaining JELF allocation	22.0	22.0
Expected committed/allocated as at March 31	5,673.5	5,724.5
Disbursements and unpaid amounts for projects		
Cumulative project disbursements as at April 1	4,958.3	5,187.5
Add:		
Expected project disbursements for the fiscal year	229.2	188.0
Cumulative project disbursements as at March 31	5,187.5	5,375.5
Add: Unpaid committed amounts — March 31 (Liability)	486.0	349.0
Expected committed/allocated as at March 31	5,673.5	5,724.5

Cash available to pay for commitments		
Anticipated funds (cash)	693.6	499.2
Less:		
Expected unpaid committed amounts — March 31 (Liability)	(486.0)	(349.0)
Projected future expenses (to 2021) not funded under 2010		
Funding agreement and 2014 Contribution agreement	(90.0)	(74.8)
Excess of cash over commitments / (Unfunded liability)	117.6	75.4

# 2010 Funding agreement Cash flow for the period April 1, 2014, to March 31, 2017 (\$M)

Fiscal year	2014-15	2015-16	2016-17
Cumulative Surplus (Shortfall) – April 1	(2.6)	(9.3)	(0)
Projected Disbursements per Fund			
John R. Evans Leaders Fund (JELF)	56.2	8.4	3.8
Leading Edge/New Initiative	35.2	36.5	12.9
College-Industry Innovation	4.0	3.1	0.6
Major Science Initiatives	40.3	43.8	43.6
Infrastructure Operating	0.7	14.2	19.0
Total Disbursements	136.4	106.0	79.9
Interest Earned	0.0		
Required appropriation to fund projected disbursements			
Payments received	129.7		
Expected cash flow needs*		115.3	79.9
Cumulative Surplus (Shortfall) – March 31	(9.3)	(0)	(0)
Cash Available to pay for Commitments			
Cumulative required appropriation to fund projected disbursements	337.3	452.6	532.5
Cumulative commitments/Board approved amounts at March 31	(592.0)	(601.0)	(601.0)
Unfunded Liability	(254.7)	(148.4)	(68.5)

<sup>\*</sup> Amount needed to cover disbursements for the current year. Of the amount of \$115.3M for 2015-16, \$71.8M must be received in early April 2015 to cover the expenses of April 2015 to September 2015. The balance of \$43.5M can be paid during the summer 2015. Of the amount of \$79.9M for 2016-17, \$38.1M must be received in early April 2016 to cover expenses of April 2016 to September 2016. The balance of \$41.8M can be paid during the summer 2016.

# 2014 Contribution agreement (\$499.85M) Cash flow for the period April 1, 2014, to March 31, 2017 (\$M)

Fiscal year	2014-15	2015-16	2016-17
Cumulative Surplus (Shortfall) – April 1	0	16.1	0
Projected Disbursements per Fund			
John R. Evans Leaders Fund	22.5	59.6	45.0
Innovation Fund 2015		30.9	72.2
College-Industry Innovation			9.0
Total Disbursements	22.5	90.5	126.2
Interest Earned	0.1		
Required appropriation to fund projected disbursements			
Payments received	38.5		
Expected cash flow needs*		74.4	126.2
Cumulative Surplus (Shortfall) – March 31	16.1	0	0
Cash Available to pay for Commitments			
Cumulative required appropriation to fund projected disbursements	38.5	112.9	238.7
Cumulative commitments/Board approved amounts at March 31	(353.0)	(449.0)	(499.9)
Unfunded Liability	(314.5)	(336.1)	(261.2)

<sup>\*</sup> Amount needed to cover disbursements for the current year. Of the amount of \$74.4M for 2015-16, \$24M must be received in early April 2015 to cover the expenses of April 2015 to September 2015. The balance of \$50.4M can be paid during the summer of 2015. Of the amount of \$126.2M for 2016-17, \$67.3M must be received in early April 2016 to cover expenses of April 2016 to September 2016. The balance of \$58.9M can be paid during the summer of 2016.



In 2014, the CFI engaged KPMG LLP to assist with the update of the key risks facing the CFI. As a result of this exercise, the CFI has identified seven primary risks and related mitigation measures. These are summarized in the table below. These risks represent the major risks facing the organization at the present time. Information on secondary risks is available upon request.

The risks identified below are ordered according to their potential impact on the CFI.

Strategic risks		
Risks	Mitigation Measures	
Risk that the CFI is unable to maintain and/or secure ongoing political support at the federal level.      Risk that the CFI is unable to maintain and/or secure ongoing political support at the federal level.	<ul> <li>The CFI undertakes regular ongoing discussions with Government of Canada officials in ministerial offices and senior department managers on the requirements for research infrastructure, the leveraging of benefits, the multidisciplinary reach and impacts of CFI investments and ideas for the future of the CFI and the research and innovation ecosystem.</li> <li>The CFI regularly provides parliamentarians with evidence on the ways that infrastructure assists in attracting and retaining top research talent, enables world-class research and supports innovation.</li> <li>The CFI leads and participates in outreach and communications activities specifically targeted to parliamentarians.</li> <li>The CFI consistently demonstrates value-for-money and how infrastructure funding has been and continues to be responsive to government priorities and research community requirements.</li> <li>The CFI disseminates success stories and evaluation assessments to demonstrate the results of CFI investments.</li> <li>The CFI seeks to capitalize on the strength of its solid reputation as a world-class funding agency.</li> <li>The CFI includes elected officials and media in celebrations and public events.</li> </ul>	

- 2. Risk that the fiscal realities of the provinces will result in reduced and/or delayed support for CFI projects (e.g. via matching funds, S&T funding in the province).
- Provincial partners are given 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 conducts ongoing monitoring of provincial research and innovation activities.
- The CFI communicates the value of the 40 percent funding provided by the CFI.
- The CFI communicates with provinces on funding parameters and competition schedules to assist them in their planning.
- While the CFI endeavours to accommodate provinces with cash flow challenges, CFI funding is provided only when partner funding has been secured.
- 3. Risk that key stakeholders, including federal funders at both the administrative and political levels, do not understand the activities, outcomes and impacts associated with CFI funding.
- The CFI consistently sends the message that world-class research requires state-ofthe-art infrastructure.
- The CFI reports on and communicates to all stakeholders the outputs, outcomes and impacts of the research enabled by infrastructure.
- 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's communications strategy focuses on highlighting the key results and social and economic outcomes of the research enabled by CFI investments.
- The CFI Navigator fosters and enables communication and linkages between CFIfunded 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.
- The CFI continues to explore new ways of telling the stories of the impacts of research enabled by CFI-funded infrastructure.

- 4. Risk that overall funding cannot be balanced to support different stakeholder needs (e.g. between capital and operating and maintenance investments).
- The CFI conducts ongoing consultations with the research community and government to determine the balance of funding types for major science initiatives and multi-institutional facilities.
- The CFI undertakes discussions with government and other funding organizations on funding pressures and how best to optimize the overall funding system.
- Latest Innovation Fund competition provides additional operating and maintenance funding for projects with greater needs for operational support.
- The Infrastructure Operating Fund provides institutions with flexibility to address projects with varying needs.
- The CFI continues to advocate for a national strategy to best address the requirements for large-scale research infrastructures.
- 5. Risk that *Funding agreement* requirements impairs the ability of the CFI to be responsive to stakeholder needs in a timely and flexible manner (e.g. through new programs).
- The CFI regularly consults with institutions to understand their needs and explain the specifics of federal funding programs and opportunities.
- The CFI briefs parliamentarians and senior government officials on the value of a flexible model, alignment of funding mechanisms with the federal Science, Technology and Innovation Strategy and the granting agencies and on the needs of institutions.
- Communication and outreach activities underscore the need for flexibility as a means to enable the CFI to achieve the expected results specified in its Funding agreements.
- The CFI encourages the research community to work with the CFI to communicate its needs to key decisionmakers.
- 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.

Human resources risks	
Risks	Mitigation Measures
6. Risk of turnover and/or loss of corporate memory among critical leadership positions.	<ul> <li>The horizontal structure of the CFI facilitates the effective transfer of corporate knowledge throughout the organization and in periods of leadership turnover.</li> <li>The CFI maintains a competitive compensation structure and a balanced work environment that help attract and retain top talent.</li> <li>The CFI succession plan is reviewed and updated every two years.</li> </ul>

Information technology/Information management	
Risks	Mitigation Measures
7. Risk that information is not managed and/or accessible in a manner to support and enable effective and timely decision making	<ul> <li>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.</li> <li>The Performance, evaluation, risk and audit framework (PERAF) exercise periodically reviews and updates information requirements needed to inform strategic business decisions and directions.</li> <li>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 Information Management team. BI training is available on an ongoing basis, and specialized training sessions are provided as needed.</li> <li>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.</li> </ul>

tools for the CFI to be a trusted voice.

