

Management Response and Action Plan to the Evaluation of the Industry-driven Collaborative Research and Development sub-program.

Context

The Industry-driven Collaborative Research and Development (IDCRD) sub-program represents NSERC's largest suite of initiatives supporting industry-academic partnerships, and is composed of several funding opportunities. The recently completed evaluation covered the three principal IDCRD grants, which accounted for expenditures of \$643 million from 2009 to 2014, as follows:

- Collaborative Research and Development (CRD) grants provide funding for up to 5 years to support well-defined projects undertaken as partnerships between university researchers and partners in private industry;
- Industrial Research Chairs (IRC) grants award professorships to individuals for an initial period of 5 years (renewable in 5 year increments) who leverage their outstanding stature by integrating an industry-based collaboration at a university;
- Engage grants support well-defined industry-driven 6 month research projects that represent a new collaborative relationship between a university researcher and a private sector company; NSERC funding is limited to \$25,000 per grant.¹

The three grants are used to motivate Canadian industry to partner with universities, and to incent university researchers to apply their expertise to industrially relevant research challenges. As such, these grants assist in allowing industry to meet its R&D needs and obtain access to the knowledge, equipment, and talent in Canadian universities. At the same time, university researchers benefit by having an opportunity to conduct research and create new knowledge and technology for company specific needs and learn about new research opportunities and needs. Moreover, students become exposed to R&D in an industrial context, while gaining expertise and knowledge required for future employment.

The evaluation was undertaken to assess the relevance and effectiveness of the program in meeting its objectives, and to assess the efficiency of the management of the program. The evaluation was also designed to ensure that NSERC adheres to the requirements of section 42.1(1) of the Financial Administration Act and the Treasury Board Policy on Evaluation (2009).

Overall Comments

Management is pleased with the findings of the evaluation that confirm that the the IDCRD subprogram is a high profile opportunity that is highly relevant, has strong performance, and is being delivered in an efficient manner. The evaluation confirmed that the IDCRD sub-program is designed to meet the needs of both industrial partners and academic researchers. Each funding

¹ IRC grants have been in operation since 1978; CRD grants since 1983; and Engage grants since 2009.

opportunity included in the sub-program adopts a different means to achieve common objectives: fostering partnerships in natural sciences and engineering that facilitates the transfer of knowledge and skills to the user sector through awards that support research projects and activities intended for socioeconomic impact. The partnerships encouraged and enabled by the sub-program also increase the commercialization of Canada's research through new products, services, and processes for the benefit of all Canadians. Moreover, while industrial R&D expenditures in Canada decline, these grants are attracting increased levels of partner contributions, and the partners tend to maintain or increase their R&D expenditure after the grants.

Responses to each recommendation and the management action plan are presented below.

RECOMMENDATIONS AND MANAGEMENT RESPONSE

Recommendation #1. Maintain the Industry-Driven funding opportunities. The grants support the role of NSERC in contributing to the Canadian ecosystem of innovation by encouraging research collaborations between industry and universities and are well aligned with government priorities. They are designed to meet the needs of both industrial partners and academic researchers, in which each funding opportunity adopts different means to achieve common objectives: fosters partnerships in natural sciences and engineering and facilitate the transfer of knowledge and skills to the user sector. Program management has demonstrated that it is equipped to address the changing landscape of university-industry collaboration via incremental changes to the programs.

Management Response: Agree

The IDCRD subprogram and its funding elements have been deemed to be highly relevant, meeting the needs of academia and industry alike. The evaluation provides strong rationale for the continued support and incremental development of the sub-program and its funding elements. As the implementation of the NSERC 2020 Strategic Plan moves forward, NSERC will continue to ensure that the IDCRD remains relevant and aligned with the needs of our stakeholders.

Recommendation #2. Continue efforts to develop common metrics for the measurement of impacts on industry and consider homogenizing vocabulary among grants. All three grants have very evolved performance measurement systems that have contributed to the on-going management of the program, as well as to this evaluation. These systems could be improved by increasing the use of common measurements to assess impacts on industry. Additionally, some terminology would benefit from more homogeneity across the grants use, such as the notions of partnership, collaboration, and networking as well as the various activities associated with knowledge (creation, dissemination, exchange, translation, mobilisation, etc.).

Management Response: Agree

As the sub-program elements were developed separately over the course of many years, RP Management is in full agreement that common language and metrics need to be developed, as these elements have been combined under the common IDCRD subprogram. Furthermore, common performance measures need to be developed in a coherent fashion. As these funding elements are integrated into NSERC's Research Portal, this will likely form the ideal moment to put into full practice the coherent vocabulary and measurement practices.

Recommendation #3. Consider revising the Engage logic model to improve alignment with the objectives of the grants. While the Engage logic model was built cooperatively with grant administrators, it includes some outcomes that are not related to program objectives and for which Program management should not be held accountable for achieving (e.g., HQP training).

Management Response: Agree

The logic model for Engage indeed includes some elements that are not well aligned with the objectives of the grants. A review of the logic model and Engage's objectives will be carried out to ensure alignment.

ACTION PLAN

Recommendation	Agree Partially Agree Disagree	Proposed Action	Responsibility	Timeline
<p>Recommendation #1. Maintain the Industry-Driven funding opportunities. The grants support the role of NSERC in contributing to the Canadian ecosystem of innovation by encouraging research collaborations between industry and universities and are well aligned with government priorities. They are designed to meet the needs of both industrial partners and academic researchers, in which each funding opportunity adopts different means to achieve common objectives: fosters partnerships in natural sciences and engineering and facilitate the transfer of knowledge and skills to the user sector. Program management has demonstrated that it is equipped to address the changing landscape of university-industry collaboration via incremental changes to the programs.</p>	Agree	Continue to support the IDCRD subprogram, and its three funding elements: CRD, IRC and Engage grants. Ensure that these grants continue to align with NSERC objectives and the needs of academia, industry, and other stakeholders as the research ecosystem evolves in the future and as the NSERC2020 Strategy goals are realized.	RP Management	Ongoing.

Recommendation	Agree Partially Agree Disagree	Proposed Action	Responsibility	Timeline
<p>Recommendation #2. Continue efforts to develop common metrics for the measurement of impacts on industry and consider homogenizing vocabulary among grants. All three grants have very evolved performance measurement systems that have contributed to the ongoing management of the program, as well as to this evaluation. These systems could be improved by increasing the use of common measurements to assess impacts on industry. Additionally, some terminology would benefit from more homogeneity across the grants use, such as the notions of partnership, collaboration, and networking as well as the various activities associated with knowledge (creation, dissemination, exchange, translation, mobilisation, etc.).</p>	Agree	<p>In order to improve the performance measurement systems there will be common terminology and accompanying metrics agreed on to more readily assess the impact these grants have on the industrial partners or sectors. These efforts will also be relevant in the design of the Research Portal in the future.</p>	<p>Colleges, Commercialization and Portfolio Planning Division, RP Directorate</p>	<p>March 31, 2017</p>
<p>Recommendation #3. Consider revising the Engage logic model to improve alignment with the objectives of the grants. While the Engage logic model was built cooperatively with grant administrators, it includes some outcomes that are not related to program objectives and for which Program management should not be held accountable for achieving (e.g., HQP training).</p>	Agree	<p>This recommendation will be acted upon this fiscal year by undertaking a review of the logic model and Engage's objectives to ensure alignment.</p>	<p>Regional Development (Ottawa)</p>	<p>March 31, 2017.</p>