



Canadian Evaluation Society
Société canadienne d'évaluation

CES - CESEF Student Evaluation Case Competition 2014

Case for the Final Round

Evaluation of the Mitacs Accelerate Program

June 16, 2014

This case was developed strictly for educational purposes.

The Request for Proposals that forms the case does not entail any commitment on the part of Mitacs, the Canadian Evaluation Society (CES), the CES Educational Fund or any of the 2014 competition sponsors.



Canadian Evaluation Society
Educational Fund

Fonds de la Société canadienne
d'évaluation pour l'éducation

Welcome to the Final Round of the 2014 Case Competition!

Congratulations to all three teams for qualifying for the final round. We look forward to your presentations later today!

The competition organizers warmly thank Drs Rob Annan and Véronique Dugas from Mitacs for providing the information that underlies this case.

Scenario for the Presentations

Your consulting firm is one of three that have been invited to respond to the attached Request for Proposals (RFP) for an evaluation of the Mitacs Accelerate Program.

The Mitacs evaluation department, supported by an advisory group of external evaluation experts, has requested a briefing from each firm on their proposal.

After considering the information conveyed in the briefings, the advisory group will recommend one of the proposals to Mitacs. The team that prepared the recommended bid will be declared the winner of the 2014 Student Case Competition!

Rules for the Final Round

1. Coaches must not communicate with their teams once the case document has been distributed to the team.
2. Teams may use the Internet to search outside resources but may not consult with any individuals or organizations.
3. Organizers may interrupt teams briefly to take pictures of members at work preparing their presentation.
4. Presentations should be no longer than 20 minutes. A timekeeper will give a warning as the end of the presentation period approaches.

5. Teams may present in either or both official languages.
6. The judges will have up to 10 minutes after each presentation to ask questions. They will use the team's language, or languages, of choice.

Assessment Criteria

The following criteria will be used for judging the presentations:

<i>Criteria</i>
Thoroughness in addressing the evaluation requirements that are outlined in Section 4.0 of the RFP
Quality of the presentation in terms of clarity, flow of information, persuasiveness and interaction with the judges
Team members' involvement and collaboration in the presentation and in the subsequent question and answer session

Questions or Problems

To communicate with organizers during the competition, please contact one of the following:

<i>Name</i>	<i>Telephone Number</i>	<i>Email</i>
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Request for Proposals:

**Evaluation of the
Mitacs Accelerate Program**

June 16, 2014

1.0 Overview of the Mitacs Accelerate Program

[Mitacs](#) is a not-for-profit research organization dedicated to promoting high-quality research and innovation by building linkages between academia and industry across all academic disciplines. Mitacs supports the attraction, training, retention and deployment of highly qualified personnel by delivering a range of programming.

Accelerate, one of several programs delivered by Mitacs, helps businesses gain a competitive advantage by enabling them to tap into the talents and expertise of graduate students and post-doctoral fellows who serve as interns.

The program gives interns an opportunity to develop their skills while working on real-world business problems. It provides host organizations with access to excellent graduate students and postdocs who, guided by their academic supervisor, work on research and development (R&D) projects that address the organization's business needs. For the academics who guide the interns, participation in the program creates or strengthens connections with Canadian organizations.

Accelerate internships are for four to six month periods. During an internship, students receive a stipend of at least \$10,000. Master's students can participate in up to two internships while PhD students and post-doctoral fellows can participate in up to six.

An intern must be a graduate student or post-doctoral fellow enrolled at a Canadian university. The intern is expected to spend a minimum of 50% of his/her time on site with the host organization. A host organization may be either for-profit or non-profit. An internship supervisor must be a university faculty member.

Applications to the Accelerate program are assessed by external experts. They provide recommendations to Mitacs for its decisions on the applications.

Mitacs works to connect companies with the most appropriate university expertise to solve identified challenges. Its Business Development Team,

located across Canada, provides a point of contact between the academic community and industry partners. With diverse industry and academic backgrounds, members of the Business Development Team have on-the-ground knowledge of the needs of local industry representatives and the expertise of university researchers.

Mitacs currently employs 32 Business Development Directors and Specialists in Canada. This growing network of business development personnel allows Mitacs to efficiently match industrial challenges with academic expertise.

Given the large number of potential interns seeking industrial partners, Mitacs cannot always work directly with them in locating an appropriate situation. However, the Mitacs website provides suggestions for students on how to go about finding a partner company. See <https://www.mitacs.ca/accelerate/apply-now/interns-getting-started>

In summary, Mitacs is able to provide the following benefits to program participants:

- Host organizations have access to cutting-edge research and skills;
- Graduate students and post-doctoral fellows gain valuable applied research experience in an industry setting; and
- Academic researchers have opportunities to collaborate with industry.

Through its activities, Mitacs is expected to achieve the following results:

- Increase collaboration and knowledge transfer between academia and industry, in various sectors of the Canadian economy including the non-profit sector;
- Create job opportunities for graduate students and post-doctoral fellows in various disciplines by providing them with an opportunity to gain real experience in the workplace;
- Improve employability of graduate students and post-doctoral fellows in their field;
- Increase retention of domestic and international graduate students and post-doctoral fellows in Canada after completion of studies, in part through the opportunity to create job-related networks;

- Increase participating organizations' investments in research, development and innovation; and
- Contribute to improved productivity and competitiveness of Canadian industry in the global economy.

Mitacs introduced a pilot of the program in 2003. It focused exclusively on research in the mathematical sciences, whereas the current version of Accelerate embraces all disciplines. The program has grown consistently in terms of the number of interns and internships, number of funders, and level of funding received.

1.1. Internships Delivered

As students are allowed to participate in more than one internship, the number of internships delivered is higher than the number of interns supported. Data are provided in Table 1. From 2011/12 to 2013/14, there were roughly 5,086 internships delivered through Mitacs Accelerate.

Table 1: Internships Data

<i>Fiscal Year</i>	<i>Interns</i>	<i>Internships</i>
2011/12	894	1241
2012/13	908	1710
2013/14 (target)	-	2135
2014/15 (target)	-	2200
2015/16 (target)	-	3000

1.2. Internships by Discipline

As illustrated in Figure 1, Mitacs programming involves a full spectrum of academic disciplines.

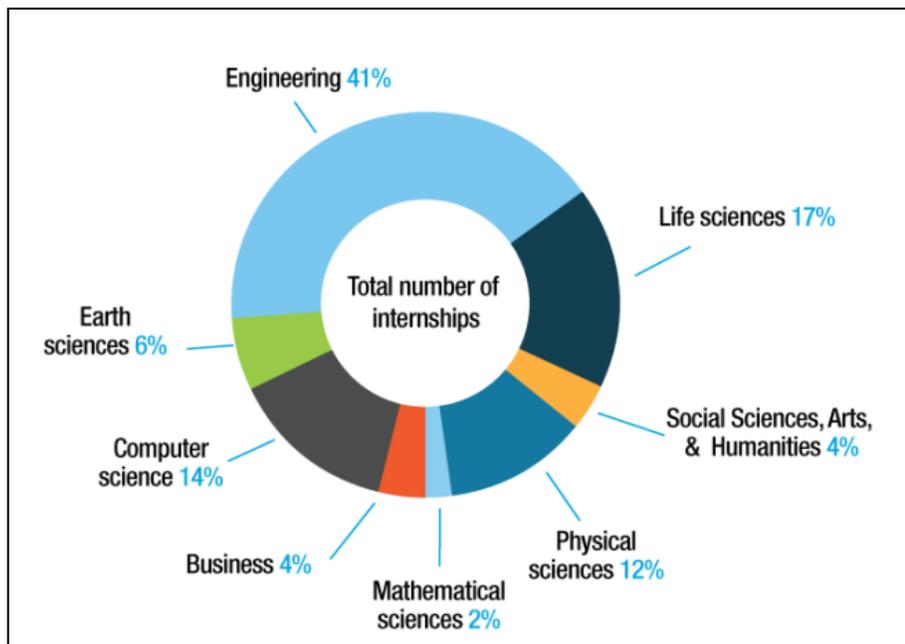


Figure 1: 2012-13 Internships by Discipline

1.3. Funding

Accelerate is funded by a combination of federal and provincial government and private sector contributions. Program funding from federal and provincial governments during the fiscal year ending March 31, 2013 is shown in Table 2.

Table 2: Federal and Provincial Funding

<i>Funding Source</i>	<i>Amount</i>
National Sciences and Engineering Research Council (NSERC) - Industrial R&D Internship Program (IRDI)	\$4,096,512
Industry Canada	\$4,821,300
National Research Council - Industrial Research Assistance Program (IRAP)	\$804,000
Western Economic Diversification (WED)	\$1,762,000
Atlantic Canada Opportunity Agency	\$114,500
Provinces	\$7,751,480
TOTAL	\$19,349,792

1.4. Organizations Involved

In 2012-13, Mitacs Accelerate supported internships across Canada at over 670 companies, a 32% increase from the previous year.

2.0 Need for the Program

According to the Conference Board, Canada ranks 13th among 16 peer countries in terms of innovation.¹ Low levels of innovation contribute to lower levels of business productivity in Canada, which has broad implications for Canada's prosperity and standard of living.

Productivity is the most important determinant of a country's per capita income over the long term. From 1981 to 2007, increases in labour productivity contributed 57% of the growth in per capita income. It was the largest contributor to an improved standard of living in Canada.² However, Canada ranks well behind other developed countries in terms of increases in labour productivity, ranking 17th among 20 countries in the Organization for

¹ Conference Board of Canada.(2012). Who Dimmed the Lights? Canada's Declining Global Competitiveness Ranking, pg. 6

² Boothe P. & Roy R., 2008, pg. 4

Economic Cooperation and Development (OECD), and 6th among the Group of 7 countries in terms of productivity increases over the last 30 years.³ According to Industry Canada calculations, in 2007 the level of business sector labour productivity in Canada was only 75% of the level in the United States.⁴

The report *Innovation Canada: A Call to Action* indicated that Canada invests significantly in university research and development (R&D) and is effective in generating new ideas and knowledge. However, it faces challenges in transforming the resulting ideas and knowledge into commercial applications through university-industry collaboration.⁵ As explained in the Conference Board of Canada's publication *How Canada Performs: A Report Card on Canada 2009*:

"...with some exceptions, Canada does not take the steps that other countries take to ensure that science is successfully commercialized and used as a source of advantage for innovative organizations seeking global market share." (pg. 6)

Canada lags behind other developed nations in business investment in R&D activities and the commercialization of R&D products. There is a need for programming that promotes business investment in these areas. In 2006 the Department of Finance indicated that business investment in innovation, research and development in Canada was lower than in most OECD nations, despite favourable tax measures and substantial public investments in primary research. At 0.8% of Gross Domestic Product (GDP), Canadian business expenditure on R&D in 2011 was well below international averages. Canada's international ranking declined from 21st in 2008 to 25th in 2011 out of 41 economies.⁶

There is empirical evidence that R&D performed by business, rather than by universities and governments, contributes most directly to productivity growth.⁷ While the low levels of spending on R&D activities in Canada are, in part, attributable to the structure of the Canadian economy, the overarching

³ idem, pg. 5

⁴ idem

⁵ Industry Canada, 2011

⁶ Science, Technology and Innovation Council, 2012, pg. 43

⁷ Council of Canadian Academies, 2009, pg. 8

factor hampering business investment is the lower commitment of Canadian businesses to innovation-based strategies relative to their counterparts in the US and many other economically advanced countries.⁸

2.1 Mitacs Responds to the Need

In 2003, Mitacs launched a deliberate strategy to support Canadian innovation through meaningful research collaboration between industry and academia. This strategy involves two complementary missions: 1) to recruit, train and retain future generations of innovators; and 2) to boost innovation by establishing and supporting research linkages between Canada's universities and non-academic organizations (including industry, hospitals, and other not-for-profits). Done right, such collaborations leverage academic research capabilities to boost business innovation while creating an ideal training platform for the development of professional skills and industrial research experience.

Accelerate, Canada's preeminent graduate research internship program, is at the heart of the Mitacs strategy. Since 2003, Mitacs has delivered over 6,000 Accelerate internships across Canada, partnering with over 1,700 companies and other non-academic organizations and 58 Canadian universities. Accelerate has become a key feature of Canadian support for innovation.

Accelerate was recognized in the federal 2012 budget by the allocation of an additional \$35 million over five-years. The first year of this funding has supported 670 additional internships, involving 393 students, 230 of whom were participating for the first time. The additional internships involved 268 professors drawn from a cross-section of 113 academic disciplines at 58 Canadian universities. There were 288 participating private-sector partners involved, more than 50% of which were small and medium sized enterprises.

⁸ idem

3.0 Challenges to Measuring Program Outcomes

3.1. Postgraduate Employment Data

An on-going challenge faced by Mitacs is the inability to access national data on postgraduate employment and retention against which the organization can compare data for program participants. Although Statistics Canada has some relevant data, there is little that relates specifically to graduate students and post-doctoral fellows.

By definition, all Accelerate participants will still be students at the end of their internship. Therefore, measures of employment recorded at the end of an internship project may be skewed. It may be too early to determine how the program has affected employment.

Mitacs needs an effective measure of employment outcome that recognizes the variety of post-internship scenarios. After completing an internship an individual may pursue further schooling for months or even years. The company that hosted an intern may hire someone else to fill an immediate need. Or an intern may take a job with an employer other than the internship host.

3.2. Attribution

Another challenge is the attribution of outcomes to Mitacs programming in an environment where many other variables are at play. Economic, regional or sector-specific variables may affect the outcomes of interest. The attribution of results is further complicated because they may occur through many pathways and over long periods of time.

The impact of research results is not necessarily linear. There is not always a direct link between a given research project and the commercialization of findings. The impact of research may be from its opening of new avenues for exploration. Research results may lead to cost-savings by proving that a given business direction should be altered. Or a given research project may change the overall research direction of an organization by establishing ongoing relationships that lead to new ways of thinking. The indirect effects of R&D investments may take a decade or more to be manifest.

A challenge faced by Mitacs is to design effective short-term proxy indicators for effects that may be indirect or long-term.

4.0 Evaluation Requirements

Mitacs is asking you to develop a proposal for an evaluation of the effectiveness of its Accelerate Program in achieving the expected results listed on pages 2 and 3 of the RFP. The presentation of your proposal should include:

1. A demonstration of your understanding of the program objectives, design and theory of change;
2. An evaluation matrix that includes questions related to the program's effectiveness, relevant indicators, data sources, and data collection methods;
3. An explanation of how you would address the outcomes measurement challenges presented in section 3.0 as well as any challenges that you anticipate with your proposed methodology;
4. The types of analysis that you propose for the data collected;
5. Identification of two professional evaluation competencies that have been strongly developed by your participation in the bidding process (i.e., by your participation in the two rounds of the case competition).⁹

⁹ http://www.evaluationcanada.ca/site.cgi?s=50&ss=8&_lang=EN

4.1. Standards

The CES *Code of Conduct for Program Evaluation*¹⁰ is the standard used by the Government of Canada and should apply to an evaluation of the Accelerate program.

4.2. Budget

Bidders are not expected to present a budget in their proposal. However to help you appreciate the anticipated scope of the evaluation, we mention here that it will likely involve a budget of \$80,000 and an estimated level of effort of 100-120 consulting days.

¹⁰<http://www.evaluationcanada.ca/site.cgi?s=6&ss=10& lang=en>