

NSERC's Research Partnerships

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Research & Innovation Development Officer
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Natural Sciences and Engineering
Research Council of Canada

Conseil de recherches en sciences
naturelles et en génie du Canada

Canada



**NSERC
CRSNG**

WHY

HOW

WHAT



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Canada



NSERC
CRSNG

What's New

Arrival of our new President: Dr. Mario Pinto
New Science Technology & Innovation Strategy
NSERC 2020: Strategic Plan 2015 – 2020
Success of Strategy for Partnerships & Innovation





NSERC
CRSNG

Vision

Help make our region and our country a place of discoverers and innovators for the benefit of all Canadians





**NSERC
CRSNG**

Values

\$7 billion over the last 10 years

Basic research

Projects involving partnerships between industry and post-secondary institutions

Training of Canada's next generation of scientists and engineers





NSERC
CRSNG

Role

Invest in people, discovery and innovation to increase Canada's scientific and technological capabilities for the benefit of all Canadians





NSERC
CRSNG

Role

Fund research and foster innovation by encouraging Canadian companies to participate and invest in post-secondary research and training





NSERC
CRSNG

Goals

- Seizing opportunities / advancing knowledge
- Showing the value of R&D investments
- Building prosperity through research
- Increasing visibility of research
- Inspiring the next generation





NSERC
CRSNG

2014 - 2015

\$1.1 billion dollars

11,300 professors

30,500 post-secondary students and post-doctoral fellows

3,500 Canadian companies



**“Making Canada a country of discoverers and innovators
for the benefit of all Canadians”**

Investments

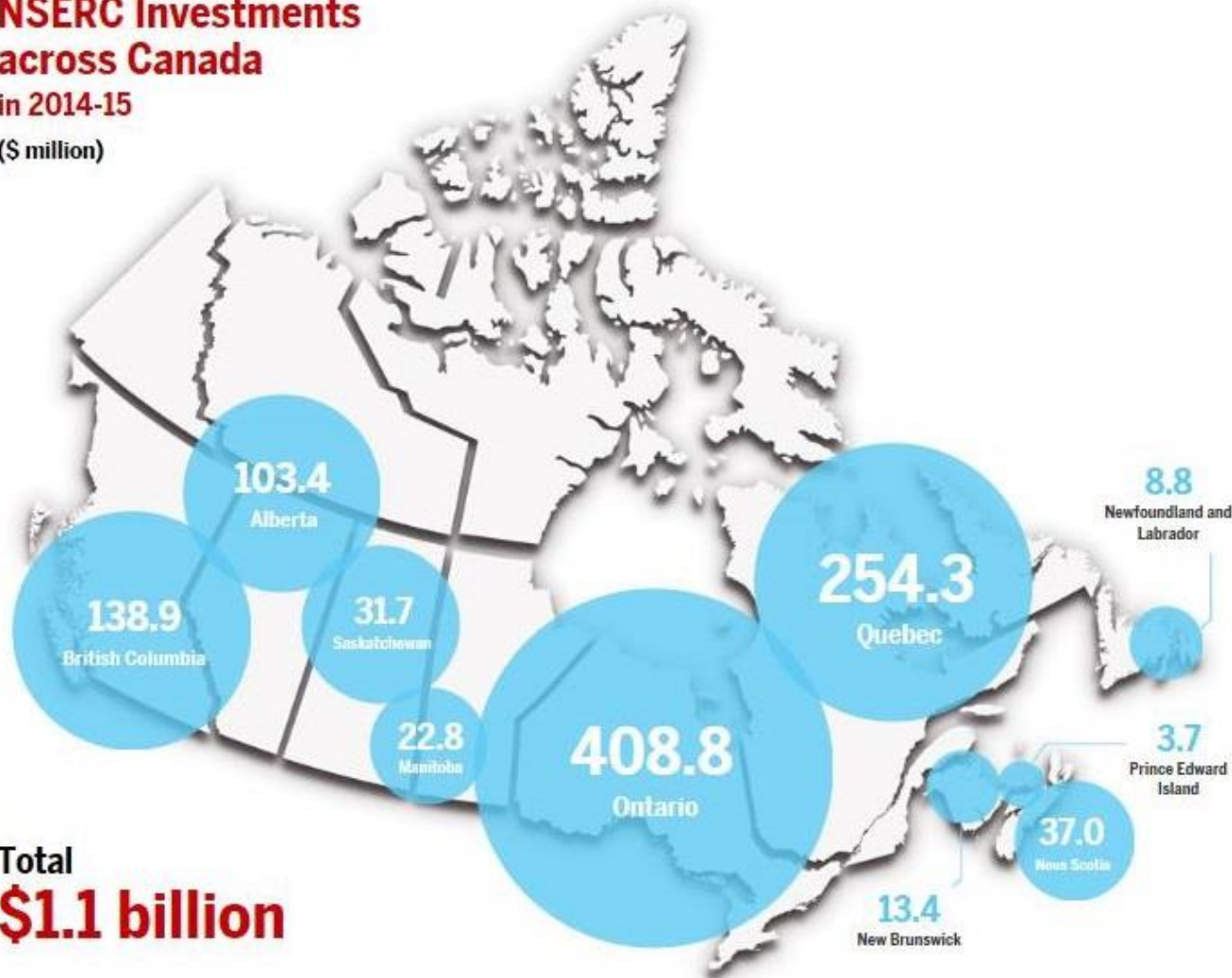
- Canada
- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Nova Scotia
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan

2011-12 | 2012-13 | 2013-14 | 2014-15

NSERC Investments across Canada

in 2014-15

(\$ million)



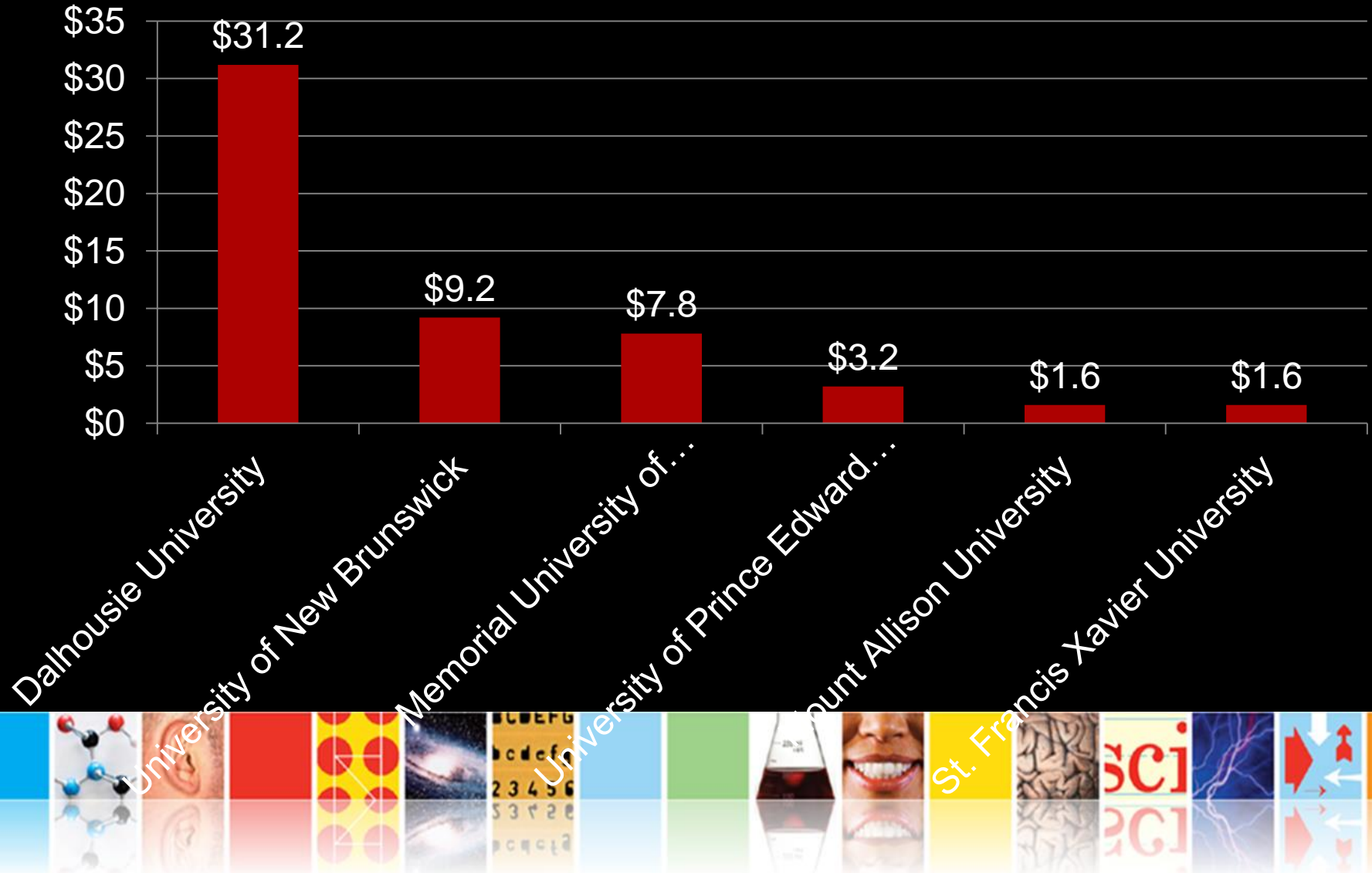
Total
\$1.1 billion

Research Priority Areas

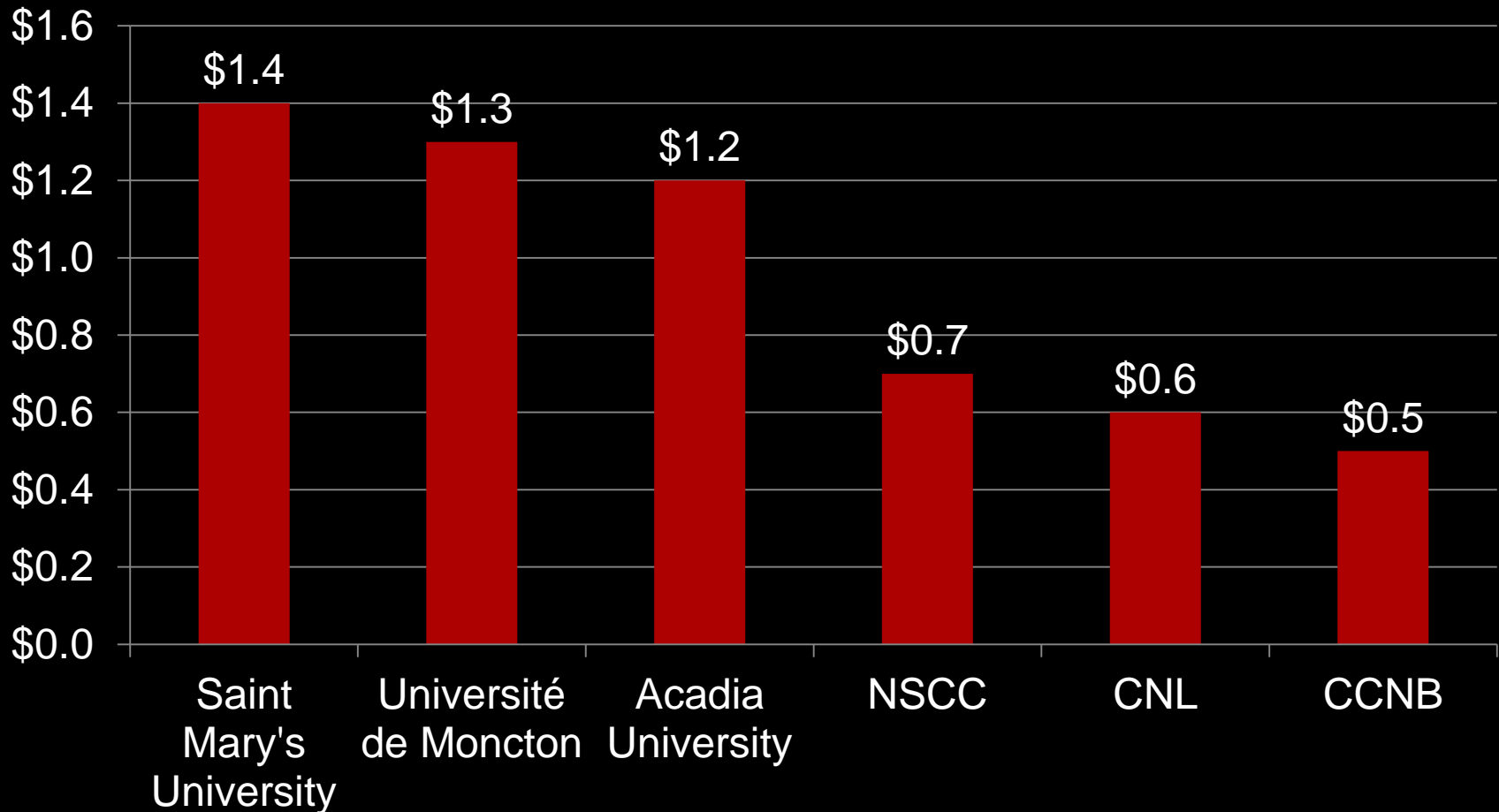
- Aerospace
- Automotive
- Environmental Science and Agriculture
- Forestry and Wood Products Research
- Health and Related Life Sciences and Technologies
- Information and Communications Technologies
- Natural Resources and Energy
- Northern Research
- Manufacturing
- Oil Sands and Heavy Oil
- Water-Related Research

Note: Provincial funding totals exclude grant payments made to recipients currently outside of Canada and administration costs, both of which are included in NSERC's total budget amount.

Total Funding 2014-15 (\$M)



Total Funding 2014-15 (\$M)



NSERC's Tools to Connect Industry with Academia and other Stakeholders

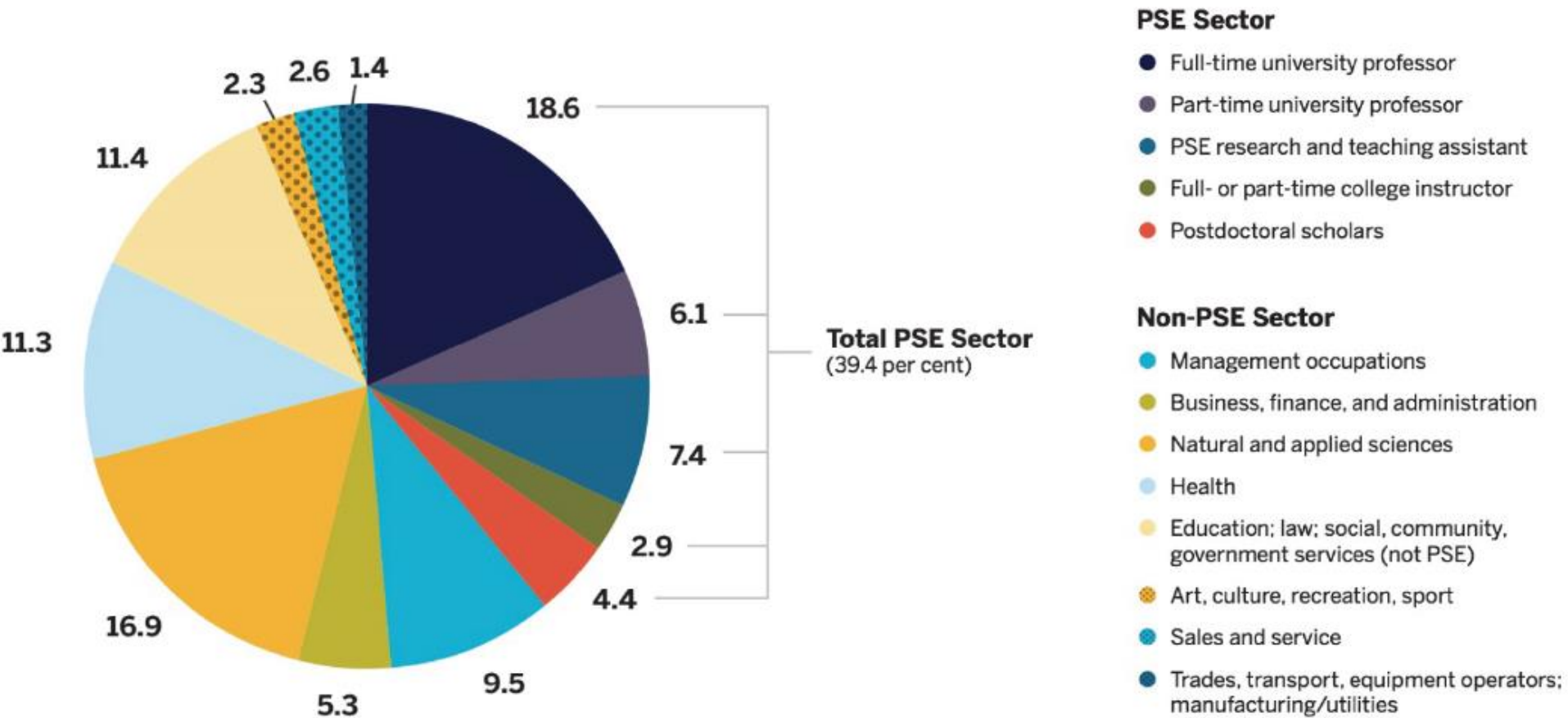


NSERC can help professors...

- Stimulate new areas of research
- Provide industrially-relevant training
- Create job opportunities for your students
- Encourage a company to work at university
- Network and build collaborative relationships
- Improve ability to attract future funding and personnel



PhD Holders in Canada



Benefits of Partnerships



We support projects with companies of all sizes – start-ups to small and medium enterprises (SMEs) to the largest companies operating in Canada.

Collaborations with over 3,500 companies backed by a scalable and flexible set of grant options.



Establish contact with companies

Call your NSERC Regional Office

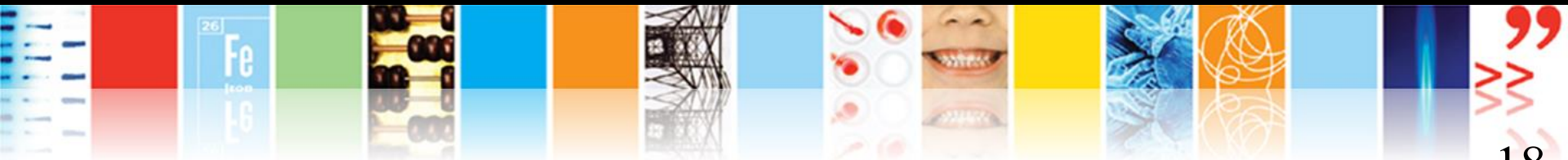
Participate in “Connector” events

Colleagues and former students

Conferences and Workshops

University Liaison Office

Social media: LinkedIn



NSERC can help companies...

Achieve competitive advantage and grow

Access high levels of expertise and advanced research facilities

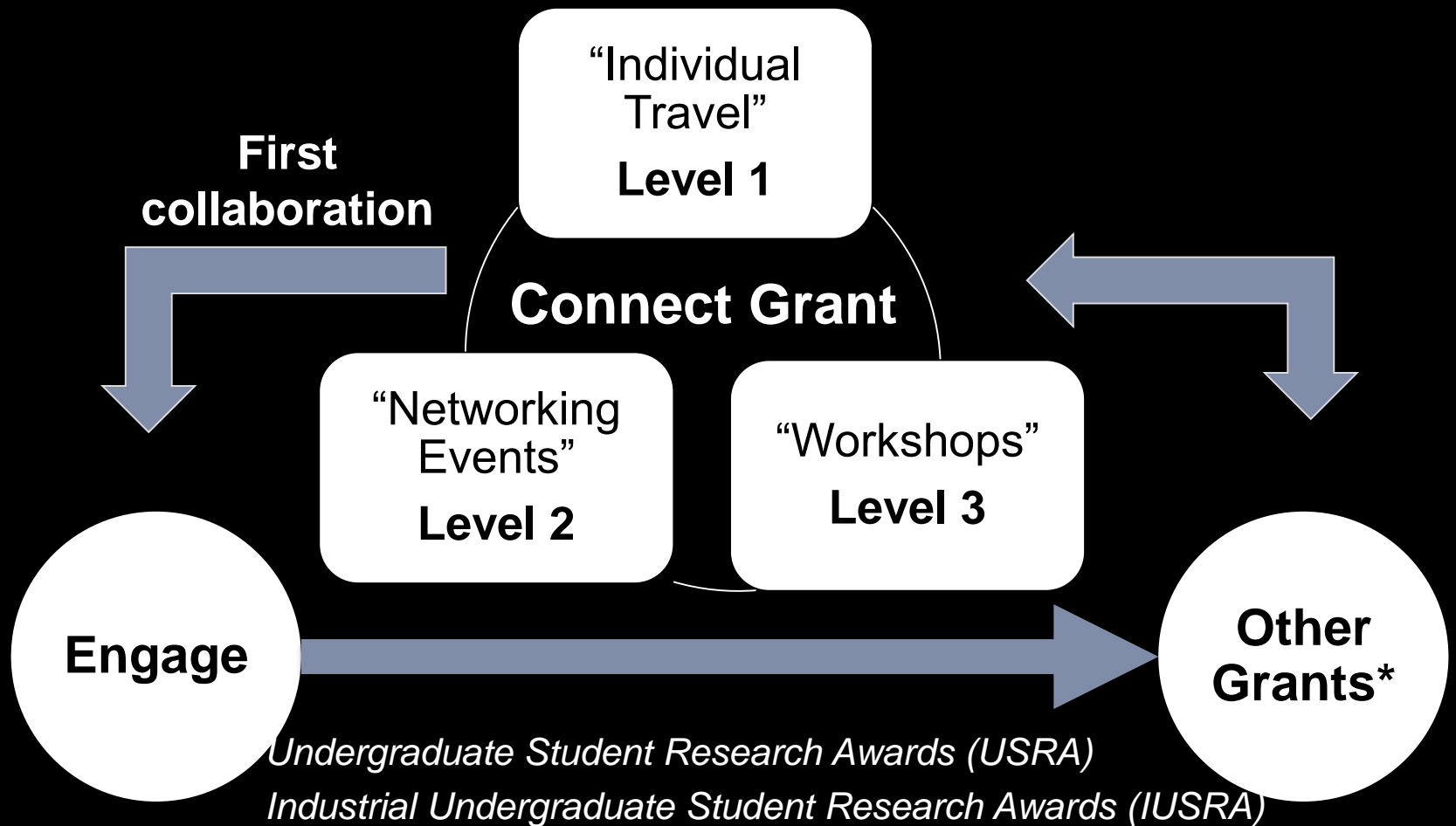
Students are potential future employees

Leverage and optimize R&D investments

Contributions qualify for SR&ED tax credits



What are the options?



* CRD, Strategic Partnerships, etc.

Partnership Options

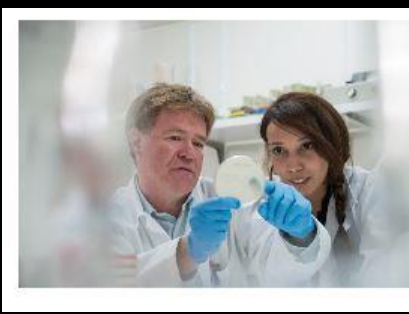
Grant Type	Description	Contribution	Benefits
Industrial / Undergraduate Student Research Awards (IUSRA) <i>Up to \$4,500</i>	16-week undergraduate student term on-site.	Typically \$1,125	2/3 of companies reported their student helped them increase research productivity or R&D capability.
Connect / Engage <i>Up to \$25,000</i>	6-month R&D project with a <u>university</u> or <u>college</u> expert.	In-kind	Find solutions to address a specific, short-term / long-term challenge. Resulting IP assigned to company.
Collaborative R&D (CRD) <i>Up to \$500,000 per project</i>	Focused long-term R&D project with a <u>university</u> researcher.	NSERC will match the company cash contribution and eligible in-kind	80% of companies developed new products or services, improved processes or enhanced competitiveness.



N SERC's Tools for Undergraduate Training with Private Sector



IUSRA



Student Training in Industry

Enrich theoretical knowledge with industry experience.

A 12 - 16-week period to conduct research

NSERC contribution: up to \$4,500

Company contribution: minimum of \$1,125

Up to 15 students per company per year

Potential future employees

Apply anytime; four-week turn-around



IUSRA's

Institution	2012-13	2013-14	2014-15
UNB	4	32	42
Dalhousie	11	21	33
U de M	4	8	18
MUN	7	24	17
Acadia	6	4	5
UPEI	13	5	4
MTA	4	5	2
SMU	1	1	0
St FX	1	0	0
Not Atlantic	5	4	4



Connect Grants

Level 1 Up to \$5,000 for travel costs related to the development of new academic-industry partnerships in natural sciences or engineering research.

Level 2 Up to \$10,000 for non-recurring, regionally oriented activities or events aimed at developing or promoting new academic-industry partnerships in natural sciences or engineering research, as well as student-industry training opportunities.

Level 3 Up to \$25,000 for non-recurring, nationally oriented research planning workshops aimed at building substantial new collaborations in natural sciences or engineering research between post-secondary researchers and partners in industry, government, not-for profit or other knowledge end-user groups.

All activities (including travel, events, and workshops) must take place within Canada.



Connect Grant for Exploring Collaboration

Travel Level 1

- Travel grant for academic researchers to meet with companies anywhere in Canada
- Support for travel and meeting costs
- Up to \$5,000 for 3 months
- No application deadline; fast-turnaround

Networking Level 2

- Connector activities to promote partnerships or industrial training
- Special networking events and activities in NSE
- Academic and industrial participants
- Typically \$1k-\$5k
- No application deadline

Workshops Level 3

- Seed new collaborations through a single workshop or multiple smaller events on a focussed topic
- Academic and industrial participants
- Up to \$25,000
- No application deadline



Connect with Colleges, Polytechnics and Universities (Pre-R&D)

Explore opportunities for business-researcher collaborations.



Connect Level 1

(Only 10 regional university/college requests in 2014-15)

To connect academics with Canadian industry



Connect Level 1 Grants in 2014-15 (up to \$5,000)

Institute	Number of Grants
Dalhousie University	3
Memorial University in Newfoundland	3
Cape Breton University	1
Holland College	1
New Brunswick Community College	1
Université de Moncton	1
University of New Brunswick	1



Connect Level 2 Grants in 2014-15

(up to \$10,000)

Institute	Number of Grants
Dalhousie University	3
Acadia University	3
College of North Atlantic	1
Nova Scotia Community College	1
Université de Moncton	1
Université de Sainte Anne	1
University of Prince Edward Island	1



Connect Level 3 Grants in 2014-15

(Up to \$25,000)

Institute	Number of Grants
University of New Brunswick	2
Dalhousie University	1
Cape Breton University	1
Memorial University in Newfoundland	1



NSERC's Tools for Collaborative R&D with Industry and Universities



Engage Grant

Partnership: **new** between 1 researcher & 1 company

Addresses: a **company-specific problem**

Value: up to **\$25,000** from NSERC (no cash required)

Project Timeframe: up to **6 months**

Deadline: none, apply anytime

Decision: ~ **6 weeks (85% success rate)**

Intellectual Property: company owned



Engage Grant



Engage with Colleges, Polytechnics
and Universities (R&D)

Address a short-term R&D challenge for a quick win.

Support new collaborations

Aimed at solving company-specific problem

Six-month project; up to \$25,000 from NSERC

No company cash required; just in-kind

New IP owned by company

Apply anytime; 4-6 week turnaround



Partner Eligibility

Canadian-based, industrial association, public utility...

R&D, manufacturing, technical activities in Canada and related to the project

Scientists, engineers or other technical staff to collaborate with you and located in Canada



Partner Eligibility

Receptor capacity - able to further develop and implement the research results into operations

Contact us to confirm eligibility of an industry partner before investing significant time in discussions and preparation of an application



Partner Eligibility

NEW

In operation for at least two (2) years

At least two (2) full-time employees

Supplementary info (2-pager)

Effective April 1st, 2016

Maximum: two (2) Engage grant per year



Section 3: Supplementary information from a company participating in an Engage Grant application

Company Name:		Completed Date:	
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TO BE COMPLETED ONLY AT THE REQUEST OF NSERC. In addition to the letter of support and completed Form 183A – Information Required from Organizations Participating in Research Partnerships, please address each of the questions below within two pages (total). This information must be completed by a company representative.

1. Provide information on the key employees (management and researchers/technical staff) that will be involved in the proposed research project and its application to the company’s operations. Indicate “X” in all but the first column below.

EMPLOYEE (Name, title or role, diploma/degree, if applicable)	Full-time or Part-Time ¹		Salaried , Contract, or Other ²			Work Location ³	
	Full-time	Part-time (%)	Salaried	Contractor	Other	Company facility	Elsewhere

2. What prior experience does the company, its personnel and advisors have in the area of business related to the research application?

3. Describe the company’s facilities (office, manufacturing, R&D and/or technical workspace):

¹ Full-time (i.e., does not also hold another job elsewhere) or Part-time (i.e., devotes only part-time or occasional efforts to the company). Indicate the percent of time spent.
² Salaried (i.e., Company issues a T4 slip), Contractor (i.e., Company pays against invoice, timesheet or similar and does not issue a T4 slip), or Other (i.e., Currently providing services without monetary compensation, in-kind)
³ Company premises (i.e., normally operates from workspace at the company) or Elsewhere (i.e., normally operates from outside company facilities, e.g., private home office)

Section 3: Supplementary information from a company participating in an Engage Grant application

Company Name:		Completed Date:	
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4. Demonstrate that the company has (or will have in the near term) the financial capabilities to achieve the expected results and outcomes associated with the proposed project:		
5. Indicate the percentage (%) of total financial resources by category of funding source (over the past year):		
Private/Industry contributions:		
Government contributions*:		* e.g., financial support from NRC's Industrial Research Assistance Program
Other**:		** Describe:
6. Explain how the company expects to exploit the technology/products/services resulting from the proposed research project and how it is linked the company's core activity or competencies:		

7. (FOR PRODUCER GROUPS OR INDUSTRIAL ASSOCIATIONS ONLY) Briefly describe the mandate of your organization and its current membership (if applicable). With respect to distributing the project results to the producer group or association's member companies, please explain the role of the organization in diffusing and implementing the project results. Provide details of past collaborations during postsecondary-based research projects and how the results were used.		

Applicant Eligibility

NSERC peer-reviewed grant within the past six (6) years

Rating of “**Strong**” or higher for the criterion “Excellence of the Researcher” in recent DG

Effective April 1st, 2016

Limited: one (1) Engage Grant per fiscal year



Company Letter of Support

Nature of the company-specific problem

Evidence of a corporate objective to grow

Benefits the anticipated outcomes will bring

Reasons for being involved in the collaboration

Efforts to date invested towards addressing problem

Further effort company will invest to advance results

Expects to integrate research results into operations

Anticipated interaction of its personnel during project



In-kind Contributions / Budget

Salaries for scientific / technical staff

Identify and define role, expertise, what they bring to the project, and their commitment (name, position, hours, rate).

Equipment / software

How will it be used? How was the cost calculated?

Material / field work logistics

What is being provided and why is it important?

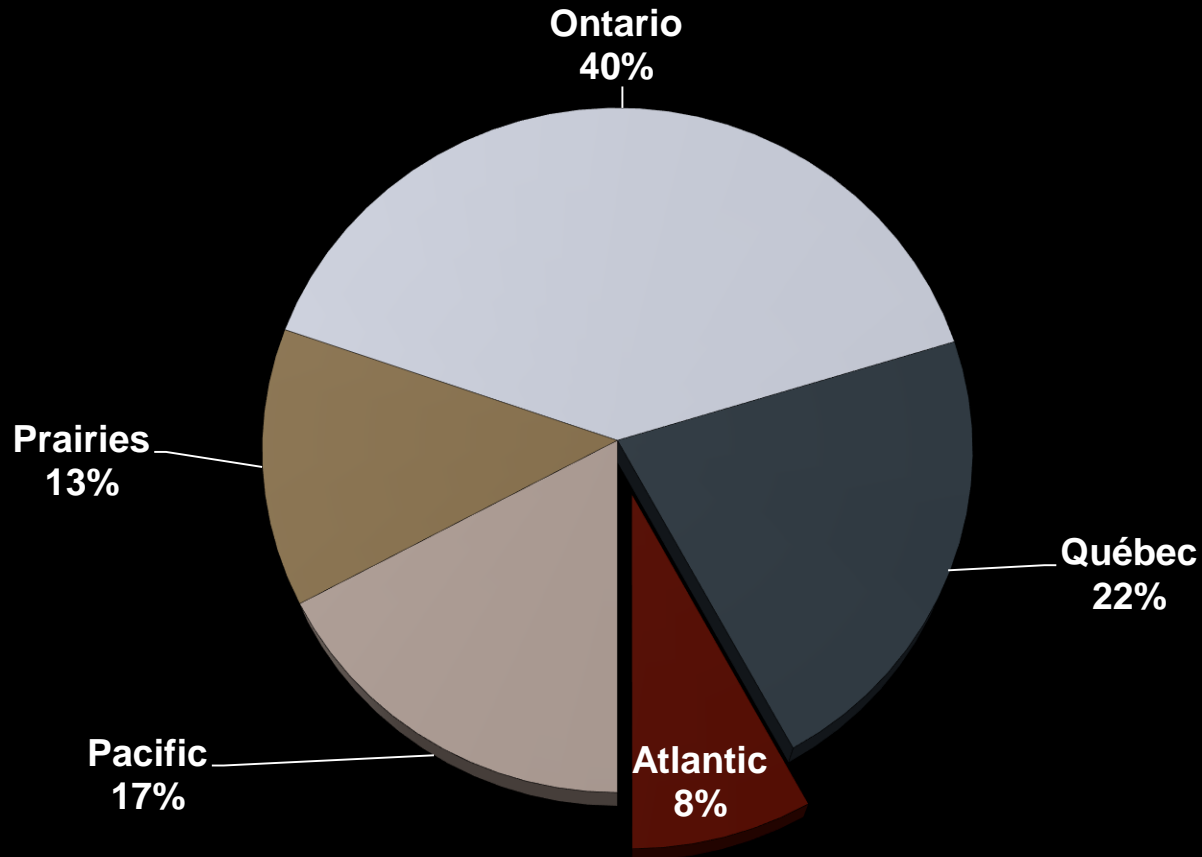
Provision of services

What is cost of providing these services and why are they needed?



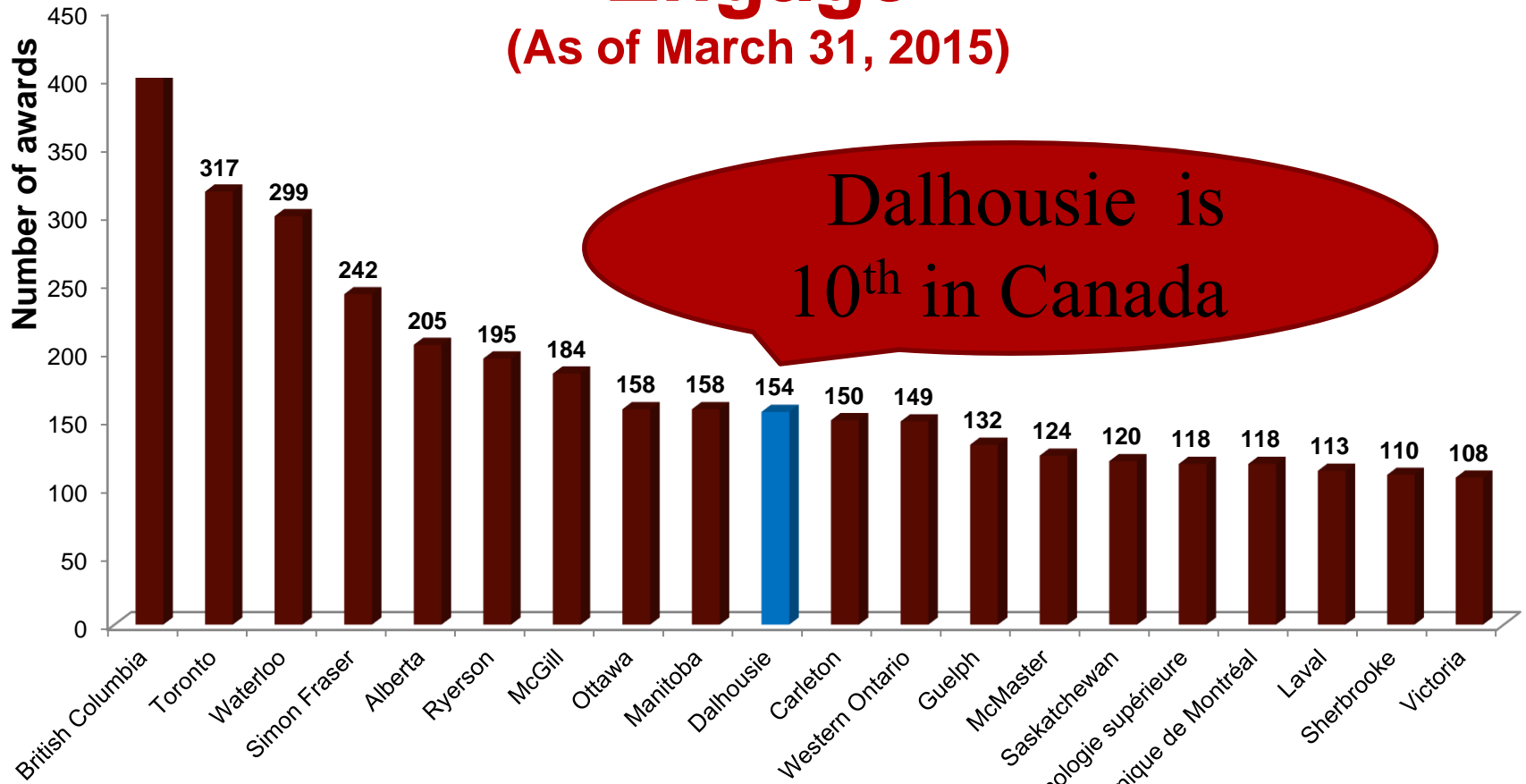
Engage Grants by Region

4860 as of March 31, 2015

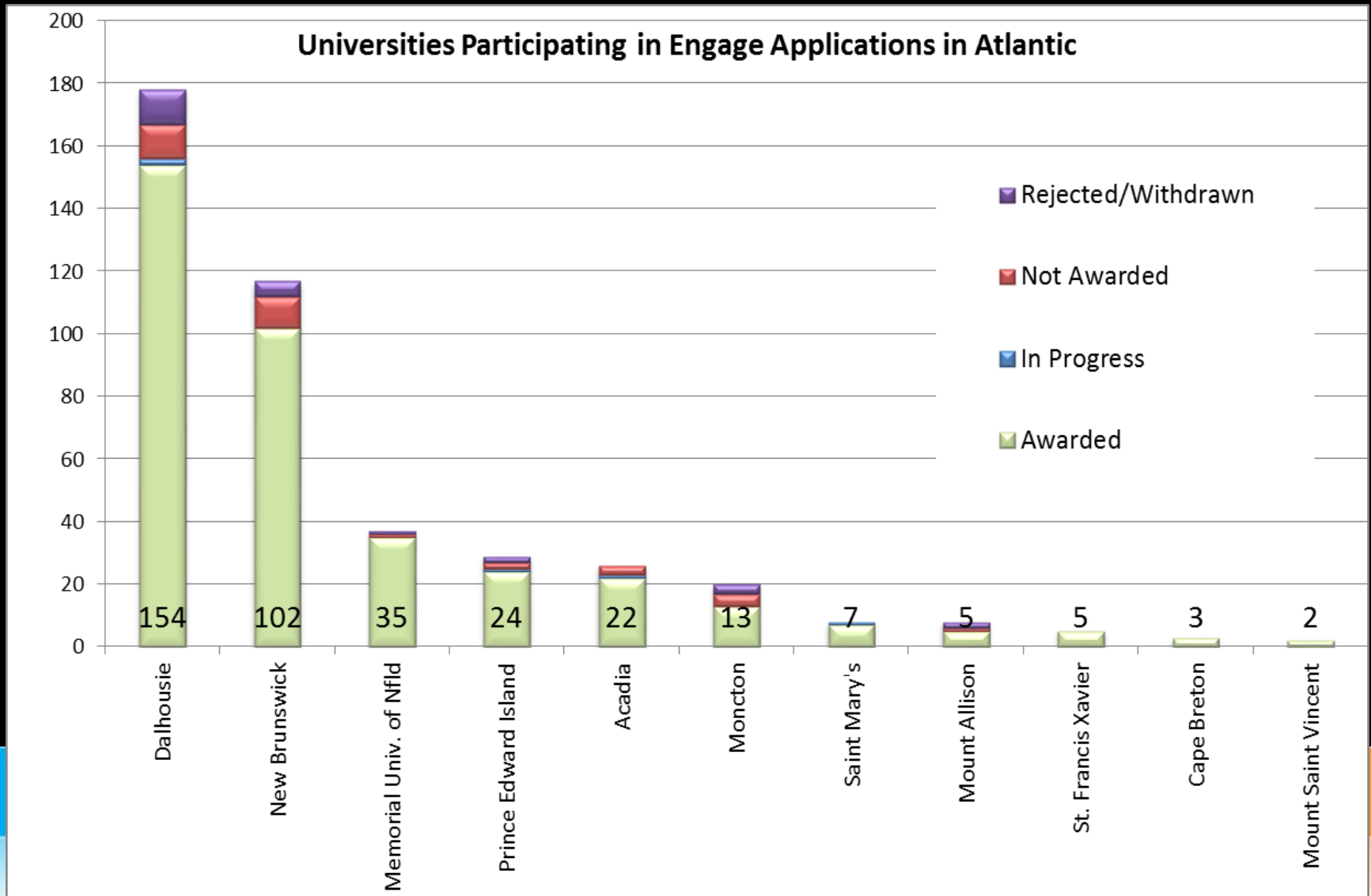


20 Universities Participating in Engage

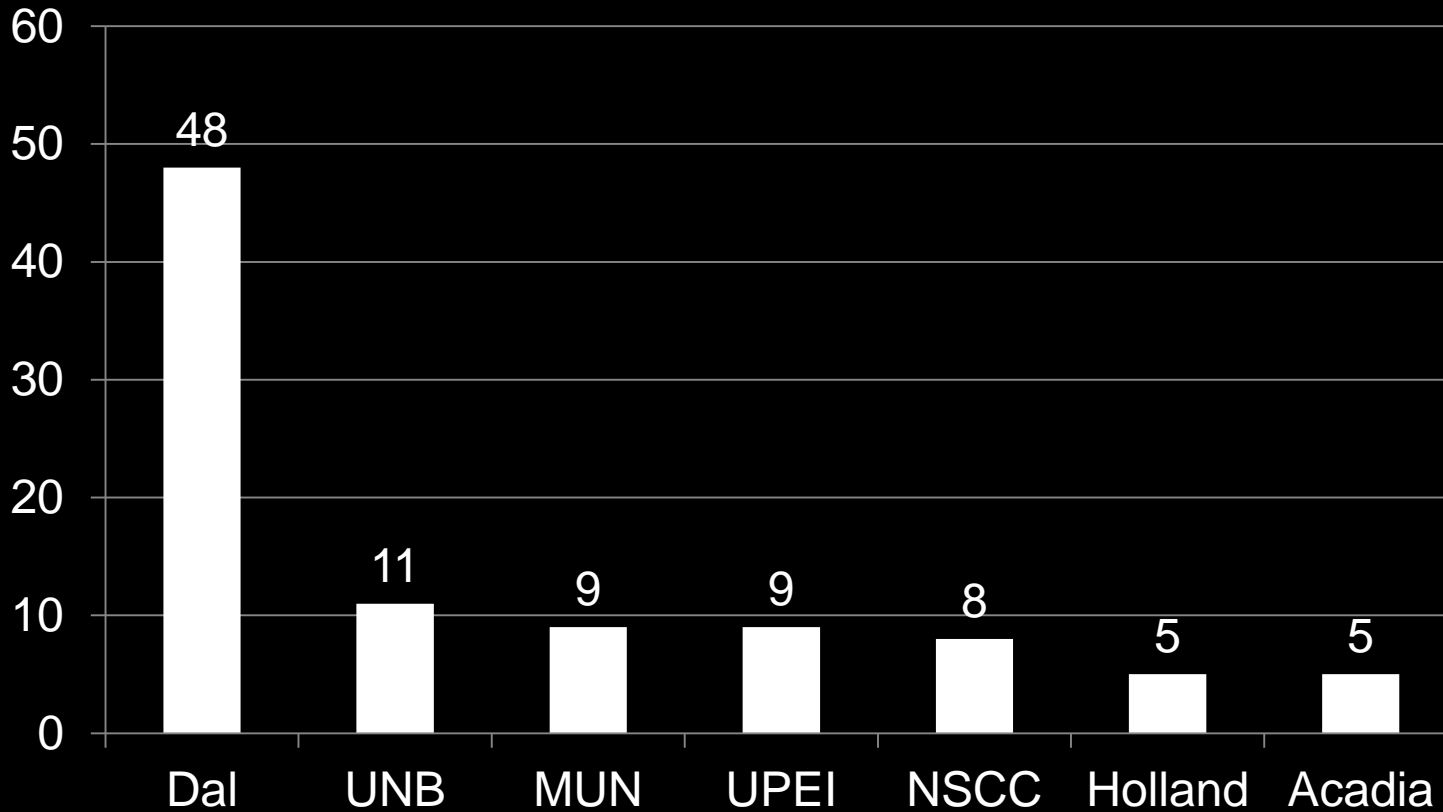
(As of March 31, 2015)



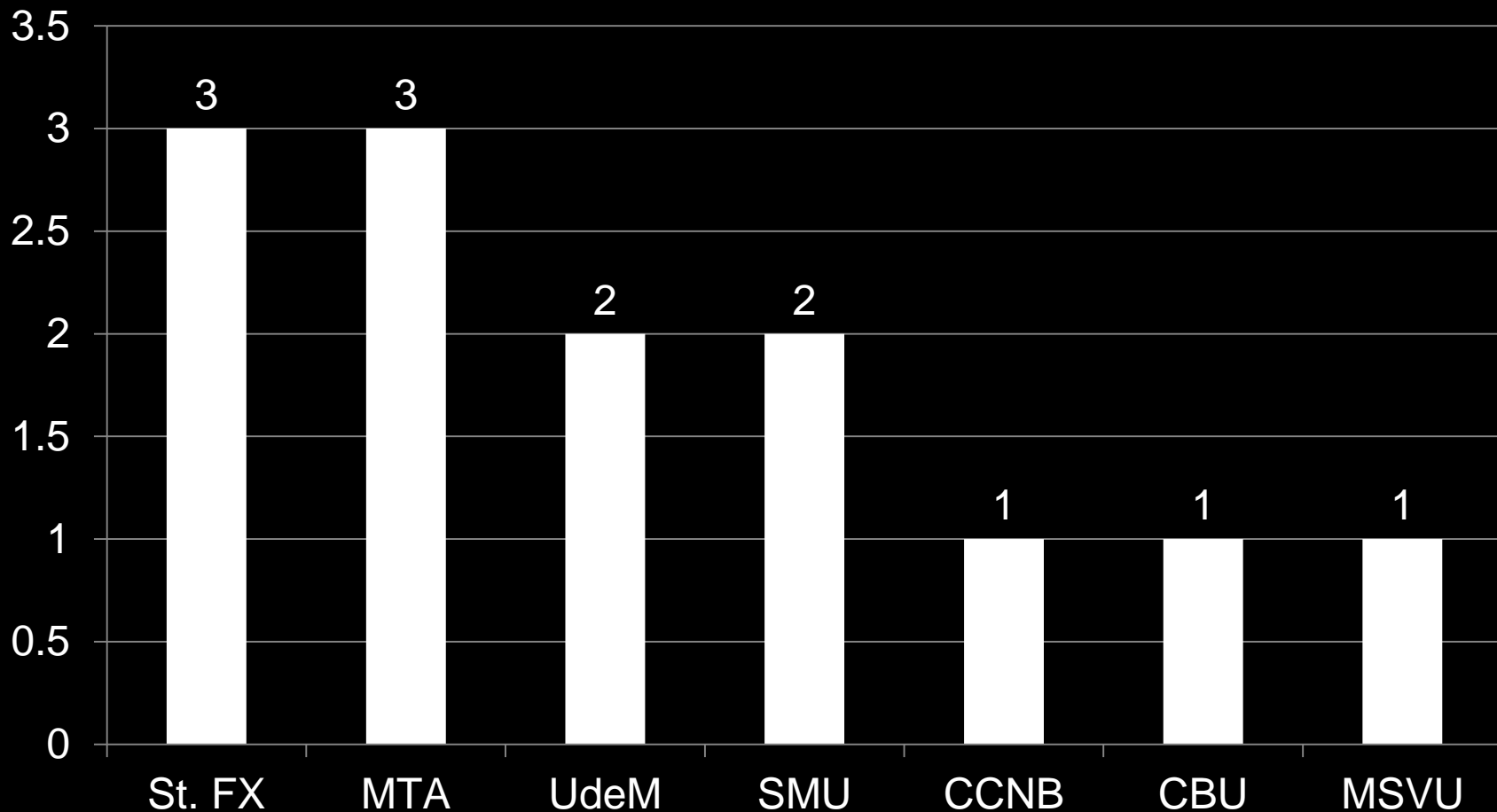
Atlantic Engage Awards by University



Number of Atlantic Engage Grants (Awarded in 2014-15)



Number of Atlantic Engage Grants (Awarded in 2014-15)

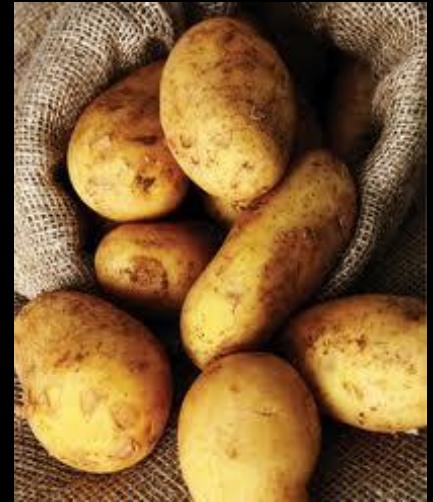


Engage Grant Project



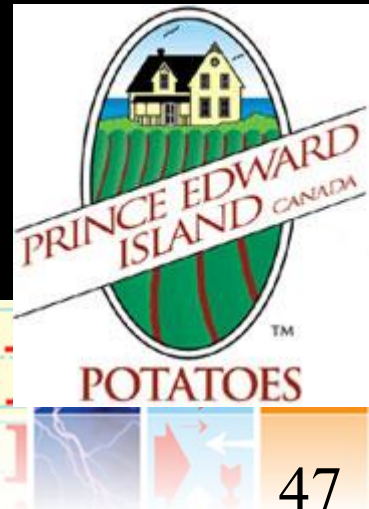
**David Burton, Dalhousie,
Agriculture**

Project: Evaluating the spatial
variation in soil nitrogen supply
of potato fields in PEI.



Company Partner: Prince Edward Island Potato Board

NSERC Award: \$24,576



Engage Plus Grant

Build on Engage project after completion

Six months in duration

Same academic researcher and the same industrial partner as in the original Engage application



Engage Plus Grant

Cash requirement from the company:

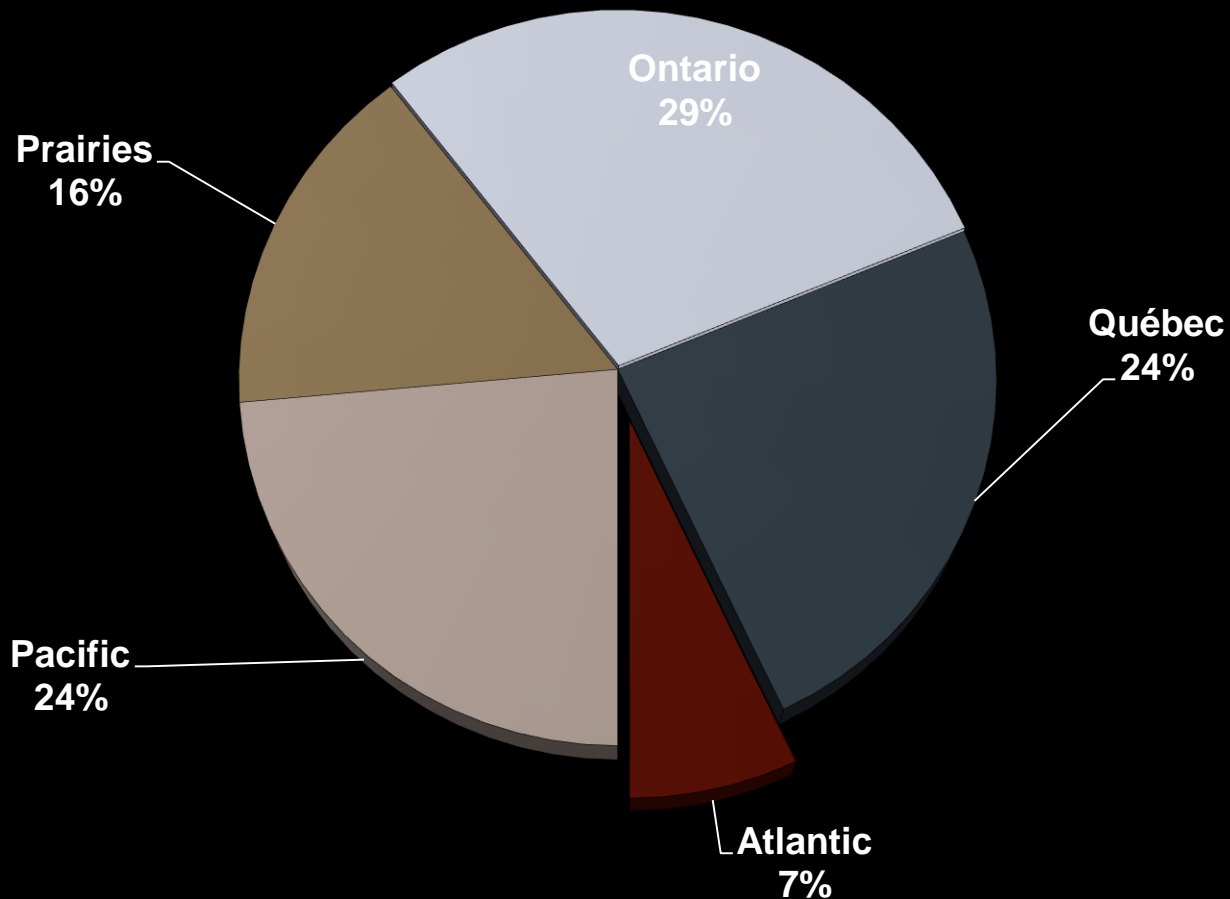
NSERC matches industry cash with a direct **1:1 funding ratio**, up to a **total value of \$25K**

Company cash directed to university overhead is not matched by NSERC



Engage Plus Grants by Region

157 as of March 31, 2015



NSERC Engage Plus Grants (2014-15)

Institute	Number of Grants
Dalhousie University	3
University of New Brunswick	2



Collaborative R&D (CRD) Grant

Project duration: 1 to 5 years

Can have prior relationship with company

Industrial cash contribution (min \$10K)

NSERC levers cash and in-kind contributions

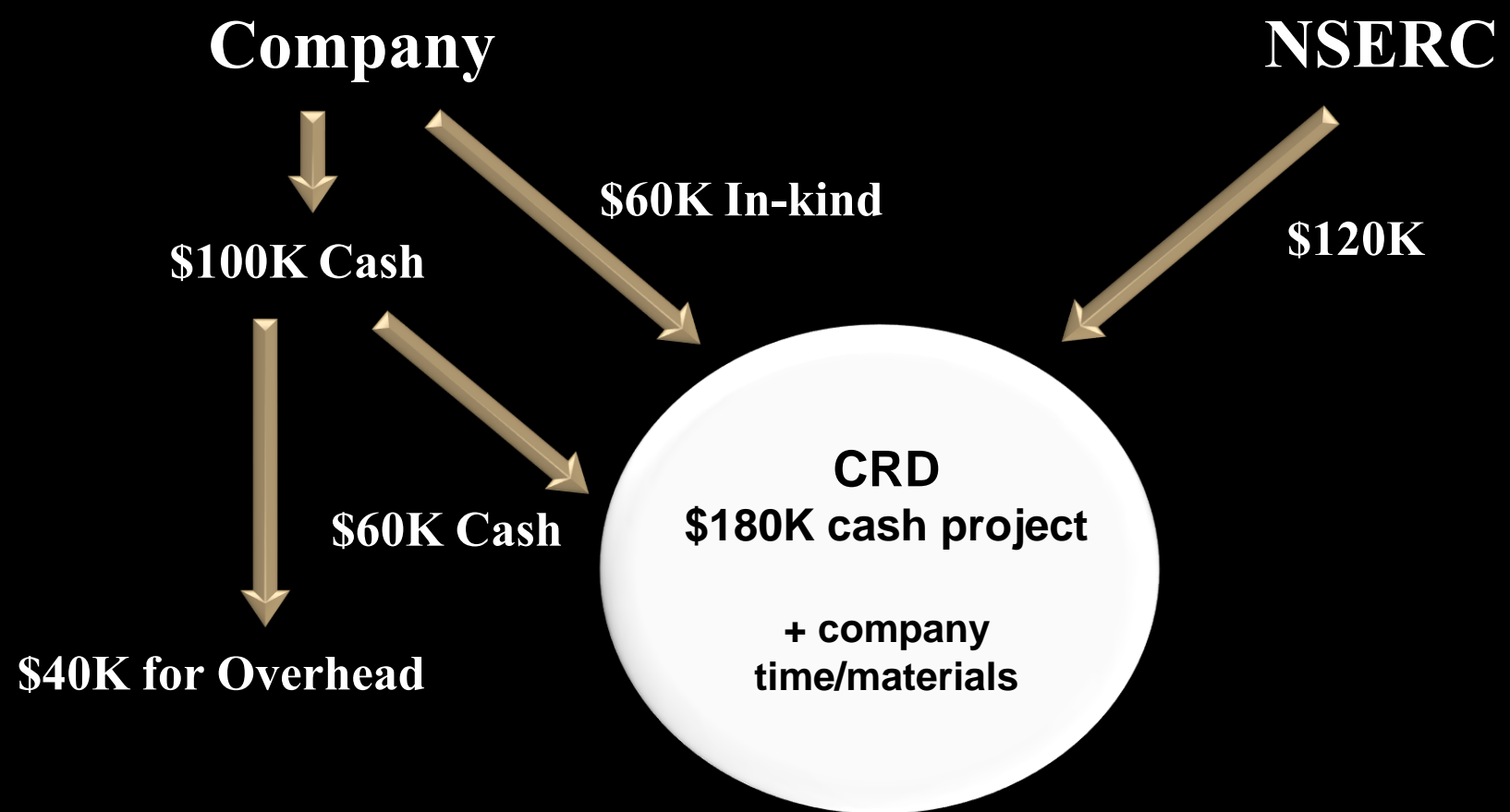
Active involvement of company required

Apply at any time

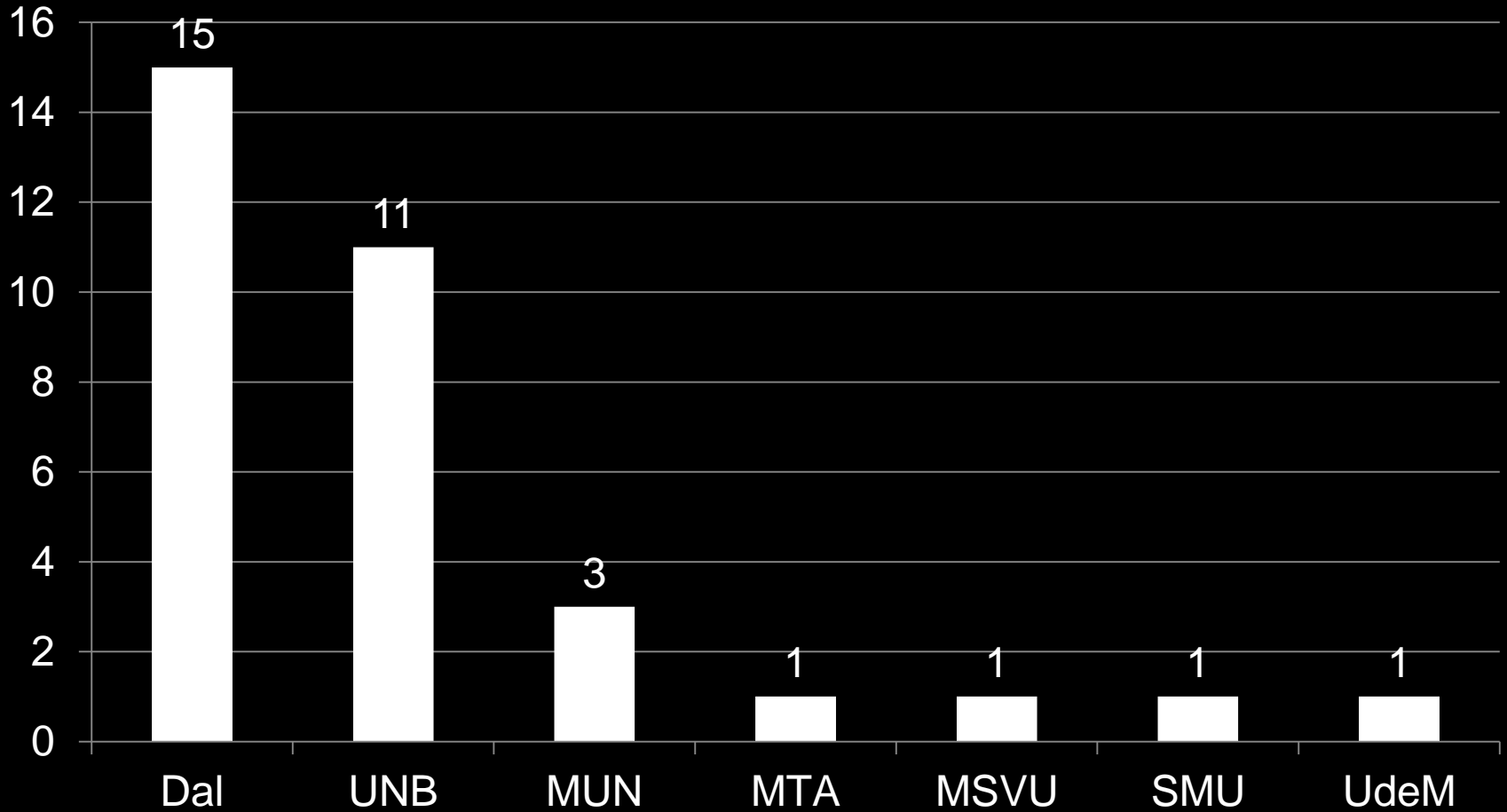
85% success rate & seeing 10% growth annually



How Does the Leverage Work?



Collaborative R&D Grant (899 CRDs in Canada in 2014-15)



Collaborative R&D Project



Tillman Benfey, Department of Biology, University of New Brunswick + **Santosh Lall**, Dept. of Biology, Dalhousie University

Project: Nutritional requirements and culture characteristics of triploid Atlantic salmon



Company Partners: Cooke Aquaculture
Atlantic Salmon Federation
Corey Feed Mills Ltd.
Heritage Salmon Limited



NSERC Award: \$95,000 over 3 years



Engage Grant → CRD

Researcher: Margaret Walsh, Civil Engineer, Dalhousie University
Engage & CRD Partner: Moosehead Breweries, Saint John, NB

“Without this program, I am not sure that Moosehead would have been as interested in committing to partnership in a recently submitted CRD grant proposal.” Margaret Walsh



N SERC's Refreshed Homepage

Natural Sciences and Engineering
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Canada

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- Students and Fellows ▾
- Professors ▾
- Business ▾
- Information for ▾
- About ▾



Home

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Discover /

We invest in scientific discovery and talent for the benefit of Canada – science and engineering at the frontier of knowledge.

Innovate /

We ensure businesses are the first to know – use discoveries to accelerate R&D.



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Home > Innovation

Login ▾

Innovation /

Engage

Collaborate

Commercialize

Celebrate



Collaborations with over 3,000 companies backed by a scalable and flexible set of programs. We connect industry with world-firsts in knowledge and the people behind them, fuelling R&D and leading to firsts in the marketplace.

Engage >

Options for universities, colleges and industry to easily connect and start working together. No risk.

Collaborate >

Scalable tools to meet industry needs. On-demand expertise, joint business-university and business-college/polytechnic research chairs, large-scale industrial collaborations. De-risk.

Commercialize >

Assistance to speed the path for promising research. Launch.

Celebrate >

Recognition for inspiring and productive business-research partnerships. Promote.

Innovate



Engage

Collaborate

Commercialize

Celebrate

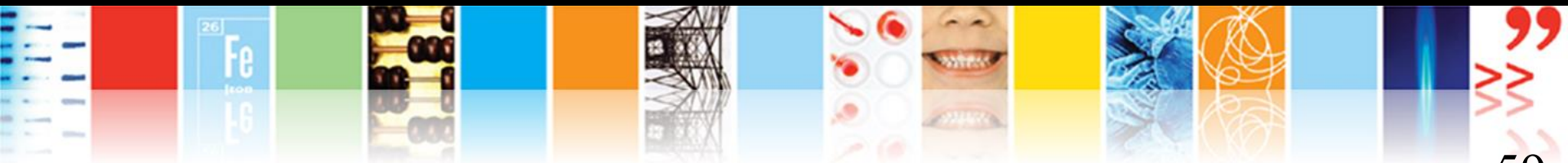


Connect Grants

**Collaborative
R&D Grants**

Engage Grants

Student Training in Industry



Building on prior connections

Engage

Engage Plus

**Collaborative
Research and
Development
Grants (CRD)**



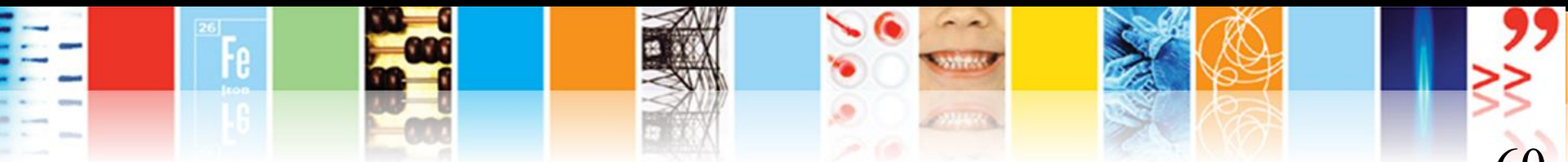
**Collaborative R&D for Colleges,
Polytechnics and Universities**

Collaborate to solve a specific, research-based industry problem.



**Engage with Colleges, Polytechnics
and Universities (R&D)**

Address a short-term R&D challenge for a quick win.



Partnership Grants Landscape

INNOVATION

ENGAGE

Connect
with colleges & universities

Engage
with colleges & universities

**Student Training in
Industry**

COLLABORATE

Collaborative R&D
*with colleges and
universities*

**Industrial Research
Chairs**
at college and universities

Strategic Partnerships
with universities

**Networks of Centres of
Excellence**

COMMERCIALIZE

Idea to Innovation
for colleges & universities

**Centres of Excellence for
Commercialization and
Research**

**College Technology
Access Centres**

CELEBRATE

**Synergy Awards
for Innovation**

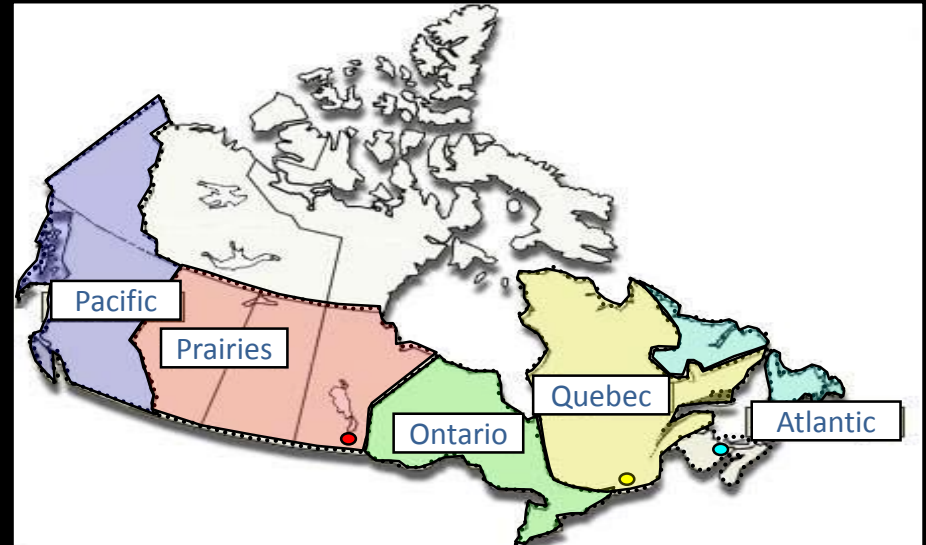


N SERC Regional Office

The Regional Office plays a central role in delivering on NSERC's Strategy for Partnerships and Innovation to promote and facilitate industry-academic research partnerships.

Overall Strategy:

- Promotion
- Relationship Development
- Follow-up



To find out more...

Atlantic Regional Office

1-877-767-1767 / nserc-atlantic@nserc-crsng.gc.ca

Vincenzo Delle Donne (506) 854-9423

Vincenzo.Delle.Donne@nserc-crsng.gc.ca

Engage Grants

Bernard Haché (506) 854-7767

Undergraduate Student Research Awards (USRA) / Connect Grants

Cécile LaPlante (506) 854-8154

Gordon Deveau (506) 854-8756



“Great things in life
are never done by
just one person.
They’re done by a
team of people”

Steve Jobs

