CRSNG
NSERC

VERS UNE INDUSTRIE PLUS VERTE
DES SEMICONDUCTEURS
SYMPOSIUM

NSERC partnership and innovation programs

Bromont, September 14th 2016

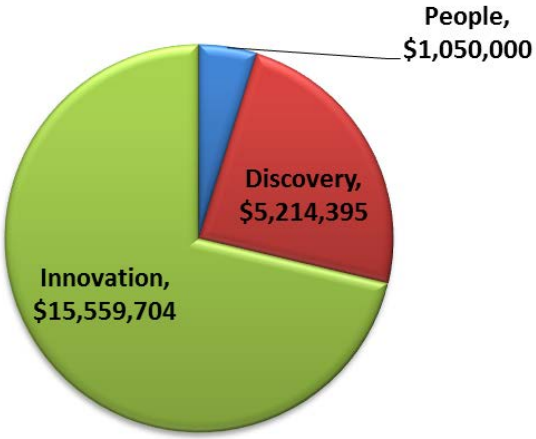
Robert Déziel, PhD, MBA
Manager, NSERC Québec Regional Office

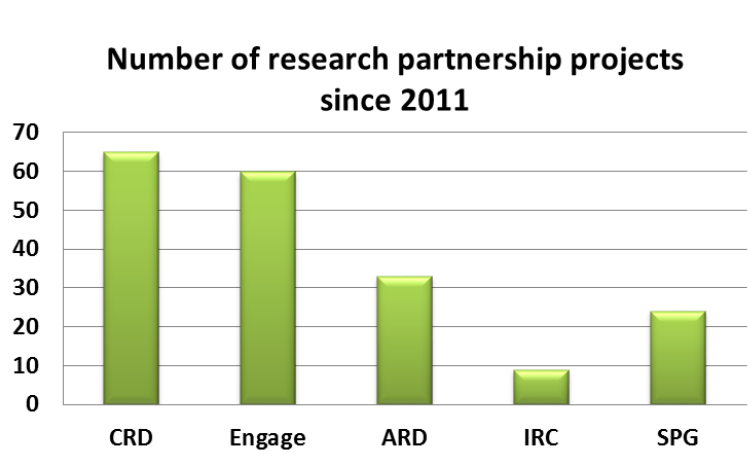
THE NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL IS A FEDERAL AGENCY RESPONSIBLE FOR FUNDING NATURAL SCIENCES AND ENGINEERING RESEARCH IN CANADA

- **Budget : $1.1 billion (2015-2016)**
  - over 11,300 professors
  - more than 30,000 students

- **$330 million in 2014-2015 for research partnership programs between universities/colleges and businesses in Canada**
  - research projects with over 3,550 Canadian companies
  - more than $200 million in cash contributions from companies

- **$22 million invested since 2011 to support research in waste water treatment and technologies**





NSERC SUPPORT FOR INNOVATION

ENGAGE

Connect
with colleges & universities
(Grant: Connect)

Engage
with colleges & universities
(Grant: Engage)

Student Training in Industry
(Grants: Experience, CREATE)

COLLABORATE

Collaborative R&D
with colleges & universities
(Grants: CRD, ARD, CU-I2I)

Industrial Research Chairs
at colleges and universities
(Grants: IRC, IRCC, CDE)

Strategic Partnerships
with universities
(Grants: Strategic Networks & Projects)
Strategic Initiatives
(Grants: CHRP, APC)

Networks of Centres of Excellence
(Grants: NCE, BL-NCE)

Building College Capacity
(Grants: IE, ARTI)

COMMERCIALIZE

Idea to Innovation
for colleges & universities
(Grant: I2I)

Centres of Excellence for Commercialization and Research
(Grant: CECR)

College Technology Access Centres
(Grant: TAC)

CELEBRATE

Synergy Awards
for Innovation

CONNECT GRANTS

Provide targeted financial support to researchers to connect with industry and other knowledge end-user communities in order to form new partnerships

- **Level 1 : up to $5,000 for up to three months**
  - for travel costs related to the development of new academic-industry partnerships
- **Level 2 : up to $10,000 for one year**
  - for regionally oriented activities or events aimed at developing or promoting new academic-industry partnerships
- **Level 3 : up to $25,000 for one year**
  - for nationally oriented research planning workshops aimed at building substantial new research collaborations between researchers and partners in industry

CRSNG
NSERC

ENGAGE GRANT (EG)

UP TO $25,000 NO CASH CONTRIBUTION REQUIRED

Support a new collaboration between a university researcher or a college and an industrial partner

Aimed at solving a company-specific problem over a six month period

Grant approval success rate: 85%

Applications are processed by regional offices within a 4-6 week turnaround time

IP owned by the company

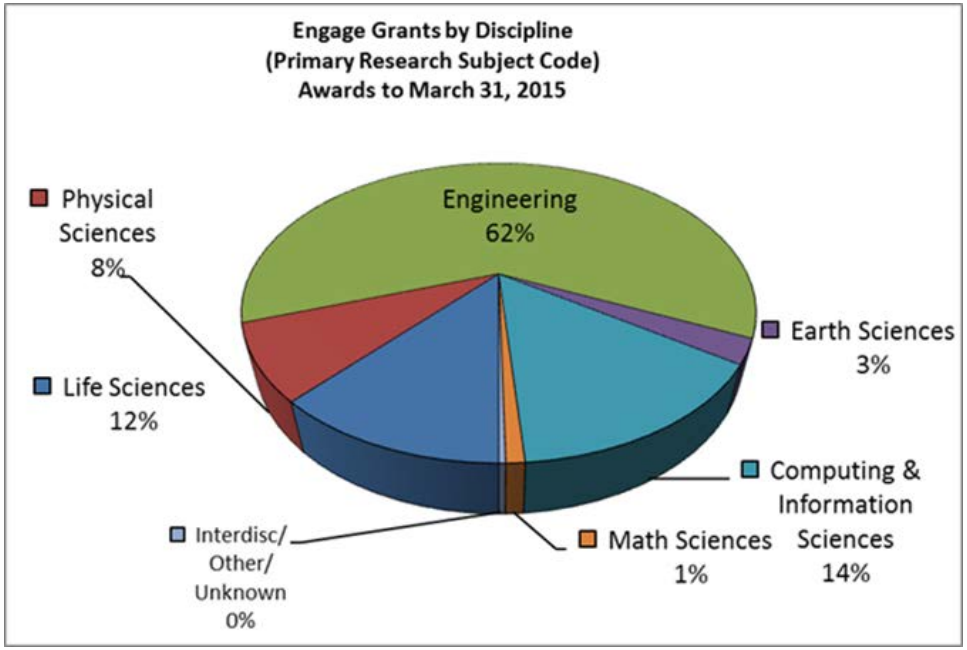
NSERC contributions since 2009: $160 M

Possibility of continuing the project with Engage Plus grant

CRSNG
NSERC

ENGAGE GRANT: SOME STATS

- **Nearly 7,000 projects supported in Canada since 2009**
  - 3,800 companies
  - 3,000 university researchers
  - Companies have contributed over $83 M of their own R&D resources
- **45% of participating companies have 10 or less employees**



CRSNG NSERC

EXAMPLE OF ENGAGE GRANT SUPPORTED RESEARCH PROJECT

Réduction de la charge organique dans les rejets d'une entreprise de semi-conducteur par procédé avancé d'oxydation

CRSNG NSERC

$25,000

TELEDYNE DALSA

Pr. Roland Leduc
Génie civil

UNIVERSITÉ DE SHERBROOKE

EXAMPLE OF ENGAGE GRANT SUPPORTED RESEARCH PROJECT

Traitement des rejets aqueux concentrés issus des procédés d'impression de l'usine Transcontinental Métropolitain

Pr. Frédéric Monette
Génie de la construction

ÉTS
Le génie pour l'industrie

CRSNG
NSERC

$25,000

tc • TRANSCONTINENTAL PRINTING

EXAMPLE OF ENGAGE GRANT SUPPORTED RESEARCH PROJECT

Remediation of waste water with biochar

Langara.

THE COLLEGE OF HIGHER LEARNING.

CRSNG
NSERC

$25,000

McCUE
ENGINEERING CONTRACTORS
EST. 2000

BROWNFIELDS TO GOLD MINES

COLLABORATIVE RESEARCH AND DEVELOPMENT GRANT (CRD)
UP TO $500,000 PER YEAR

Covers the entire spectrum of R&D activities

Specific short- and medium-term objectives (up to 5 years)

Grants may range from $20K to $500K/year

Equivalent contribution from the company (50% in cash + 50% in kind)

Success rate: 80-85%

Intellectual property agreement between the university and the partner

NSERC contributions in 2015-2016: $83 M

CRSNG
NSERC

EXAMPLE OF A CRD GRANT SUPPORTED RESEARCH PROJECT

Development of hollow fiber anaerobic membrane bioreactor for industrial wastewater treatment

Pr. Baoqiang Liao
Chemical engineering

Lakehead UNIVERSITY

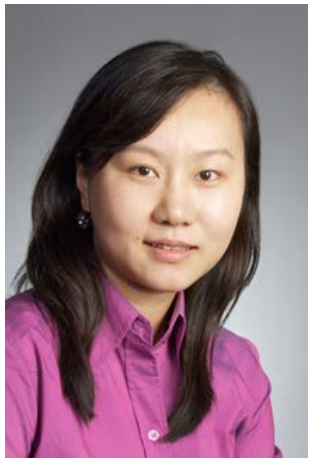
CRSNG
NSERC

$51,500

GE Power & Water
Water & Process Technologies

EXAMPLE OF A CRD GRANT SUPPORTED RESEARCH PROJECT

Control strategies for hydrogen sulphide in stormwater retention ponds



Pr. Yang Liu
Civil and Environmental Engineering

CRSNG
NSERC

$60,000

THE CITY OF Edmonton

UNIVERSITY OF ALBERTA

APPLIED RESEARCH AND DEVELOPMENT GRANT (ARD)
UP TO $150,000 PER YEAR

To support well-defined applied research and development projects with college researchers

Projects can be at any point in the R&D activities

For grants up to $75,000:

- **the company partner contributes at least half of the amount requested in cash and/or in-kind of which at least $10,000 must be in cash**

For grants between $75,000 and $150,000

- **the company partner's contribution must be at least equal to the amount requested with at least 50% in cash**

Success rate: 80-85%

NSERC contributions: $14 millions in 2015-2016

Centre des technologies de l'eau

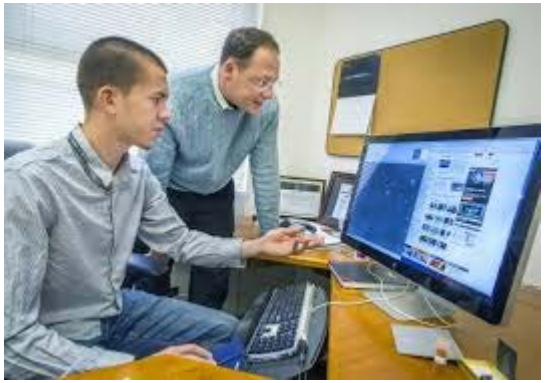
CNETE
Centre National en Électrochimie et en Technologies Environnementales

CRSNG
NSERC

FIND QUALIFIED PERSONNEL THROUGH NSERC'S *EXPERIENCE* AWARDS

Experience awards:

- $4,500 from NSERC for a16-week term
- supplement of $2,000 from FRQNT
- hosting organizations supplement the award by at least 25% of its value
- students address company-specific R&D challenges while gaining valuable industrial experience
- 37% of companies report hiring a former *Experience Awards* holder
- 1,500 awards in 2015



CRSNG
NSERC

POUR NOUS CONTACTER
BUREAU RÉGIONAL DU QUÉBEC

François Santerre
Agent de développement, recherche et innovation
514-496-4741
francois.santerre@nserc-crsng.gc.ca

Hélène Fortier
Agente de promotion des partenariats de recherche
514-496-4721
helene.fortier@nserc-crsng.gc.ca

Robert Déziel
Gestionnaire
514-496-4746
robert.deziel@nserc-crsng.gc.ca