Panel: Leveraging Funded Academic Research For Your Business

Panel: NRC-IRAP, MITACS, NSERC, WTC Winnipeg

Date: October 2, 2019

Presented by: World Trade Centre Winnipeg
How to Leverage Funded Academic Research for Your Business

Todd Burns, President
Cypher Environmental Ltd.
October 2nd 2019
Cypher Environmental is a 100% Canadian owned company based in Winnipeg, Manitoba, Canada.

We provide environmentally friendly, cost effective dust / erosion control, road/soil stabilization and organic waste remediation/odour control solutions around the world and work directly with our customers or through our extensive distributor network, as well as direct to many foreign customers. Distribution channels exist countries such as USA, Mexico, Peru, Chile, Colombia, Ecuador, Honduras, Costa Rica, Ghana, Mongolia, China, Korea, Indonesia, Malaysia, Japan and more.

Driven By Innovation – Partners in Performance
At Cypher Environmental we live our tag line, continually innovating our solution offerings, developing new ones, and improving upon our existing technologies. By partnering with our distributors and customers worldwide, we are able to better understand their needs and develop new and innovative solutions to help solve them.

We believe in providing the best customer experience possible, including hands on technical support and training, and being available 24 / 7 for technical support whenever required. It is through this method of customer experience that we are able to develop repeat customers and long lasting, mutually beneficial relationships.

Driven By Innovation – Partners in Performance
Industry Partners

Partnership extend to our external support network, we proudly work with several organizations that allow us to leverage competitive advantage over other companies.

We work closely with organizations such as Export Development Canada, the World Trade Center Winnipeg, Red River College, University of Alberta, Brandon University, University of Manitoba, the Trade Commissioner Service, NRC / IRAP, CAMESE and many more.
The National Research Council of Canada Industrial Research Assistance Program (NRC IRAP)

- IRAP YEP (Youth Employment Program) Hiring Grants
- Larger portions of funding for industry/academia partnership and organizational scale up
- International expansion to over 40 countries (Peru, South Africa, Australia, Chile, etc...)

Cypher Environmental
Mitacs

> Clay Binding of Roads in partnership with Brandon University
> Connects industry to academia- Support Geoscientist masters Student
> Allowed Cypher to expand nationally and gain momentum within rural areas
> Research supports local conditions and environmental factors
• Engage Plus
• Collaborative Research and Development (CRD)
• Alliance Grants
Other Funding Opportunities

Opportunities for summer internships/Co-Op’s

- Bio-Talent
- CiCan
- Student Work- Integrated Learning Program (SWILP)

“Students funded by such programs help to support the flow of innovation thorough the organization and develop leading industry experience”
EarthZyme is a non-toxic soil stabilizer used on clay based soils that results in a reduction in road maintenance costs due to increased and lasting compaction and strength values.

- Partnership with Academia
- Capacity to bring on experienced and specialized personnel
- Innovative Focus
Expansion and Validation of Technology
Cypher Environmental & University of Brandon
Product Formulation
Dust Stop Municipal Blend

Development of Technology
To Global Commercial Sales
The Scientific Research and Experimental Development (SR&ED) program

Tax incentives to encourage Canadian businesses of all sizes and in all sectors to conduct research and development in Canada. There are two main benefits of the SR&ED tax incentives.
Thank You

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Panel:
Leveraging Funded Academic Research For Your Business

Mitacs
Supporting your Research & Innovation Agenda

Presented by:
Brent Wennekes
Director, Business Development (MB)
What keeps a company from innovating?
What keeps a company from innovating?

- Insufficient capacity or expertise in-house
- Lack state-of-the-art equipment or technology
- Insufficient budget
Mitacs de-risks your innovation pathway

We help you solve your **business challenges** with **solutions** from the best post-secondary institutions
Mitacs has the experience

Mitacs is an independent, not-for-profit organization that fosters global growth and innovation.

<table>
<thead>
<tr>
<th>20 years in operation</th>
<th>67 post-secondary partners in Canada</th>
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<tbody>
<tr>
<td>35,000+ research projects</td>
<td>6,000+ company partners</td>
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<tr>
<td>200+ staff, 30+ offices, 4 regional hubs: Vancouver</td>
<td>Toronto</td>
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We work with companies to create an innovation road map to transform business challenges into solutions.
We work with companies to create an innovation road map to

- We start from your reality
- We identify the right academic expertise to address your challenges
- We determine, with you, the scope and desired outcomes from a collaboration
- We support project development
- We provide funding towards the project
We focus on your business needs
Our focus is your business

**SUPPORT**

- One-on-one guidance
- Translate company challenges into research problems
- Experienced in facilitating IP and NDAs

**DE-RISK**

- Avoid high cost of hiring
- Test-drive a potential new employee
- Obtain third-party validation of your project
Our funding model is flexible and responsive
Our funding model is flexible and responsive

Minimum project is 4 months - $15K with no maximum — we tailor to meet your needs

Mitacs finances up to 55% of the project

We bring in as many researchers, disciplines and post-secondary institutions as required to address the challenge
Accelerate
Mitacs Accelerate

More than **20,000** internship modules in Canada since 2007

Small- and large-scale **multidisciplinary** projects

Funding from **$15,000** to **multi-million $**

Over **95%** application success rate

**Quick**, simple application process

Decision within **6–8 weeks**

Both domestic and foreign students and postdoctoral fellows are **eligible**
Accelerate internship modules submitted by fiscal year
(projection for 2019/2020)
2018-19:

> *Fastest growing province in Canada*

> 340 research modules proposed

  o ~$5 million in total funding (50-55% industry cash)

> International projects with Japan and United States

> Largest project ever (in MB): 88 modules for ~$1.3 million
Thanks to our funding partners!
Thank you for your interest!

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Making Canada a country of Discoverers and Innovators for the benefit of all Canadians
Building R&D Partnerships Through NSERC

NSERC innovation programs encourage Canadian businesses to collaborate on research projects with colleges and universities across the country.

• **Work with colleges**
  
  College and Community Innovation Program

• **Work with university researchers**
  
  Alliance Grants
College and Community Innovation Program

Provides innovative solutions for local and regional business challenges

• Grants to support short and longer-term applied R&D projects and programs*

  Engage Grants
  • First-time collaboration
  • Six-month project
  • Up to $25,000 from NSERC
  • No company cash required

  Applied Research and Development Grants
  • Up to three years
  • Up to $150,000/year from NSERC
  • Company matches NSERC amount in cash & in-kind

* See nserc.ca for complete list
Alliance Grants

Alliance grants encourage university researchers to collaborate with partner organizations in the private, public or not-for-profit sectors.

A simplified, flexible program

- Focused on outcomes with economic, societal, and environmental benefits for Canada
- Grants of $20,000 to $1 million per year, up to five years
- Small short term projects to large-scale activities involving many partner organizations
- Grants share costs evenly (1:1) with partner organizations
- Enhanced cost-sharing (2:1) for collaborations with small/medium-sized enterprises*

* An option that will potentially offer 9:1 leverage for SMEs is under development
NSERC-Funded Collaborations
- Key Advantages for Partners

- Access to high levels of expertise and advanced research facilities
- Enhanced internal R&D capacity
- Significant savings in research costs
- Students are potential future employees
- Built-in quality control – NSERC peer-review system
- Contributions may qualify for SR&ED tax credits

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INDUSTRIAL RESEARCH ASSISTANCE PROGRAM (IRAP)

Panel: How to Leverage funded Academic Research for your business

Helping small and medium-sized businesses grow

Oct. 2, 2019
Industrial Research Assistance Program

**Mandate**

**STIMULATE WEALTH CREATION** for Canada through innovation

**Mission**

**ACCELERATE THE GROWTH** of small and medium-sized businesses by providing them with a comprehensive suite of innovation services and funding

**Vision**

**BE THE MOST IMPACTFUL PROGRAM** of its kind in the world, where Canadian firms go first to transform their ideas into commercial success
IRAP at a glance

2018-19 Overview
- Total invested in SMEs: $293.4 million
- Total IRAP reach (funding and advice): 8,159
- Number of firms funded: 3,541
- Jobs supported: 15,662
- Assessments completed for OGDs: 1,350
- 255 Industrial Technology Advisors

Services
- Technical and business advisory services
- Financial assistance
- Linking SMEs with local and international opportunities

Impact on clients
- 27% increase in revenues
- 18% increase in employees
Indusial Research Assistant Program – National Research Council

Who IRAP/NRC works with:

- Innovative Canadian SME’s developing new technologies or processes for commercialization.
- Must be opportunity for new Intellectual Property (I.P.)
- Anywhere in Canada
What Firms do IRAP/NRC invest in:

- Must have market pull – International opportunities
- Opportunity to scale the Firm
- Owner & C-Level team must be coachable
- Firm must have resources to support their share of R&D costs.
Indusial Research Assistant Program – National Research Council

Investments by IRAP/NRC:

- Non-Funded Investments: linkages, etc.
- Funded Investments: Contribution Agreements
What Innovative R&D does IRAP/NRC Support?:

- Idea to Proof of Concept
- Proof of Concept to Proof of Commercialization
What is IRAP/NRC objective’s when investing in an Innovative SME?:

Primarily to Build Innovative Capacity

• External: linkages to R&D Centres of Expertise, Business Incubators, OGD’s, etc.

• Internal: assist Firm in building their technical team (HQP).
IRAP clients by industry sector

Aircraft
Agriculture & food
Construction & related products/services
Energy & resources
Health & life sciences
ICT (digital economy)
Manufacturing & materials
Others

Source: FY 2018-2019

NATIONAL RESEARCH COUNCIL CANADA
IRAP clients by company size

Source: FY 2018-2019

# OF FIRMS

# OF EMPLOYEES

1 to 10
11 to 20
21 to 50
51 to 100
101 to 300
301 +
THANK YOU

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KEY SERVICES

BUSINESS AND TRADE SERVICES

TRAINING AND EDUCATION

NETWORK CONNECTIONS
TRADE SERVICES

Advisory Services
Market Intelligence
Trade Missions and Preparation
TRAINING AND EDUCATION

- Seminars
- Market Info Sessions
- Trade Accelerator Program
NETWORK CONNECTIONS

- World Trade Centre Network
- Global Contacts
- Manitoba Business Community
THANK YOU | MERCI!

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Q & A

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