



## Global Partnership Program

**“ Winning on Security! Winning on Innovation!”  
Canada’s Redirection Efforts**

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# Presentation overview

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- **Canada's Participation in the STCU (+ISTC)**
  - « Regular » projects, « Partner » projects and TI's
- **The Project Review Process in Canada**
- **Focus on « Partner » projects**
- **IP Management**
- **Promoting Technology to Industry**



# Canada's Global Partnership Program

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**Canada actively funds projects related to:**

- **Destruction of chemical weapons**
- **Dismantlement of nuclear submarines**
- **Nuclear and radiological security**
- **Biological non-proliferation**
- **Redirection of former weapons scientists**

**Canada seeking renewed authority to fund projects for next 5 years**



# The Redirection of Former Weapons Scientists

- Canada funds projects and other activities through the Science and Technology Center in Ukraine (STCU) (replaced CIDA as STCU coordinator in Oct 2006) and via ISTC since 2004
- To date, Canada has funded over 100 individual research projects, worth ~\$30 million, involving over 2,500 former weapons scientists. In past year we have funded \$1 million for 16 projects via STCU.
- Canadian collaborators and partners come from government, academia and industry
- Key sectors of interest are: environment, alternative energy, biotechnology, advanced materials and manufacturing, aerospace, information and communication technologies, photonics and counterterrorism-related technologies
- Canadian objective is sustainability



# Canada and the STCU-Ongoing Commitment

## **Regular Science Project Program**

Projects funded by DFAIT

Industry or academic/government researcher can be collaborator (advisor) on projects representing Canadian government

KEY: Identify Collaborator BEFORE submitting proposal for funding

## **Partner Project Program**

CDN company funds its own research project via STCU (or ISTC)

We try to find potential Canadian “partners” (IP management for federal government “partners” is similar to those for “regular”)

Canadian “partner” can negotiate to own the new IP developed (market focus recommended)

KEY: Recommend promoting your expertise by networking with potential Canadian clients-MOBILITY funds (“East/West” travel budget)

## **Targeted Initiatives**

Clusters of projects with co-funding by host country beneficiary/end-customer involved



# Understanding the Review Process in Canada



# **The multi-layered review process in Canada**

**Led by the Global Partnership Program (GPP)  
Bureau at the Department of Foreign Affairs and  
International Trade (DFAIT)**

**GPP responsible for managing Science Center  
programs and projects for Canada**

**Peer review Committees led by the National Science  
and Engineering Research Council (NSERC), a Canadian  
granting agency for universities**



## **Canadian Approach to funding projects**

- **GPP selects topics and institutes of national interest**
- **Consults with an intergovernmental Science & Technology Trade Advisory Group on national priorities**
- **Prescreens projects of national interest to be sent to NSERC Grants Committee**
- **In past, if no collaborator identified will recommend a pre-identified Canadian collaborator**
- **Chances of making the “shortlist” improved if Cdn collaborator already identified**





# **NSERC Grant Committee Review**

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- **8-10 people**
- **Coordinated by NSERC, but chaired by outside person**
- **Composed of Science and Engineering specialists from:**
  - Universities, Industry and Government**
- **Seek external Peer Reviews - typically 2+ specialists**
- **Scientists and Engineers with very different backgrounds**
- **Seek / validate potential collaborators from universities, government institutes and industry**



## Selection Criteria by NSERC Review Committee

### **PROJECT PROPOSALS**

- Scientific and Technical Merit and pot'l for sustainability
- Originality, Novelty, → Innovation
- Detailed Project Description, Feasibility
- Track Record, Synergy & Team Quality
- Project Management and proposed financial structure
- Expected Results → Technical and Business prospects [Jobs, Sales, Licenses], Sustainability
- Environmental Benefits (where applicable)

**Recommends priorities to GPP**



# GPP Final Assessment

- **Reviews Strengths, Weaknesses & Opportunities [grant writing tips]**
- **Reviews proposal rankings [High, Medium, Low]**
- **Reviews Potential for dual use**
- **May consider a Project Development Grant (PDG)**
- **GPP decisions not only limited to scientific merit, but depends on relevance to Cdn scientific community and sustainability of redirection**
- **identifies feedback issues to the STCU**



# Focus on “Partner” Projects



## What is Sustainable Redirection?

**Movement of project team of weapons scientists to become less reliant upon government funding, including from international Parties of STCU (and ISTC)**

**i.e. to seek other sources of funding from institutes, or **industry**, including from foundations**

**Goal: Long-term collaborative relationships contributing to an innovative, safer and peaceful world**



# How to identify prospects

**Business Register:** Conduct due diligence by determining status of firm  
[[http://strategis.ic.gc.ca/cgi-bin/sc\\_mrksv/corpdire/dataOnline/search.cgi?lang=e](http://strategis.ic.gc.ca/cgi-bin/sc_mrksv/corpdire/dataOnline/search.cgi?lang=e)]

**Industry Sector Reports:** For listing of industry clusters in Canada and status worldwide [[www.strategis.ic.gc.ca](http://www.strategis.ic.gc.ca)]

**NRC-IRAP** → network deals with 9,000 Small and Medium Sized Enterprises (SMEs)/year

NSERC-Special Research Opportunity Program ([www.nserc.gc.ca](http://www.nserc.gc.ca)),  
Canadian Institutes of Health Research (CIHR)-International Opportunities Program ([www.cihr.gc.ca](http://www.cihr.gc.ca)); NR institutes and NRC-IRAP network ([www.nrc-cnrc.gc.ca](http://www.nrc-cnrc.gc.ca))

- Participate in trade shows/technical conferences/workshops: (eg. Remtech 2007, BioEurope, Photonics North/West, Bio 2008, Globe 2008, Hanover Fair etc. and others you may identify for opportunity to network with pot'l "partners"/collaborators)



# Identifying research/S+T organizations in Canada

Review funding guide database: <http://fgic-gfciscitech.gc.ca/home-e.php>

This list includes list of grants + bursaries, post-doc fellowships and major international prizes

Key research-based organizations in Canada:

1. National Research Council (NRC): [www.nrc-cnrc.gc.ca](http://www.nrc-cnrc.gc.ca)
2. National Science and Engineering Research Council: [www.nserc.ca](http://www.nserc.ca)
3. Networks of Centres of Excellence: [www.nce.gc.ca](http://www.nce.gc.ca)
4. Agriculture and Agri-Food Canada: [www.agr.gc.ca](http://www.agr.gc.ca)
5. Canadian Institutes of Health Research: [www.cihr-irsc.gc.ca](http://www.cihr-irsc.gc.ca)
6. Genome Canada: [www.genomecanada.ca](http://www.genomecanada.ca)
7. Federal Partners in Technology Transfer (FPTT): [www.fptt-pftt.gc.ca](http://www.fptt-pftt.gc.ca)

For access to database of “Canadian Companies Capabilities” listing 60,000 Cdn businesses, including technology focus, see:

[www.strategis.ic.gc.ca/epic/site/ccc-rec.nsf/en/home](http://www.strategis.ic.gc.ca/epic/site/ccc-rec.nsf/en/home)



# List of Canadian “partner” prospects

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Acrolab Ltd., Ontario <http://www.acrolab.com>  
ADM-Lysac, Quebec City <http://www.lysac.com>  
Barrick Gold Corporation, Toronto <http://www.barrick.com>  
CANTOX, Ontario <http://www.cantox.com>  
CG2 NanoCoatings Inc., Ontario <http://www.cg2nanocoatings.com>  
Chatham Biotech Ltd  
Ecreation.ca, Ottawa  
Environment Science & Technology Center / Environment Canada  
GangaGen Life Sciences <http://www.gangagen.com>  
Highmark Renewable, Alberta <http://www.highmark.ca>  
Institut Rosell Lallemand, Montreal <http://www.institut-rosell.com/>  
Integrity Testing Laboratory Inc., Ontario <http://www.itlinc.com>  
Liponex Inc., Ottawa <http://www.liponex.ca>  
Medteknostics Inc. (MTN), North York <http://www.medteknostics.com/>  
NMC Nutraceutical Medicine Company





# List of Canadian “partner” prospects

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Ondine BioPharma <http://www.ondinebiopharma.com>

Pratt & Whitney Canada Corporation, Longueuil <http://www.pwc.ca>

SciMed Laboratories Inc., Alberta <http://www.scimed.lab.com>

Stans Energy Corp., Ontario

StarFish Medical, Victoria <http://www.starfishmedical.com>

Stem Cell Therapeutics Corp., Alberta <http://www.stemcellthera.com>

StemPath Inc., Ontario <http://www.stempath.com/>

Taron Technologies Inc., Quebec City <http://www.agstaron.com/>

Tesseral Technologies Inc., Calgary

YM BioSciences Inc., Ontario <http://www.ymbiosciences.com>

Atomic Energy Canada Limited

Customs Plastic Group

Photon Controls

Firebird Technologies

General Fusion



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# Intellectual Property Mgmt Process



# IP Management

- For “regular” projects”, once ROI identified by scientist to STCU, protocols established to communicate to Funding Parties for follow-up to identify potential commercialization interests
- Canadian government has right to exclusive royalty-free use of license in Canada
- MOU negotiated between DFAIT/GPP and NRC/Industrial Research Assistance Program/IPSO to assist with process



# IP Management-Key Steps

1. Record invention
2. Conduct preliminary assessment- assess patentability once market assessment indicating commercial value is conducted (non-confidential info sharing via IRAP network and other stakeholders on basis of institute objectives), establish a promo strategy
3. If interest identified, IPSO to conduct patentability assessment
4. File patent for protection in Canada [recognition and award for inventors]
5. Identify potential licensees [depends on complementarities between company products and licensed technology & capacity of firm to exploit technology]
6. Promoting technology to industry
7. Successful licensing activities result in 15% royalty stream to recipient institute



# Patenting

Most countries use system of “First to File” of an invention.

- Europe, Canada
- US system is based on “First to Invent”
- Essential, especially for US patent, to have **note books written up, dated and witnessed.**
- Most Canadian firms file first in US
- Make “Claims” specific - but may make multiple claims per filing

Patents cover **20 years** from date of issue.

- List **ONLY** those inventors specifically involved in the patent creation



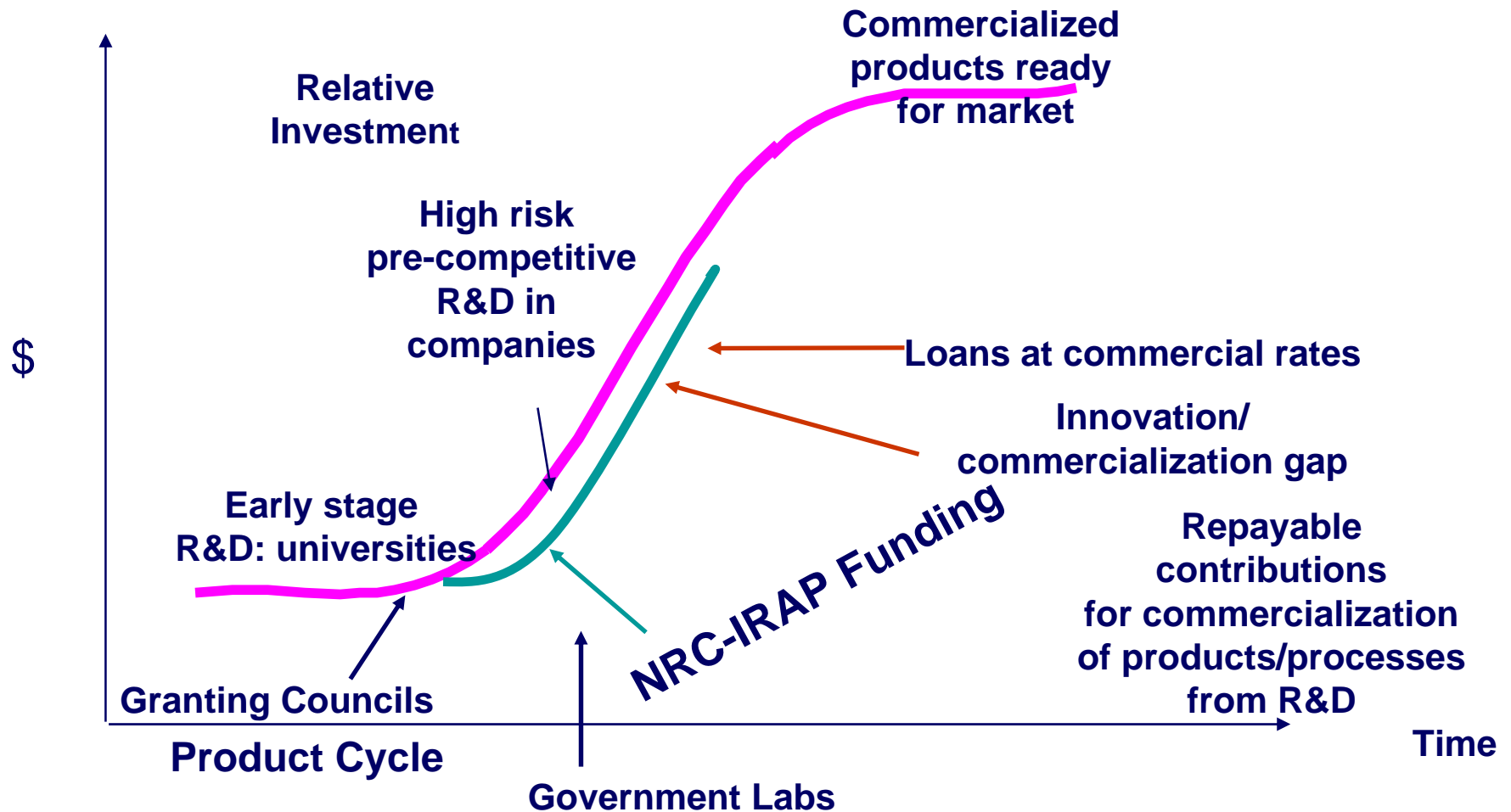
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# Promoting Technology to Industry



# Commercialization

## Role of NRC-IRAP in Financing Innovation





# Thinking about Tech Transfer

- commercial value is enhanced if invention linked to cutting edge technology
- transparent and open communication between scientist and « partner » or licensee
- sign Non Disclosure Agreement (NDA)
- provide additional info, issued patents, samples, etc...whatever in public domain (retain trade secrets)
- meet face-to-face
- reasonable and flexible T&Cs
- request business proposition





# Tech Transfer Objectives

- Preparation of **IP portfolio** of technologies [“offerings” could be promoted via STCU website with link to your institute/organization]
- Some organizations will accept your IP portfolio for dissemination at large and free of charge, and offer other services, such as IP valuation, technology transfer and licensing advice: **Canadian Technology Network (CTN)**, Industry Canada’s “**National Technology Index**” (NTI), the **Licensing Executives Society (LES)**, **BioExchange**, **Market Launchers**, **Health Technology Exchange (HTX)** and **TechEx** (cost to owner of IP portfolio is negligible but technology “scouts” scanning these IP portfolios do pay a fee)
- Consider customized web presence by becoming a Flintbox Member: <http://www.flintbox.com> [**manage IP project portfolio + other research artifacts online- enable click wrap licensing and e-commerce**]



## Business Opportunity Document (BOD)-tool suggested by entrepreneur Denzil Doyle

One page description of technology with five key elements

1. The **Business Opportunity**: how investor can make money from product/service/process generated by technology
2. The **Technology**- brief description (non-confidential info only + serial number of the patent application or patent)
3. The **Markets**: identify who would typically purchase (segment market by geographic territory, end use application, distribution channel)
4. **Technology Transfer Possibilities**: how investors might work with owner of technology (collaboration, licensing, consulting arrangements, sale of technology, etc..)
5. **Key Contact**: From whom additional info can be obtained (inventor/supervisor or business development officer)



## Enhancing your understanding of commercialization best practices

- Licensing Executives Society (LES) (USA and Canada): non-profit organization with over 5,000 members (private/public sector) involved in transfer, in-licensing and marketing of IP
- Association for the Commercialization of Canadian Technologies (ACCT): Organization seeking to implement programs and services to enhance Canada's technology infrastructure, capacity and collaboration
- Competency building services/training via STCU and ISTC
- IP toolkit: [http://strategis.gc.ca/sc\\_mrksv/cipo/toolkit/main\\_e.html](http://strategis.gc.ca/sc_mrksv/cipo/toolkit/main_e.html)
- Canadian Intellectual Property Office (CIPO) administers IP systems in Canada: [www.cipo.gc.ca](http://www.cipo.gc.ca)



# Questions?

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