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# Public Sector – Indicators of Innovation

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# Outline

- What is the public sector
- Why measure public sector innovation
- Indicators that cross-over from private sector collection activities
- Defining market and client for public sector organisations
- Next steps in measuring public sector innovation

# Defining the public sector

## ■ In Canada the public sector is comprised of:

- Federal, provincial, regional and local government activities (NAICS 91)
- Health care sector (NAICS 62 – some private sector)
- Educational sector (provincial jurisdiction with federal funding and policy interest at the post-secondary level) (NAICS 61 – some private sector)

## ■ NAICS – North American Industry Classification System, Canada, 2002



# Why measure innovation in the public sector

## ■ Policy purposes:

- Commercialisation – using public knowledge to capture value and transfer technology
- Encouraging technology development and adoption
- Alliances and partnerships with private sector

## ■ Public sector efficiency

## ■ Encouraging national competitiveness and growth



# What is innovation

- **Product**
- **Process**
- **Organisational**
- **Market**



# Current measures of the activities of innovation in the public sector

- **Research and development (R&D)**
- **Intellectual property (patents)**
- **Licensing activities**
- **Spin-offs**
- **Bibliometrics**

# Intellectual Property Commercialisation in the Higher Education Sector (SIPCHES)

- Technology transfer from universities, colleges and research hospitals
- Spin-offs
- Licensing activities
- Patents and personnel
- Collaboration and partnerships

# Survey of Electronic Commerce and Technology (SECT)

- **Annual cross-economy survey of information communication technology use**
- **Section D of SECT surveys:**
  - organisational and technological change,
  - technology transfer,
  - new management practices and
  - business incubation services



# Organisational change question – 2000

- During the last three years, 1998 to 2000, did your organisation introduce significantly improved organisational structures or implement improved management techniques?
- If yes, did these improvements require training?

# Technological change question 2000

- During the last three years, 1998 to 2000, did your organisation introduce significantly improved technologies?
- If yes, how did you introduce significantly improved technologies? (check all that apply)
  - By purchasing off-the-shelf technologies
  - By licensing new technologies
  - By customising or significantly modifying existing technologies
  - By developing new technologies (either alone or in conjunction with others)
- Did any of these improvements require training?

# Technological change 2000-2002

## ■ Similar to 2000 question with two new methods of acquiring technologies added:

- By leasing new technologies
- By putting in place an improved production facility (not a very clear question)

# Technology use – electronic networks for information sharing 2001

- Question on identifying the type of information being transmitted and shared over electronic networks.
- One-way (outwards) sharing for job opportunities and product descriptions
- Two-way (to and from) sharing - order status, demand projections, inventory data, customer information and training.
- Interactive activity captured – e-training.

# Public Sector Technology Transfer - 2003

- Over the past 3 years, has the firm licensed technologies from any of the following?
- Did the acquisition of technology from any of the following sources play a major role in the firm's inception or growth over the past 3 years?
  - A Canadian university
  - A Canadian hospital
  - A Canadian federal government lab
- Is this firm a spin-off from a Canadian university?

# Defining market for the public sector

- **Public sector organisations create and enhance products and processes to serve their clients.**
- **These clients are often, but not always, non-paying; they are a market.**
- **Examples of paying clients (albeit sometimes subsidised) include:**
  - University and college students; and
  - Purchasers or licensees of products (goods and services) or processes.



# Innovation indicators can cross the public-private divide

- **Points to consider in data collection:**
- **Public sector organisations are complex (closely resemble large enterprises)**
- **Streamline collection operations for single respondent**

# Tools that are required

- **First - A statistical framework needs to be developed.**
- **Second – There is a need for concepts and definitions – market and target respondent.**





**Thanks**

**For more information see our Web-site  
[www.statcan.ca](http://www.statcan.ca)**

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