



Federal Science Expenditures and Personnel 1999/2000

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Intellectual Property Management 1998/99 Fiscal Year



Information for respondents

Survey Objective

This survey collects data that are essential to assure the availability of pertinent statistical information to monitor science and technology related activities in Canada and to support the development of science and technology policy. The data collected will be used by federal and provincial science policy analysts.

Authority

This survey is conducted under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Confidentiality

Statistics Canada is prohibited from publishing any statistics that would divulge information relating to any identifiable organization without the previous written consent of that organization.

Data Sharing Agreement

To reduce response burden and to ensure more uniform statistics, Statistics Canada has entered into an agreement under Section 12 of the Statistics Act with Industry Canada for sharing information from this survey. Under Section 12 of the Statistics Act you may refuse to share your information with Industry Canada by writing to the Chief Statistician and returning your letter of objection along with the completed questionnaire in the enclosed envelope.

I hereby authorize Statistics Canada to publish any or all portions of the data supplied on this questionnaire by this department.

1 Yes 2 No

Name	Signature
Official position	Program
Department or agency	

Enquiries to be directed to:

Name	Date	Telephone number
Position title	E-mail address	Fax number

1. General Information

1.1 This survey covers intellectual property arising from R&D activities in Federal Science-Based Departments and Agencies. Please list the names of the research and development establishments included in your figures. Please see the handbook for definitions of S&T and R&D.

A list of federal research facilities is provided in the handbook for reference.

Also, indicate whether or not they are engaged in intellectual property management (identification, protection, promotion or commercialization) by selecting YES or NO in the second column.

Use an additional sheet of paper, if required.

Name of establishment	Intellectual property management	
	Yes	No
	1 <input type="radio"/>	2 <input type="radio"/>
	1 <input type="radio"/>	2 <input type="radio"/>
	1 <input type="radio"/>	2 <input type="radio"/>
	1 <input type="radio"/>	2 <input type="radio"/>
	1 <input type="radio"/>	2 <input type="radio"/>
	1 <input type="radio"/>	2 <input type="radio"/>
	1 <input type="radio"/>	2 <input type="radio"/>
	1 <input type="radio"/>	2 <input type="radio"/>

Intellectual property management infrastructure and expenditure

1.2 a. In your organization, intellectual property management, (including identification, promotion and commercialization) is conducted by:

1 The individual R&D establishment

2 A corporate-level office

3 An external organization (please specify):

4 A combination of the above

1.2 b. For each level, indicate the resources dedicated to IP management. "Full-time equivalents" (FTEs) is an estimate of the number of person-years. "Expenditures on patent applications" include patent searches. "Legal costs" include costs of patent filing, examination, prosecution and litigation. Patent-related expenditures such as maintenance, monitoring and enforcement should be included under "other operational costs". Please see the handbook for a detailed description of these categories.

Level	Employees dedicated to IP management	Operational expenditures for IP management				Total operational expenditures for IP management
		Salaries (corresponding to FTEs)	Expenditures on patent applications	Legal costs	Other operational expenditures	
	(FTEs)	(\$ thousands)				
Corporate						
All S&T establishments						
Other (please specify)						

1.3 Intellectual property policies

a. The Public Servants Inventions Act requires reporting of inventions and other forms of intellectual property to the appropriate Minister or designate. Are these reports normally managed at the R&D establishment level or by a central office?

Reports are managed by:

	<u>the establishment</u>	<u>the corporation</u>	<u>not applicable</u>
Inventions	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
Computer software or databases	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
Literary, artistic, dramatic or musical works, books, papers	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
Educational materials	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
Industrial designs	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
Trademarks	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
Integrated circuit topographies	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
New plant varieties	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
Know-how	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
Other (please specify)	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>

b. Are there any instances in which awards are made to employees of your organization in accordance with the Treasury Board policy on awards to inventors and innovators?

1 Yes 2 No

c. What percentage (range) of the royalties from licensing IP is normally awarded to the inventor or innovator? Please specify whether this percentage is of gross or net royalties. (Net royalties are gross royalties minus the cost of patenting and licensing the IP.)

	<u>% of royalties awarded the inventor/innovator</u>	<u>% of net royalties</u>	<u>% of gross royalties</u>
Inventions	%	1 <input type="radio"/>	2 <input type="radio"/>
Computer software and databases	%	1 <input type="radio"/>	2 <input type="radio"/>
Literary, artistic, dramatic or musical works, books, papers	%	1 <input type="radio"/>	2 <input type="radio"/>
Educational materials	%	1 <input type="radio"/>	2 <input type="radio"/>
Industrial designs	%	1 <input type="radio"/>	2 <input type="radio"/>
Trademarks	%	1 <input type="radio"/>	2 <input type="radio"/>
Integrated circuit topographies	%	1 <input type="radio"/>	2 <input type="radio"/>
New plant varieties	%	1 <input type="radio"/>	2 <input type="radio"/>
Know-how	%	1 <input type="radio"/>	2 <input type="radio"/>
Other (please specify)	%	1 <input type="radio"/>	2 <input type="radio"/>

1.4 Barriers to intellectual property management

Please indicate your agreement with the following statements on the barriers and challenges to IP management

	<u>Strongly disagree</u>				<u>Strongly agree</u>
1. Policy					
1.1 Federal laws and regulations restrict the abilities of departments to fully exploit their IP	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
1.2 Federal laws and regulations deter companies from commercializing IP developed by government	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
1.3 The poor understanding of IP and technology transfer policies leads to perceived barriers	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
1.4 There is a lack of compliance with reporting regulations (e.g., information about inventions is published before protected)	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
1.5 There is a poor linkage to commercial lending organizations and venture capitalists	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
1.6 There is a lack of flexibility for inventors and innovators to commercialize	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
2. IP Management Resources					
2.1 There is a lack of resources (monetary/personnel) to identify and manage IP	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
2.2 There is a lack of experience in identifying technologies that have a high potential for success	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
2.3 Staff involved in technology transfer require further training in IP identification, patent law, IP regulations	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
2.4 Technologies that have a potential for success are not identified sufficiently early	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
3. Revenue Retention					
3.1 Commercialization is impeded because departments are not able to take an equity position in a company	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
3.2 Deferring payment of royalties until the technology is commercialized creates a perception that the IP has not been successful	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
3.3 Inventors and innovators are not adequately rewarded for their participation in the development and transfer of technology	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
4. Receptors' Capabilities					
4.1 Few Canadian SMES have both the resources and the skills necessary to commercialize technologies originating in federal labs	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
4.2 Canadian companies believe they should obtain royalty-free licenses because they pay taxes	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
4.3 There are insufficient mechanisms to help start-up companies in commercializing leading-edge technologies	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
4.4 There is no means for early contact with potential users	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
5. Others (please specify) _____					

1.5 R&D contracts and collaborative arrangements

R&D contracts often result in intellectual property being created in the form of inventions, computer software, databases, published papers, etc. This section requests information on the role of R&D contracts in your organization.

For the purpose of this survey,

- the term "contracts undertaken" refers to arrangements in which your **organization is paid** by an outside organization to conduct R&D activities.
- the term "contracts let" refers to arrangements in which **your organization pays** an external contractor to conduct R&D activities.
- "collaborative arrangements" are formal joint R&D activities not covered by "contracts undertaken" or "contracts let".

a. What are your organization's policies concerning intellectual property resulting from R&D contracts undertaken? That is, who owns the rights to the intellectual property and who has the first rights to license it?

b. What are your organization's policies concerning intellectual property arising from collaborative arrangements?

c. Who were the sponsors of the R&D contracts undertaken during the reference year?

<i>R&D contracts undertaken with:</i>	Number of research contracts	Value of research contracts (\$ thousands)
Federal government		\$
Provincial and other levels of government		\$
Canadian businesses		\$
Other Canadian organizations		\$
Foreign governments		\$
Foreign businesses		\$
Other foreign organizations		\$
Multi-stakeholder groups (e.g., consortia)		\$
Other (please specify)		\$

d. To whom did you let R&D contracts during the reference year? Please account for contributions to other R&D programs separately.

R&D contracted out to:

Federal government

Provincial and other levels of government

Canadian businesses

Other canadian organizations

Foreign governments

Foreign businesses

Other foreign organizations

Universities

Colleges

Multi-stakeholder groups (e.g., consortia)

Other (please specify) _____

Number	Number of contracts		Value of contracts	
	% of number of contracts with IP retained by department	Value (\$ thousands)	% of value of contracts with IP retained by department	
	%	\$	%	
	%	\$	%	
	%	\$	%	
	%	\$	%	
	%	\$	%	
	%	\$	%	
	%	\$	%	
	%	\$	%	
	%	\$	%	
	%	\$	%	
	%	\$	%	

e. With whom did you conduct collaborative research during the reference year? If possible, indicate the name of the group, your approximate commitment of resources and the approximate make-up of the group (e.g., 50% federal government, 25% university, 25% private industry).

f. Please indicate your contributions to other R&D programs that generate intellectual property (IRAP, PILP, Matching Investment Initiative, etc.)

Program	Contribution	
	\$	FTE

2. Identifying Intellectual Property

2.1 Indicate the number of new reports or disclosures, during the reference year, of intellectual property arising from in-house activities, contracts let and collaborative activities.

Type of intellectual property reported	Number of new reports of intellectual property arising from		
	In-house activities	Contracts	Collaborative activities
Inventions			
Computer software or databases			
Literary, artistic, dramatic or musical works, books, papers			
Educational materials			
Industrial designs			
Trademarks			
Integrated circuit topographies			
New plant varieties			
Know-how			
Other (please specify):			

3. Protecting Intellectual Property

3.1 Has the organization engaged in any of the following forms of intellectual property protection over the past 5 years?

Indicate YES in the column provided, whether or not the action was completed. These are more fully defined in the handbook.

	Yes	No
Filing of patent applications	1 <input type="radio"/>	2 <input type="radio"/>
Prior art searches	1 <input type="radio"/>	2 <input type="radio"/>
Prosecutions	1 <input type="radio"/>	2 <input type="radio"/>
Patent cooperation treaties	1 <input type="radio"/>	2 <input type="radio"/>
Registration of copyright for computer software or databases	1 <input type="radio"/>	2 <input type="radio"/>
Registration of copyright for literary, artistic, dramatic or musical works, books, papers	1 <input type="radio"/>	2 <input type="radio"/>
Registration of copyright for educational materials	1 <input type="radio"/>	2 <input type="radio"/>
Registration of industrial designs	1 <input type="radio"/>	2 <input type="radio"/>
Filing for protection of trademarks	1 <input type="radio"/>	2 <input type="radio"/>
Registration of integrated circuit topographies	1 <input type="radio"/>	2 <input type="radio"/>
Filing of applications for plant breeder's rights	1 <input type="radio"/>	2 <input type="radio"/>
Materials transfer agreements	1 <input type="radio"/>	2 <input type="radio"/>
Signing of non-disclosure or confidentiality agreements	1 <input type="radio"/>	2 <input type="radio"/>
Other (please specify):	1 <input type="radio"/>	2 <input type="radio"/>

3.2 During the reference year, how many intellectual properties resulted in protection activity?

	Number that resulted in protection activity
Inventions	
Computer software and databases	
Literary, artistic, dramatic or musical works, books, papers	
Educational materials	
Industrial designs	
Trademarks	
Integrated circuit topographies	
New plant varieties	
Know-how	
Other (please specify)	

3.3 Patent applications and patents issued

During the reference year, how many patents were applied for and issued to the organization. International (for example, Patent Cooperation Treaty applications, PCT) and regional applications (European Patent Office applications) should be counted as **single applications**.

	New patent applications			Patents issued in:			
	Canada	US	other	Canada	US	other	TOTAL
1. Commerce, Management and Business Administration							
2. Agriculture and Biological Sciences/Technologies							
3. Engineering and Applied Sciences							
4. Health Professions, Sciences and Technologies							
5. Mathematics and Physical Sciences							
6. All other not elsewhere classified							
TOTAL							

Patents held in:			
Canada	US	other	TOTAL

Total patents held, including patents issued this year

4.1 Licenses

Please report the number of new licenses executed during the reference year and the number of active licenses at the end of the year. If detailed figures are not available, please report totals in the appropriate cells. See the handbook for detailed definitions of "Canadian" and "foreign". If in doubt, please provide the name of the licensee and Statistics Canada will assign the appropriate classification.

	Exclusive or sole license	Non-exclusive or multiple license	TOTAL
a. New licenses executed with Canadian licensees that were:			
i) sponsors of research contracts, contractors or participants in collaborative activities			
ii) not involved in generating the technology licensed			
iii) Total new licenses with Canadian licensees (a.i + a.ii)			
b. i) New licenses with foreign licensees			
ii) Total new licenses (a.iii + b.i)			
c. Active licenses with Canadian licensees that were:			
i) sponsors of research contracts, contractors or participants in collaborative activities			
ii) not involved in generating the technology licensed			
iii) Total active licenses with Canadian licensees (c.i + c.ii)			
d. i) Active licenses with foreign licensees			
ii) Total active licenses (c.iii + d.i)			

4.2 What were the sources of the technologies upon which the current licenses are based? The total should match the total of d.ii above.

Technology source	Total active licenses
In-house activities	
External activities (contracts let)	
Collaborative activities	
Multiple sources	
Other (please specify)	
Total	

4.3 Royalties received

During the reference year, what was the total amount of royalties received from active licenses? Include license issue fees, running royalties, software and database end-user license fees, and any other royalties.

Total royalties received during the reference year from IP arising from:	Canadian licensees (\$ thousands)	Foreign licensees (\$ thousands)	TOTAL (\$ thousands)
In-house activities	\$	\$	\$
External activities (contracts let)	\$	\$	\$
Collaborative activities	\$	\$	\$
Multiple sources	\$	\$	\$
Other (please specify)	\$	\$	\$
Total	\$	\$	\$

5. Impacts of Intellectual Property Transfer

5.1 New companies are often formed to commercialize technologies that are owned by public sector organizations. Spin-offs can result from several institutional arrangements:

Licensing: A new company is formed to license and commercialize the organization's technology (these are sometimes called start-ups)

R&D – A new company funds research at the organization to develop technologies that it plans to license.

Service – a new company is formed to provide a service that was originally offered through the organization. This also includes employee take-overs, or companies that are started by former employees on an arrangement to commercialize the technology.

List the legal names of spin-off companies incorporated within the past 10 years, their year of incorporation, the company status, technology sector (refer to the technology sector classification provided for Question 3.3) and the institutional link (licensing, R&D or other).

Use additional sheets of paper, if necessary.

Legal name	Year Incorporated	Company Status (conceptual stage, early stage, active, merged, inactive, closed)	Technology sector (refer to Question 3.3)	Institutional link (licensing, R & D, service)

5.2 Besides licensing technologies and creating new companies, what other benefits have arisen from intellectual property developed by or for your organization? This could include: royalty-free licenses, permission to use IP without licensing, non-commercial applications such as regulatory or stewardship purposes or "know how". If possible, estimate the market value of the benefit.

Contribution	Estimated value to	
	Canadian beneficiaries (\$ thousands)	US and other foreign beneficiaries (\$ thousands)

6. Additional questions

Your responses to the following questions will help us understand intellectual property management in your organization. Responses will be used to refine future versions of this survey. *If you completed this question previously and there have been no changes, it is not necessary to complete section 6.*

6.1 Approaches to intellectual property management

a. How are intellectual property management activities most often initiated for new intellectual property?

Check one

The discoverer (researcher) reports the discovery to the organization and requests consideration for protection and/or commercialization.

1

The organization monitors the activities of the researchers and notes which discoveries should be considered for protection and/or commercialization.

2

Other (please specify)

3

b. What are the main approaches to developing and commercializing the organization's intellectual property? For example, patenting and licensing could be managed by the technical transfer office or alternatively by a commercialization company. *Provide the response on a separate sheet of paper, if necessary.*

c. Please describe a typical case of intellectual property management in your organization. This description should include who took what action and at what time. *Provide your response on a separate sheet of paper, if necessary.*

6.2 Has your organization published a report on the benefits of the department's S&T activities?

1 Yes 2 No



If YES, please list the titles and/or Internet addresses of the most recent reports.

If possible, please include a hard copy with your response.

Title and/or Internet address	Organization covered	Year referenced

7. Respondent Feedback

7.1 We are committed to minimizing the burden placed on our respondents while obtaining quality statistics. Please answer the following questions to help us fine-tune the survey.

a. How much effort was required to complete the survey?

person-hours

b. In your opinion, which was the most difficult question to answer?

question number

c. Did you find the questions and classifications used in the survey compatible with your own accounting systems?

1 Yes

2 No → If not, please comment on how the concepts and classifications could be changed to be more compatible.

7.2 Other comments

Thank you for your cooperation !