Science, Innovation and Electronic Information Division (SIEID)

Research and Development of Canadian Private Non-profit Organizations, 2007

Confidential when completed

Si vous préférez ce questionnaire en français, veuillez cocher ☐

Please correct any mistakes in name or address

INFORMATION FOR RESPONDENTS

Survey Objective
This survey collects data which 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. Your data will be used, for instance, to provide indicators on the state of research and development (R&D) performed by private non-profit organizations and to complete national totals for scientific R&D expenditures and personnel.

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

Legal requirement
Completion of this questionnaire is a legal requirement under the *Statistics Act*.

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. The data reported on this questionnaire will be treated in strict confidence, used for statistical purposes and published in aggregate form only.

Reporting Period
This questionnaire should be completed for the **fiscal year ending in 2007.**

Data Sharing Agreement
In order to avoid duplication of surveys, to reduce the cost of data collection and to provide consistent statistics, Statistics Canada has entered into an agreement with the Institut de la statistique du Québec, under Section 11 of the *Statistics Act*, to share data from organizations located or having R&D activities in Québec. The Act respecting the Institut de la statistique du Québec authorizes it to collect this information on its own or jointly with Statistics Canada. It also includes the same provisions for confidentiality and penalties for disclosure of information as the federal *Statistics Act*.

CERTIFICATION

Name of person who completed this report *(please print)* 001	Business address 002			
Official position 003	Date 004	Postal Code 005	Telephone No. 006 ( ) -	Extension 007
E-mail address: 008	GST No. (BN No.) 009		Fax No. 010 ( ) -	

Please describe briefly your organization's main activities. If you have enclosed an annual report which contains this information, disregard this question. ▶ 011

GENERAL DATA

1. a) FISCAL YEAR ENDING IN 2007 ▶ **FROM** 2 0 0 (103 year) (102 month) (103 day) **TO** 2 0 0 7 (104 year) (105 month) day

b) For the fiscal year ending in 2007, did your organization perform any R&D (as defined in the Instruction Guide)? ▶ ○ Yes 106 ○ No 107

c) If 'NO', did your organization fund any R&D for the fiscal year ending in 2007? ▶ ○ Yes – **go to question 7** 108 ○ No 109

THANK YOU FOR YOU COOPERATION

5-5300-408.1 2008-05-20 STC/SAT – 465-60043

Statistics Canada Statistique Canada

Canada

DATA ON R&D PERFORMED *(questions 2 to 6)*

2. EXPENDITURES FOR R&D PERFORMED WITHIN THIS ORGANIZATION IN CANADA

Major fields of R&D	Expenditures for fiscal year ending in 2007			Planned expenditures for fiscal year ending in 2008			Forecast expenditures for fiscal year ending in 2009		
	Current	Capital	Total	Current	Capital	Total	Current	Capital	Total
	(CAN$ thousands)								
Natural sciences and engineering:	200	201	202	203	204	205	206	207	208
Medical	210	211	212	213	214	215	216	217	218
Other	220	221	222	223	224	225	226	227	228/
Social sciences and humanities	230	231	232	233	234	235	236	237	238
Total	240	241	242	243	244	245	246	247	248

3. SOURCES OF FUNDS FOR R&D PERFORMED WITHIN THIS ORGANIZATION FOR THE FISCAL YEAR ENDING IN 2007

Attach a list of the organizations or individuals from which major payments were received for R&D and their support. (Your annual report may provide this information)

		(CAN$ thousands)
a)	Reporting organization (e.g. interest on own funds, investments income, membership dues, trust funds)	300
b)	Federal government	301
c)	Provincial governments (specify province)	302
d)	Canadian business enterprises	303
e)	Other Canadian private non-profit organizations	304
f)	Other Canadian sources (e.g. universities) (Please specify and attach additional sheet if necessary) (Please print full name)	305
g)	Foreign sources	306
	Total *(equal to the 2007 grand total expenditures of question 2 (cell 242))*	307

4. PERSONNEL OF THIS REPORTING UNIT ENGAGED IN R&D FOR THE FISCAL YEAR ENDING IN 2007 (FULL-TIME EQUIVALENT – FTE*)

(use rounded numbers only)

CATEGORY	FULL TIME * EQUIVALENT
Scientists and engineers	400
Technicians and technologists: technically trained personnel who assist scientists and egineers in R&D; *(e.g. chemical technicians, draftspersons).* They may be certified by either provincial educational authorities or by provincial or national scientific or engineering associations.	401
Other: personnel directly engaged in the R&D program *(e.g. machinists and electricians engaged in construction of prototypes or staff engaged in the administration or clerical support of R&D units)*	402
Total R&D personnel	403

*** See Instruction Guide, page 4**

5. FIELDS OF MEDICAL R&D PERFORMED WITHIN THIS ORGANIZATION FOR THE FISCAL YEAR ENDING IN 2007

Please indicate the medical field in which R&D is performed within this organization.

Fields of medical R&D	Yes	No	Fields of medical R&D	Yes	No
Cellular biology	500	501	Haematology	502	503
Genetics	504	505	Drugs and their effects	506	507
Immunology	508	509	Visual sciences (e.g. ophthalmology, optometry and other eye related research)	510	511
Endocrinology	512	513	Other medical fields (*please specify)* a)	514	515
Nutrition and metabolism	516	517	b)	518	519
Cancer	520	521	c)	522	523

6. R&D EXPENDITURES BY SOCIO-ECONOMIC OBJECTIVES WITHIN THIS ORGANIZATION FOR THE FISCAL YEAR ENDING IN 2007

Socio-Economic Objective		(CAN$ thousands)
1.	Exploration and exploitation of the Earth	600
2.	Infrastructure and general planning of land use (e.g. transport, telecommunications, other)	601
3.	Control and care of the environment	602
4.	Protection and improvement of human health	603
5.	Production, distribution and rational utilization of energy	604
6.	Agricultural production and technology (e.g. agriculture, fishing, forestry)	605
7.	Industrial production and technology	606
8.	Social structures and relationships	607
9.	Exploration and exploitation of space	608
10.	Non-oriented research	609
11.	Other civil research	610
12.	Defence	611
	Total *(equal to the 2007 grand total expenditures of question 2 (cell 242))*	612

DATA ON PAYMENTS FOR R&D

7. PAYMENTS FOR R&D PERFORMED BY OTHER ORGANIZATIONS FOR THE FISCAL YEAR ENDING IN 2007
Attach a list of the organizations or individuals to which major payments were made for R&D. Include a description of the projects if possible. (Your annual report may provide this information.)

Major fields of R&D	Sector of performance			
	Canadian universities and hospitals	Other Canadian private non-profit organizations	Other	Total
	(CAN$ thousands)			
Natural sciences and engineering	700	701	702	703
Medical	710	711	712	713
Other	720	721	722	723
Social sciences and humanities	730	731	732	733
Total	740	**741**	**742**	**743**

SURVEY COMPLETION TIME

8. PLEASE INDICATE HOW LONG IT TOOK YOU TO COMPLETE THIS QUESTIONNAIRE.

			minutes
			800

COMMENTS

COMMENTS: Reasons for major changes in reporting R&D expenditures and personnel – *In order to eliminate the necessity to verify discrepancies between this report and your last return (fiscal year ending in 2006) please explain any significant changes which might be misconstrued as an error in reporting.*

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INSTRUCTION GUIDE

Please answer all questions. Since the required information cannot normally be readily extracted from available records, your best estimates will be quite satisfactory. This survey was carried out for the fiscal year ending in 2006. You may have a file copy of your return which will help you now.

Additional forms and explanations of the terms used in the questions can be obtained from Catherine ten Den, Science, Innovation and Electronic Information Division: call collect (613) 951-2188

Please return the completed questionnaire within 30 days of receipt. If you are unable to do so, please inform us of the expected completion date. If you receive more than one copy of this survey questionnaire for the same private non-profit organization, please complete one and attach and return the duplicate(s). If you require assistance in the completion of this questionnaire or have any questions regarding the survey please address all enquiries to:

Science and Technology Survey Section
Science, Innovation and Electronic Information Division
Statistics Canada
Ottawa, Ontario
K1A 0T6
Tel: 1-866-824-5893
Fax: 613-951-9920

Definitions

Research and development (R&D) is creative work in the natural and social sciences and humanities undertaken on a systematic basis to increase the stock of knowledge or discover new applications for existing knowledge. New knowledge involves the integration of newly acquired information into existing hypotheses, the formulation and testing of new hypotheses or the re-evaluation of existing observations.

NOTE: Exclude all non-R&D activities *(such as investigative studies, medical care, social services, education and training, dissemination of information, etc.),* which your organization undertakes or funds.

To illustrate the distinction between R&D and investigative studies: the developing and testing of new methods for treating a neurosis is research. A study of psychiatric services in a region to suggest changes is an investigative study.

Major fields of R&D

a) Natural sciences and engineering:
- Medical sciences include medicine, dentistry, pharmacy, etc.
- Other sciences include all disciplines in the natural sciences except the medical sciences (*e.g. mathematics, physics, chemistry, biology and engineering).*

b) Social sciences and humanities include all disciplines involving the study of human actions and conditions, and the social, economic and institutional mechanisms affecting humans *(e.g. economics, history, sociology).*

Expenditures

Current expenditures are expenditures on items used up within a relatively short time period or costing relatively little. They include wages, salaries and related costs; materials and supplies used; necessary background literature; minor scientific equipment and associated administrative overhead costs.

Capital expenditures are expenditures on facilities such as buildings, equipment, machinery and land. **Exclude capital depreciation.**

Question 4 – **Full Time Equivalent (FTE) –** R&D may be carried out by persons who work solely on R&D projects or by persons who devote only part of their time to R&D, and the balance to other activities such as testing, quality control and production engineering. To arrive at the total effort devoted to R&D in terms of personnel, it is necessary to estimate the full-time equivalent of these persons working only part-time in R&D.

FTE = Number of persons who work solely on R&D projects + the estimate of time of persons working only part of their time on R&D.

Example calculation: If out of five scientists engaged in R&D work, one works solely on R&D projects and the remaining four devote only one quarter of their working time to R&D, then: FTE = 1 + 1/4 + 1/4 + 1/4 + 1/4 = 2 scientists.

Question 6 – RESEARCH AND DEVELOPMENT EXPENDITURES BY SOCIO-ECONOMIC OBJECTIVES

Socio-economic objectives allow organizations to classify their S&T resource allocations according to the purpose for which the expenditure is intended. The objectives are listed on the questionnaire at the highest level of aggregation with sub-levels given here for clarification of categories. In many cases, projects have multiple objectives and an organization should assign its expenditures consistent with the stated objectives. Care must be taken to avoid "double counting".

The objectives are based on the Nomenclature for the Analysis and Comparison of Scientific Programs and Budgets (NABS) produced by the Statistical Office of the European Communities (Eurostat).

1. **Exploration and exploitation of the Earth** – scientific activities with objectives related to the exploration of the Earth's crust and mantle, seas, oceans and atmosphere, and scientific activities on their exploitation. It also includes climatic and meteorological research, polar exploration (under various headings, as appropriate) and hydrology.

   Examples:
   - Mineral, oil and natural gas prospecting
   - Exploration and exploitation of the sea-bed

- Earth's crust and mantle excluding sea-bed and studies of soil for agriculture (6)
- Hydrology – excludes scientific activities on: water supplied and disposal (2) and water pollution (3)
- Sea and oceans
- Atmosphere

Excludes: scientific activities on pollution (objective 3), soil improvement or land-use (objective 2), and fishing (objective 6).

2. **Infrastructure and general planning of land use** – scientific activities on infrastructure and land development, including research on the construction of buildings. More generally, all scientific activities relating to the general planning of land use. This includes scientific activities into protection against harmful effects in town and country planning but not scientific activities into other types of pollution (objective 3).

   Transport systems – covers scientific activities on transport systems, including road accident prevention and ancillary services such as electronic traffic aids and radar stations. Also included are general scientific activities on transport systems, road and rail traffic, inland waterway and sea transport, air traffic, pipeline transport systems, works transport systems, combined transport systems and scientific activities on the potential effects on the environment of the planning and operation of transport systems. Scientific activities on transport equipment is included only when it forms part of the coordinated programs for the development of improved and safer transport systems, otherwise, such research is classified in objective 7.

   Telecommunication systems – covers scientific activities on telecommunication services and the planning and organization of telecommunication networks. It includes, in particular, general scientific activities on telecommunication systems, telephones, telex, data transmission, radio and television (including cable TV).

   Other scientific activities – covers scientific activities on the infrastructure and general planning of land use.

   Examples:
   - General scientific activities
   - General planning of land-use
   - Construction and planning of buildings
   - Civil engineering – excludes scientific activities on building materials and industrial processes (objective 7)
   - Water supply

3. **Control and care of the environment** – covers scientific activities into the control of pollution, aimed at the identification and analysis of the sources of pollution and their causes, and all pollutants, including their dispersal in the environment and the effects on man, species (fauna, flora, microorganisms) and biosphere. Development of monitoring facilities for the measurement of all kinds of pollution is included. The same is valid for the elimination and prevention of all forms of pollution in all types of environment.

   Examples:
   - Protection of atmosphere and climate
   - Protection of ambient air and water
   - Solid waste
   - Protection of soil and groundwater
   - Noise and vibration
   - Protection of species and habitats
   - Protection against natural hazards
   - Radioactive pollution
   - Other scientific activities on the environment

4. **Protection and improvement of human health** – scientific activities aimed at protecting, promoting and restoring human health broadly interpreted to include health aspects of nutrition and food hygiene. It ranges from preventative medicine, including all aspects of medical and surgical treatment, both for individuals and groups, and the provision of hospital and home care, to social medicine and pediatric and geriatric research.

   Examples:
   - Medical scientific activities, hospital treatment, surgery
   - Preventive medicine
   - Biomedical engineering and medicines
   - Occupational medicine
   - Nutrition and food hygiene
   - Drug abuse and addiction
   - Social medicine
   - Hospital structure and organization of medical care

5. **Production, distribution and rational utilization of energy** – covers scientific activities into the production, storage, transportation, distribution and rational use of all forms of energy. It also includes scientific activities on processes designed to increase the efficiency of energy production and distribution, and the study of energy conservation.

   Examples:
   - Fossil fuels and their derivatives
   - Nuclear fission and fusion
   - Radioactive waste management including decommissioning with regard to fuel/energy
   - Renewable energy sources
   - Rational utilization of energy

6. **Agricultural production and technology** – covers all scientific activities on the promotion of agriculture, forestry, fisheries and foodstuff production. It includes: scientific activities on chemical fertilizers, biocides, biological pest control and the mechanization of agriculture; research on the impact of scientific activities in the field of developing food productivity and technology.

7. **Industrial production and technology** – covers scientific activities on the improvement of industrial production and technology. It includes scientific activities on industrial products and their manufacturing processes except where they form an integral part of the pursuit of other objectives (e.g. defence, space, energy, agriculture).

   Examples:
   - Increasing economic efficiency and competitiveness
   - Manufacturing and processing techniques
   - Petrochemical and coal by-products
   - Pharmaceutical products
   - Manufacture of motor vehicles and other means of transport
   - Aerospace equipment manufacturing and repairing
   - Electronic and related industries
   - Manufacture of electrical/non-electrical machinery and apparatus
   - Medical and surgical equipment and orthopedic appliances, food products and beverages, clothing and textiles and leather goods
   - Recycling

8. **Social structures and relationships** – scientific activities on social objectives, as analyzed in particular by social and human sciences, which have no obvious connection with other objectives. This analysis includes quantitative, qualitative, organizational and forecasting aspects of social problems.

   Examples:
   - Education, training, recurrent education and retraining
   - Cultural activities
   - Management of businesses and institutions
   - Improvement of working conditions
   - Social security system
   - Political structure of society
   - Social change, social processes and social conflicts
   - Other scientific activities with regard to society

9. **Exploration and exploitation of space** – all civil space scientific activities. Corresponding scientific activities in the defence field is classified in objective 12. (Although civil space research is not, in general, concerned with particular objectives, it frequently has a specific goal, such as the increase of general knowledge (e.g. astronomy), or relates to particular applications (e.g. telecommunication satellites).

   Examples:
   - General scientific activities
   - Scientific exploration of space
   - Applied research programs
   - Launch systems
   - Space laboratories and space travel
   - Other research on the exploration and exploitation of space

10. **Non-oriented research** – basic activities motivated by scientific curiosity with the objective of increasing scientific knowledge. It also includes funding used to support postgraduate studies and fellowships.

    Examples:
    - Mathematics and Computer Sciences
    - Physical Sciences
    - Chemical Sciences
    - Biological Sciences
    - Earth and Related (Environmental) Sciences
    - Engineering Sciences
    - Medical Sciences
    - Agricultural Sciences
    - Social Sciences
    - Humanities

11. **Other civil research** – civil scientific activities which cannot (yet) be classified to a particular objective.

12. **Defence** – covers scientific activities for military purposes. It also includes basic research and nuclear and space research financed by ministries of defence. Civil scientific activities financed by ministries of defence, for example, in the fields of meteorology, telecommunications and health, should be classified in the relevant objectives.