

Federal Science Expenditures and Personnel 2018/2019

Activities in the social sciences, humanities and the arts

Collected under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S-19. Completion of this questionnaire is a legal requirement under this Act. Confidential when completed.

Si vous préférez ce questionnaire en français, veuillez envoyer un courriel à : statcan.fsepsurv-enqdsf.statcan@canada.ca

Correct as required

Department or Agency Name

 C/O

 Address

 City

 Province/Territory _____ Postal Code _____

Information for respondents

Survey purpose

This survey collects the financial and operating 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. The data collected are used by federal and provincial science policy analysts and are also part of the gross domestic expenditures on research and development (GERD). Your information may also be used by Statistics Canada for other statistical and research purposes.

Fax or e-mail transmission disclosure

Statistics Canada advises you that there could be a risk of disclosure during the transmission of information by facsimile or e-mail. However, upon receipt, Statistics Canada will provide the guaranteed level of protection afforded all information collected under the authority of the *Statistics Act*.

Confidentiality

Statistics Canada is prohibited by law from releasing any information it collects which could identify any person, business, or organization, unless consent has been given by the respondent or as permitted by the *Statistics Act*. Statistics Canada will use the information from this survey for statistical purposes.

Data-sharing agreements

To reduce respondent burden, Statistics Canada has entered into data-sharing agreements with provincial and territorial statistical agencies and other government organizations, which have agreed to keep the data confidential and use them only for statistical purposes.

Information on data-sharing agreements and record linkages can be found on the last page of this questionnaire.

I hereby authorize Statistics Canada to disclose any or all portions of the data supplied on this questionnaire that could identify this department after the tabling of the 2018/2019 Main Estimates. Yes No

Name of person authorized to sign	Signature
Official position	Program
Department or agency	
E-mail address	Telephone No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

Enquiries to be directed to:

Name	Date	Year	Month	Day
		<input type="text"/>	<input type="text"/>	<input type="text"/>
Position title	Telephone No.	<input type="text"/>	<input type="text"/>	<input type="text"/>
E-mail address	Fax No.	<input type="text"/>	<input type="text"/>	<input type="text"/>

1 A. Expenditures by activity and performer – fiscal year 2016/2017

Activity / Performer	Intramural	Extramural					Total
		Business enterprise	Higher education	Canadian non-profit institutions	Provincial and municipal governments	Foreign performers	
I. Research and experimental development (R&D) Current expenditures	(\$'000)						
1. In-house R&D	10C140						10C141
2. R&D contracts		10C142	10C5	10C6	10C7	10C8	10C10
3. R&D grants and contributions		10C143	10C14	10C15	10C16	10C17	10C19
4. Research fellowships	10C20	10C144	10C22	10C23	10C24	10C25	10C27
5. Administration of extramural programs	10C28						10C29
6. Capital expenditures	10C30						10C31
I a) Sub-total Research and experimental development (R&D)	10C32	10C145	10C34	10C35	10C36	10C37	10C39
II. Related scientific activities (RSA) Current expenditures							
7. In-house RSA	10C146						10C147
8. RSA contracts		10C148	10C149	10C150	10C151	10C152	10C153
9. RSA grants and contributions		10C154	10C155	10C156	10C157	10C158	10C159
10. Administration of extramural programs	10C72						10C73
11. Capital expenditures	10C74						10C75
II a) Sub-total Related scientific activities (RSA)	10C76	10C160	10C78	10C79	10C80	10C81	10C83
III. Total expenditures I a) + II a)	10C84	10C161	10C86	10C87	10C88	10C89	10C91 1

1. Must equal social science funds for 2016/2017, question 3A (ii).

1 B. Expenditures by activity and performer – fiscal year 2017/2018

Activity / Performer	Intramural	Extramural					Total
		Business enterprise	Higher education	Canadian non-profit institutions	Provincial and municipal governments	Foreign performers	
I. Research and experimental development (R&D) Current expenditures	(\$'000)						
1. In-house R&D	20C140						20C141
2. R&D contracts		20C142	20C5	20C6	20C7	20C8	20C10
3. R&D grants and contributions		20C143	20C14	20C15	20C16	20C17	20C19
4. Research fellowships	20C20	20C144	20C22	20C23	20C24	20C25	20C27
5. Administration of extramural programs	20C28						20C29
6. Capital expenditures	20C30						20C31
I a) Sub-total Research and experimental development (R&D)	20C32	20C145	20C34	20C35	20C36	20C37	20C39
II. Related scientific activities (RSA) Current expenditures							
7. In-house RSA	20C146						20C147
8. RSA contracts		20C148	20C149	20C150	20C151	20C152	20C153
9. RSA grants and contributions		20C154	20C155	20C156	20C157	20C158	20C159
10. Administration of extramural programs	20C72						20C73
11. Capital expenditures	20C74						20C75
II a) Sub-total Related scientific activities (RSA)	20C76	20C160	20C78	20C79	20C80	20C81	20C83
III. Total expenditures I a) + II a)	20C84	20C161	20C86	20C87	20C88	20C89	20C91 1

1. Must equal social science funds for 2017/2018, question 3A (ii).

1 C. Expenditures by activity and performer – fiscal year 2018/2019

Activity / Performer	Intramural	Extramural					Total
		Business enterprise	Higher education	Canadian non-profit institutions	Provincial and municipal governments	Foreign performers	
I. Research and experimental development (R&D) Current expenditures	(\$'000)						
1. In-house R&D	30C140						30C141
2. R&D contracts		30C142	30C5	30C6	30C7	30C8	30C10
3. R&D grants and contributions		30C143	30C14	30C15	30C16	30C17	30C19
4. Research fellowships	30C20	30C144	30C22	30C23	30C24	30C25	30C27
5. Administration of extramural programs	30C28						30C29
6. Capital expenditures	30C30						30C31
I a) Sub-total Research and experimental development (R&D)	30C32	30C145	30C34	30C35	30C36	30C37	30C39
II. Related scientific activities (RSA) Current expenditures							
7. In-house RSA	30C146						30C147
8. RSA contracts		30C148	30C149	30C150	30C151	30C152	30C153
9. RSA grants and contributions		30C154	30C155	30C156	30C157	30C158	30C159
10. Administration of extramural programs	30C72						30C73
11. Capital expenditures	30C74						30C75
II a) Sub-total Related scientific activities (RSA)	30C76	30C160	30C78	30C79	30C80	30C81	30C83
III. Total expenditures I a) + II a)	30C84	30C161	30C86	30C87	30C88	30C89	30C91 1

1. Must equal social science funds for 2018/2019, question 3A (ii).

2 A. Personnel in full-time equivalent for intramural scientific and technological activities in the social sciences, humanities and the arts, fiscal years 2016/2017, 2017/2018 and 2018/2019

Category	2016/2017				
	Personnel engaged in R&D	Personnel engaged in RSA	Personnel engaged in the administration of extramural R&D programs	Personnel engaged in the administration of extramural RSA programs	Total
	(A)	(B)	(C)	(D)	
(Full-time equivalent)					
Scientific and professional (include executive)	40C1	40C2	40C3	40C4	40C5
Technical	40C6	40C7	40C8	40C9	40C10
Other ¹	40C11	40C12	40C13	40C14	40C15
Total	40C16	40C17	40C18	40C19	40C20

1. Include administrative and foreign service, administrative support, operational and military personnel.

- A: Personnel engaged in research and development (R&D).
- B: Personnel engaged in related scientific activities (RSA).
- C: Personnel engaged in the administration of extramural R&D programs.
- D: Personnel engaged in the administration of extramural RSA programs.

2 B. Personnel in full-time equivalent for intramural scientific and technological activities in the social sciences, humanities and the arts, fiscal years 2016/2017, 2017/2018 and 2018/2019 – continued

Category	2017/2018				
	Personnel engaged in R&D	Personnel engaged in RSA	Personnel engaged in the administration of extramural R&D programs	Personnel engaged in the administration of extramural RSA programs	Total
	(A)	(B)	(C)	(D)	
(Full-time equivalent)					
Scientific and professional (include executive)	41C1	41C2	41C3	41C4	41C5
Technical	41C6	41C7	41C8	41C9	41C10
Other ¹	41C11	41C12	41C13	41C14	41C15
Total	41C16	41C17	41C18	41C19	41C20

1. Include administrative and foreign service, administrative support, operational and military personnel.

- A: Personnel engaged in research and development (R&D).
- B: Personnel engaged in related scientific activities (RSA).
- C: Personnel engaged in the administration of extramural R&D programs.
- D: Personnel engaged in the administration of extramural RSA programs.

2 C. Personnel in full-time equivalent for intramural scientific and technological activities in the social sciences, humanities and the arts, fiscal years 2016/2017, 2017/2018 and 2018/2019 – continued

Category	2018/2019				
	Personnel engaged in R&D	Personnel engaged in RSA	Personnel engaged in the administration of extramural R&D programs	Personnel engaged in the administration of extramural RSA programs	Total
	(A)	(B)	(C)	(D)	
	(Full-time equivalent)				
Scientific and professional (include executive)	42C1	42C2	42C3	42C4	42C5
Technical	42C6	42C7	42C8	42C9	42C10
Other ¹	42C11	42C12	42C13	42C14	42C15
Total	42C16	42C17	42C18	42C19	42C20

1. Include administrative and foreign service, administrative support, operational and military personnel.

- A: Personnel engaged in research and development (R&D).
- B: Personnel engaged in related scientific activities (RSA).
- C: Personnel engaged in the administration of extramural R&D programs.
- D: Personnel engaged in the administration of extramural RSA programs.

FOR INFORMATION ONLY

3A (i) Transfers for social sciences, humanities and the arts activities – fiscal year 2016/2017

Into the program¹		
From Federal department or agency	Description	2016/2017 (\$'000)
70C1	70C2	70C3
70C1	70C2	70C3
70C1	70C2	70C3
70C1	70C2	70C3
Total		

1. Must equal total transferred into this program reported for 2016/2017, question 3A (ii), column 1, row 2 a).

From the program¹		
To Federal department or agency	Description	2016/2017 (\$'000)
71C1	71C2	71C3
71C1	71C2	71C3
71C1	71C2	71C3
71C1	71C2	71C3
Total		

1. Must equal total transferred from this program reported for 2016/2017, question 3A (ii), column 1, row 2 b).

3A (ii). Sources of funds for total scientific and technological activities in the social sciences, humanities and the arts, fiscal years 2016/2017, 2017/2018 and 2018/2019

Source of funds	2016/2017	2017/2018	2018/2019
	(\$'000)		
1. Departmental S&T budget (operating and capital and grants and contributions)	43C1	44C1	45C1
2. Revenues to / from other federal departments ¹	43C2	44C2	45C2
a) Total transferred into this program	43C3	44C3	45C3
b) Total transferred from this program	43C4	44C4	45C4
Net other federal departments and agencies	43C5	44C5	45C5
3. Provincial government departments	43C6	44C6	45C6
4. Business enterprises	43C7	44C7	45C7
5. Other (please specify)	43C8	44C8	45C8
Total		2	3
			4

1. Include payments or receipts for contracts, transfers and joint programs from/to other federal government departments. The amount and the names of the origination and recipient programs should be identified in question 3A (i).
2. Must equal total expenditures, question 1A.
3. Must equal total expenditures, question 1B.
4. Must equal total expenditures, question 1C.

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4. Scientific and technological expenditures by socio-economic objective – fiscal year 2016/2017

Socio-economic objective	R&D		RSA		Total S&T		
	Intramural	Extramural	Intramural	Extramural	Intramural	Extramural	
	(\$'000)						
1. Exploration and exploitation of the Earth	50C1	50C2	50C3	50C4	50C5	50C6	
2. Infrastructure and general planning of land use: 2.1 Transport	50C7	50C8	50C9	50C10	50C11	50C12	
2.2 Telecommunication	50C13	50C14	50C15	50C16	50C17	50C18	
2.3 Other	50C19	50C20	50C21	50C22	50C23	50C24	
3. Control and care of the environment	50C25	50C26	50C27	50C28	50C29	50C30	
4. Protection and improvement of human health	50C31	50C32	50C33	50C34	50C35	50C36	
5. Production, distribution and rational utilization of energy	50C37	50C38	50C39	50C40	50C41	50C42	
6. Agricultural production and technology: 6.1 Agriculture	50C43	50C44	50C45	50C46	50C47	50C48	
6.2 Fishing	50C49	50C50	50C51	50C52	50C53	50C54	
6.3 Forestry	50C55	50C56	50C57	50C58	50C59	50C60	
7. Industrial production and technology	50C61	50C62	50C63	50C64	50C65	50C66	
8. Social structures and relationships	50C67	50C68	50C69	50C70	50C71	50C72	
9. Exploration and exploitation of space	50C73	50C74	50C75	50C76	50C77	50C78	
10. Non-oriented research	50C79	50C80	50C81	50C82	50C83	50C84	
11. Other civil research	50C85	50C86	50C87	50C88	50C89	50C90	
12. Defence	50C91	50C92	50C93	50C94	50C95	50C96	
Total Expenditures	50C97	1 50C98	2 50C99	3 50C100	4 50C101	5 50C102	6

1. Must equal intramural R&D expenditures reported for 2016/2017, question 1A.
2. Must equal extramural R&D expenditures reported for 2016/2017, question 1A.
3. Must equal intramural RSA expenditures reported for 2016/2017, question 1A.
4. Must equal extramural RSA expenditures reported for 2016/2017, question 1A.
5. Must equal total intramural S&T expenditures reported for 2016/2017, question 1A.
6. Must equal total extramural S&T expenditures reported for 2016/2017 question 1A.

5. Expenditures and personnel of scientific and technological establishments engaged in activities in the social sciences, humanities and the arts, fiscal year 2016/2017

Region	Total intramural R&D		Total intramural RSA		Total R&D personnel		Total RSA personnel	
	Current	Capital	Current	Capital	Scientific & professional	Total	Scientific & professional	Total
	(\$'000)				(Full-time equivalent)			
Newfoundland and Labrador	60C1	60C2	60C3	60C4	60C5	60C6	60C7	60C8
Prince Edward Island	60C9	60C10	60C11	60C12	60C13	60C14	60C15	60C16
Nova Scotia	60C17	60C18	60C19	60C20	60C21	60C22	60C23	60C24
New Brunswick	60C25	60C26	60C27	60C28	60C29	60C30	60C31	60C32
Quebec (excl. NCR - Quebec)	60C129	60C130	60C131	60C132	60C133	60C134	60C135	60C136
National Capital Region (NCR) (Quebec)	60C41	60C42	60C43	60C44	60C45	60C46	60C47	60C48
Ontario (excl. NCR - Ontario)	60C137	60C138	60C139	60C140	60C141	60C142	60C143	60C144
National Capital Region (NCR) (Ontario)	60C65	60C66	60C67	60C68	60C69	60C70	60C71	60C72
Manitoba	60C81	60C82	60C83	60C84	60C85	60C86	60C87	60C88
Saskatchewan	60C89	60C90	60C91	60C92	60C93	60C94	60C95	60C96
Alberta	60C97	60C98	60C99	60C100	60C101	60C102	60C103	60C104
British Columbia	60C105	60C106	60C107	60C108	60C109	60C110	60C111	60C112
Yukon, Northwest Territories and Nunavut	60C113	60C114	60C115	60C116	60C117	60C118	60C119	60C120
Canada Total ¹	60C121	60C122	60C123	60C124	60C125	60C126	60C127	60C128

1. Must equal total intramural expenditures and personnel, question 1A and question 2A, for year 2016/2017.

Question 5	Must equal	Question 1A, Column 1
Column 1 Total - Current intramural R&D expenditures	=	Sum of rows 1, 4 and 5
Column 2 Total - Capital R&D expenditures	=	Item 6
Column 3 Total - Current intramural RSA expenditures	=	Sum of rows 7 and 10
Column 4 Total - Capital RSA expenditures	=	Item 11
Question 5	Must equal	Question 2A, Column 1
Column 5 Total - Scientific and professional R&D personnel	=	Scientific and professional of columns A and C
Column 6 Total - Total R&D Personnel	=	Total of columns A and C
Column 7 Total - Scientific and professional RSA personnel	=	Scientific and professional of columns B and D
Column 8 Total - Total RSA personnel	=	Total of columns B and D

Areas covered in the National Capital Region Quebec and Ontario:

Alcove (QC)	Davidson Corner (QC)	Ironside (QC)	Merivale (ON)	Ruthledge (QC)
Almonte (ON)	Deschênes (QC)	Jeanne-d'Arc (QC)	Metcalfe (ON)	St-François-de-Masham (QC)
Angers (QC)	Dirleton (ON)	Jockvale (ON)	Mohr Corners (ON)	St-Louis-de-Masham (QC)
Antrim (ON)	Duclos (QC)	Johnston Corners (ON)	Munster (ON)	St-Onge (QC)
Appleton (ON)	Dunrobin (ON)	Kanata (ON)	Navan (ON)	St-Pierre-de-Wakefield (QC)
Ashton (ON)	Dwyer Hill (ON)	Kars (ON)	Nepean (ON)	Ste-Cécile-de Masham (QC)
Aylmer (QC)	Eardley (QC)	Kenmore (ON)	North Gower (ON)	Sarsfield (ON)
Barrhaven (ON)	Edwards (ON)	Kilmaurs (ON)	North Onslow (QC)	Shirley's Bay (ON)
Baxters Corner (ON)	Elm (ON)	Kinburn (ON)	Old Chelsea (QC)	South Gloucester (ON)
Bearbrook (ON)	Embrun (ON)	Kirks Ferry (QC)	Onslow Corners (QC)	South March (ON)
Beech Grove (QC)	Fallowfield (ON)	La Pêche (QC)	Orléans (ON)	Spring Hill (ON)
Bells Corners (ON)	Farm Point (QC)	Lac-des-Loups (QC)	Osgoode (ON)	Stapledon (ON)
Blackburn Hamlet (ON)	Fitzroy Harbour (ON)	Lac-McGregor (QC)	Ottawa (ON)	Stanley Corners (ON)
Blakeney (ON)	French Hill (ON)	Lascelles (QC)	Pakenham (ON)	Steel (QC)
Breckenridge (QC)	Galetta (ON)	Larrimac (QC)	Pamure (ON)	Stittsville (ON)
Brisson (ON)	Gatineau (QC)	Leitrim (ON)	Patterson (QC)	Strathearn (ON)
Buckingham (QC)	Glen Almond (QC)	Leonard (ON)	Perkins (QC)	Tenaga (QC)
Burnet (QC)	Glencairn (ON)	Limbour (QC)	Pointe-Gatineau (QC)	Twin Elm (ON)
Cantley (QC)	Gleneagle (QC)	Lucerne (QC)	Poltimore (QC)	Val-des Monts (QC)
Carlsbad Springs (ON)	Gloucester (ON)	Luskville (QC)	Poupore (QC)	Val-du-Lac (QC)
Carp (ON)	Greely (ON)	MacLarens Landing (ON)	Quinnville (QC)	Val-Paquin (QC)
Carsonby (ON)	Halverson (QC)	Malwood (ON)	Quyion (QC)	Vanier (ON)
Cascades (QC)	Harwood Plains (ON)	Manion Corners (ON)	Ramsayville (ON)	Vars (ON)
Chelsea (QC)	Hazeldean (ON)	Manotick (ON)	Reevecraig (ON)	Wakefield (QC)
Constance Bay (ON)	Herbert Corners (ON)	Mansfield (ON)	Ribot (QC)	Watterson Corners (ON)
Corkery (ON)	Heyworth (QC)	Marathon (ON)	Richmond (ON)	Wilson's Corners (ON)
Cousineau (QC)	Holland Mills (QC)	Marchhurst (ON)	Rideau (ON)	Woodlawn (ON)
Cumberland (ON)	Hull (QC)	Marvelville (ON)	Rupert (QC)	Woodridge (ON)
Dalmeny (ON)	Huntley (ON)	Masson (QC)	Russell (ON)	Wyman (QC)

PAYMENTS TO EXTRAMURAL PERFORMERS FOR SCIENTIFIC ACTIVITIES, FISCAL YEAR 2016/2017

Departments and agencies of the federal government are asked to identify the recipients of their scientific payments.

We are requesting a detailed listing of the recipients of federal payments made in connection with a scientific activity.

Expenditures reported on this submission should be equal to the 2016/2017 extramural expenditures, by sector and activity, reported on the 2018/2019 Federal science expenditures and personnel (FSEP) questionnaire.

Please provide us with a list of 2016/2017 science payments, including:

- (1) name and address of the organization or individual receiving the payment;
- (2) field of science: social or natural;
- (3) type of payment: contract or grant/contribution;
- (4) activity carried out by the performer: research and experimental development (R&D) or related scientific activity (RSA);
- (5) performing sectors: business enterprise (BE), higher education (HE), Canadian non-profit institutions (NP), provincial and municipal governments (GO), foreign performers (FP);
- (6) amount in (\$'000);
- (7) business number.

NOTE: the purchase of goods and services to support in-house R&D or RSA are to be treated as an in-house or intramural expenditure.

A suggested format is given below:

Name	Street	City	Province	Postal Code	Country	Science	Payment Type	Activity	Performer	Amount ('000\$)	Business Number
XXX Company Limited	123 First Street	Regina	SK	S5R6R8	CAN	Social	Contract	R&D	BE	123	123456789
YYY Company Limited	345 Second Street	Vancouver	BC	V5T2T5	CAN	Social	Grant	RSA	BE	350	987654321

Business number

Canada Revenue Agency has launched a number of initiatives to streamline the administrative work required of small businesses. The new Business Number allows businesses to use a single number for all Canada Revenue Agency accounts. This is enhanced by the Business Window, organized to handle registration and provide information for all Canada Revenue Agency programs at a single location.

Lists containing the required data in some other format including Excel® format are acceptable.

For further clarification of terms and definitions, please refer to the enclosed guide.

This information is collected in collaboration with Industry Canada under Section 12 of the *Statistics Act* which states:

“The Minister may enter into an agreement with any department or municipal or other corporation for the sharing of information collected from a respondent by either Statistics Canada or the department or corporation on behalf of both of them and for the subsequent tabulation or publication based on that information.”

Included in this section of the act is the following provision:

The agreement shall not apply in respect to “the respondent who gives notice in writing to the Chief Statistician that the respondent objects to the sharing of the information by Statistics Canada, the information not be shared with the department or corporation unless the department or corporation is authorized by law to require the respondent to provide that information.”

Statistics Canada and Industry Canada have such an agreement for sharing information gathered in this exercise. The joint agreement shall not apply to data provided by a department or agency which has given the required notice to the office of the Chief Statistician.

When such notice has been given, such specified data will be held by Statistics Canada alone, as provided for in the “*Statistics Act*”. Industry Canada and Statistics Canada will maintain as confidential, data obtained under this agreement.

SOME GUIDELINES:

(1) Support or service contracts

Support or service contracts should not be included with extramural payments. They are defined as contracts to an outside institution or individual to provide goods or services necessary to support in-house R&D programs and should be reported as an in-house R&D or in-house RSA expenditure in this questionnaire. Examples are contracts with data processing firms for computing services, maintenance contracts for R&D facilities, or procurement contracts for specialized equipment which is not considered capital.

(2) Discrepancies

Reasons for significant fluctuations in expenditures or personnel between the years reported for this survey are requested to be explained in the ‘change report’. Also written explanation is requested if the reference year data is significantly different from what was reported in the previous Federal Science Expenditure and Personnel survey.

Introduction

This introduction is intended to provide an overview of the process of collecting science expenditure data; definitions of and explanatory notes on natural sciences and engineering, social sciences, humanities and the arts, scientific and technological activities, performance sectors, and other terms used are given in subsequent sections

The collection of science expenditure data is organized by the Investment, Science and Technology Division (ISTD) of Statistics Canada. This exercise was formerly conducted under the aegis of the Treasury Board of Canada Secretariat but is now solely a Statistics Canada survey.

Collection is undertaken to gather essential data describing the recent, current and proposed state of the federal resources allocated to science. Federal science expenditures data are provided to Industry Canada who in turn use the data in the development of advice to the Assistant Deputy Ministers' Steering Committee on the Management of S&T, their Minister and the Treasury Board of Canada Secretariat, as well as in policy development and in monitoring the implementation of science policies. Statistics Canada maintains historical expenditures series in natural sciences and engineering dating back to 1963 and to 1971 in the social sciences, humanities and the arts. These data are available through the Investment, Science and Technology Division (ISTD) or through special requests.

The basic reporting unit is the budgetary program of a department or agency. Each budgetary program forms the subject of separate scientific expenditure reports for the natural and for the social science activities within it. Both the program and the program activities within it may be scientific in whole or in part only. Only expenditures on the scientific components of a program or its activity are reported. In some programs it will be difficult to distinguish between the natural and social sciences. However, some allocation must be made and in determining this allocation, the dominant orientation of the projects and the area of expertise of the personnel involved must be considered. Detailed definitions are given on the following pages.

On the questionnaires, the identified expenditures are looked at from several different viewpoints and in various subdivisions. Expenditures on **research and development (R&D)** and **related scientific activities (RSA)** are subdivided to provide an indication of the "what" of a department's scientific effort. Expenditures in each category of scientific activity are further subdivided into "current" and "capital" segments. Current expenditures are additionally subdivided by sector, to indicate the "where" and "by whom" the activity is performed (e.g., in business enterprise, in higher education).

The human resources allocated to scientific activities are summarized in terms of the involved categories of personnel (scientific and professional, technical, etc.) and the principal focus of their efforts (R&D, RSA and, administration of extramural programs).

When completed, checked for consistency with previous reports, entered into the database and totaled along the various dimensions, these data provide snapshots of the federal resources allocated to science, supporting not only the work of central agencies but also the submissions of departments and agencies requesting resources.

General

This guide consists of definitions/explanations for terms used in the questionnaire.

The **social sciences, humanities and the arts** consist of disciplines involving the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as arts, economics and business, education, history and archeology, law, language and linguistics, media and communications, philosophy, ethics and religion, psychology and cognitive sciences, social and economic geography and, sociology.

The natural sciences and engineering consist of disciplines concerned with understanding, exploring, developing or utilizing the natural world. Included are the engineering and technology, mathematical, computer and information services, physical sciences, medical and health science, and agricultural sciences, veterinary sciences and forestry.

1. Expenditures by activity and performer

The questionnaire covers three consecutive fiscal years and the headings of all three are identical. One set of definitions/explanations therefore suffices.

Actual and planned expenditures on scientific and technological activities are to be classified according to the type of scientific activity and the performance sector in which the activities were or will be conducted.

Scientific and technological (S&T) activities can be defined as all systematic activities which are closely concerned with the generation, advancement, dissemination and application of scientific and technical knowledge in all fields of science and technology, that is, the natural sciences and engineering, and the social sciences, humanities and the arts. The central activity is scientific **research and experimental development (R&D)**. In addition there are a number of activities closely related to R&D, and are termed **related scientific activities (RSA)**. Those identified as being appropriate for the federal government in the social sciences, humanities and the arts are: general purpose data collection, information services, special services and studies and education support.

The performer is equivalent to the sector in which the scientific activity is conducted. The basic distinction is between intramural and extramural performance. Extramural payments are classified on the basis of the performance sectors to which they are made. The appropriate extramural performers are business enterprise, higher education, Canadian non-profit institutions, provincial and municipal governments, and foreign performers.

I. Performers

Intramural activities include all current expenditures incurred for scientific activities carried out by in-house personnel of units assigned to the program, the related gross fixed capital expenditures (acquisition of land, buildings, machinery and equipment for scientific activities); the administration of scientific activities by program employees and the purchase of goods and services to support in-house scientific activities (include royalties or licences for the use of patents and other intellectual property rights, the lease of capital goods (machinery and equipment, etc.) and the rental of buildings to support scientific activities performed by the statistical unit in the reference year).

The intramural expenditures reported for scientific activities are those direct costs, including salaries, associated with scientific programs. The costs should include that portion of a program's contribution to employee benefit plans (e.g., superannuation and compensation) which is applicable to the scientific personnel within the program. The summation of intramural R&D activity is synonymous with the performance of R&D for the entire economy (GERD).

Extramural performers are groups being funded for S&T activities by the federal government sector for S&T activities. In this survey the extramural performers include:

Business enterprise – business and government enterprises including public utilities and government-owned firms. Both financial and non-financial corporations are included. Incorporated consultants or unincorporated individuals providing scientific and engineering services are also included. Industrial research institutes located at Canadian universities are considered to be in the higher education sector.

Higher education – comprises all universities, colleges of technology and other institutes of post-secondary education, whatever their source of finance or legal status. It also includes teaching hospitals (non-teaching hospitals are in the Canadian non-profit sector) all research institutes, centers, experimental stations and clinics that have their scientific activities under the direct control of, or administered by, or associated with, the higher education establishments.

Canadian non-profit institutions – charitable foundations, voluntary health organizations, scientific and professional societies, non-teaching hospitals (teaching hospitals are in the higher education sector) and other organizations not established to earn profits. Non-profit institutions primarily serving or controlled by another sector should be included in the controlling sector.

Provincial and municipal governments – departments and agencies of these governments as well as provincial research organizations. Government enterprises, such as provincial utilities are included in the business enterprise sector, and non-teaching hospitals in the Canadian non-profit institutions sector.

Foreign performers – all foreign government agencies, foreign companies (including foreign subsidiaries of Canadian firms), international organizations, non-resident foreign nationals and Canadians studying or teaching abroad.

II. Research and experimental development

Research and experimental development – comprises creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge.

R&D activities may be aimed at achieving either specific or general objectives. R&D is always aimed at new findings, based on original concepts (and their interpretation) or hypotheses. It is largely uncertain about its final outcome (or at least about the quantity of time and resources needed to achieve it), it is planned for and budgeted (even when carried out by individuals), and it is aimed at producing results that could be either freely transferred or traded in a marketplace.

For an activity to be an R&D activity, it must satisfy five core criteria:

1. To be aimed at new findings (novel);
2. To be based on original, not obvious, concepts and hypothesis (creative);
3. To be uncertain about the final outcome (uncertainty);
4. To be planned and budgeted (systematic)
5. To lead to results that could be possibly reproduced (transferable/or reproducible).

Examples of R&D:

- A review of theories on the factors determining regional disparities in economic growth.
- Understanding the fundamental dynamics of spatial interactions.
- Comparative evaluations of national education programs aimed at reducing the learning gap experienced by disadvantaged communities.
- Research studies analyzing the spatial-temporal patterns in the transmission and diffusion of an infectious disease outbreak.

Both “research” and “development” are often used with different meanings in the government. For example, it is increasingly common to hear that a person is “researching” something (i.e. the person is looking for information about something). Similarly, there are many units with either “research” or “development” or both terms in their titles which are concerned primarily with information gathering, speech writing and preparation of position papers. These should be excluded from the scientific activity of R&D. On the other hand, a case study on unemployment in a specific region, if applying original techniques in interviewing survey respondents could include such data collection in its R&D effort.

From a broad perspective, to the extent that the social sciences are using empirical data, the same guidelines have to be applied as for the natural sciences (although excluding the testing of their results on an experimental basis).

Many social scientists perform work in which they bring the established methodologies and facts of the social sciences and humanities to bear upon a particular problem, but which cannot be classified as research. The following are examples of work which might be included in this category and are not R&D: interpretative commentary on the probable economic effects of a change in the tax structure using existing economic data; forecasting future changes in the pattern of the demand for social services within a given area arising from an altered demographic structure; operations research as a contribution to decision-making, e.g. planning the optimal distribution system for a factory; the use of standard techniques in applied psychology to select and classify industrial and military personnel, students, etc., and to test children with reading or other disabilities.

Item 1. In-house R&D – R&D performed by personnel of the reporting program. It may include R&D carried out on behalf of another program or federal government department.

In-house R&D activities include all current expenditures incurred for scientific activities carried out by in-house personnel of units assigned to the program, the purchase of goods and services to support in-house scientific activities (include royalties or licences for the use of patents and other intellectual property rights, and the rental of buildings to support scientific activities performed by the statistical unit in the reference year). Also include expenses of persons who provide ancillary services such as security, cleaning and maintenance work, finance and administration that are related and proportional to the R&D being conducted. However, the personnel providing these services are not to be included in the in-house personnel counts (see Section 2. Personnel).

Include the costs of self-employed individuals, consultants and researchers not employed by the statistical unit's R&D activities, who are working on-site on the departments' R&D projects.

The intramural expenditures reported to R&D are those direct costs, including salaries, associated with scientific programs. The cost should include that portion of a program's contribution to employee benefit plans (e.g., superannuation and compensation) which is applicable to the scientific personnel within the program.

Item 2. R&D contracts – R&D contracts to an outside institution or individual to fund R&D performed by the institution or individual. The criterion is: would the performer report the R&D contract as in-house (intramural) R&D that is government-funded? If the answer is yes the activity would be an R&D contract. If no, and the funding is to provide goods and services necessary to support the in-house R&D of the federal government it should be reported as In-house R&D (Item 1).

Contracts to other federal government departments should be reported as a transfer of funds in question 3A (i) and 3A (ii) of the questionnaire.

Item 3. R&D grants and contributions – awards to organizations or individuals for the conduct of R&D and intended to benefit the recipients rather than provide the program with goods, services or information. These funds are normally identical to that portion of the budgetary “grants and contributions” line object of expenditure which is devoted to R&D activities.

Item 4. Research fellowships – awards to individuals for advanced research training and experience. Awards intended primarily to support the education of the recipients should be reported as “education support”.

Item 5. Administration of extramural programs – the costs of identifiable units engaged in the administration of contracts and grants and contributions for scientific activities that are to be performed outside the federal government. These expenditures should be broken down by the type of scientific activity supported, i.e. R&D or RSA.

Item 6. Capital expenditures – the annual gross amount paid for the acquisition of fixed assets that are used repeatedly or continuously in the performance of scientific activities for more than one year. They should be reported in full for the period when they took place, whether acquired or developed in house, and should not be registered as an element of depreciation.

The most relevant types of assets used for capital expenditures are:

- Land and buildings
- Machinery and equipment
- Capitalized computer software
- Other intellectual property products

III. Related scientific activities

Related scientific activities (RSA) are all systematic activities which are closely concerned with the generation, advancement, dissemination and application of scientific and technological knowledge. The types of related scientific activities for the social sciences, humanities and the arts are described below.

General purpose data collection – the routine gathering, processing, collating and analyzing and publication of information on human phenomena using surveys, regular and special investigations and compilations of existing records. It excludes data collected primarily for internal administrative purposes (e.g. departmental personnel statistics) as well as the collection of data as part of an R&D project.

Data collected as part of an existing or proposed research project are charged to research. Similarly, the costs of analyzing existing data as part of a research project are R&D costs, even when the data were originally collected for some other purpose. The development of new techniques for data collection is also to be considered a research activity. The institutions involved are generally the statistical bureaus of Canadian governments and the statistical sections of departments and agencies. If there are units whose principal activity is R&D, their costs and personnel should be assigned to R&D; specialized libraries with separate budgets should be assigned to information services.

Information services – all work directed to collecting, coding, analyzing, evaluating, recording, classifying, translating and disseminating scientific and technological information as well as museum services. Included are the operations of scientific and technical libraries, S&T consulting and advisory services, the Patent Office, the publication of scientific journals and monographs, and the organizing of scientific conferences. Grants for the publication of scholarly works are also included.

General purpose information services or information services directed primarily towards the general public are excluded, as are general departmental and public libraries. When individual budgets exist, the costs of libraries which belong to institutions otherwise entirely classified to another activity, such as R&D, should be assigned to information services. The costs of printing and distributing reports from another activity, such as R&D, are normally attributed to that activity.

Sub category under Information services:

Museum services – the collecting, cataloguing and displaying of specimens and representations relating to human history, social organization and creations. The activity involves a systematic attempt to preserve and display the works of human beings and to provide information on their works, history, and nature. The scientific activities of historical museums, archeological displays, and art galleries are included. In all cases the costs of providing entertainment and recreation to visitors should be excluded (e.g. restaurants, children’s gardens and museums).

When a museum also covers aspects of natural history, the museum’s operations should be divided between the social and natural sciences. However, museums of science and technology, war, etc., which display synthetic or artificial objects and may also illustrate the operations of certain technologies, should be considered as engaged in museum services in social sciences.

Special services and studies – systematic investigations carried out in order to provide information needed for planning or policy formulation. Demonstration projects are also included.

The work is usually carried out by specialized units in some government departments, by consultants, by royal commissions, and by task forces. The activity is similar to R&D since it may require innovative analyses and a high degree of scientific ability. However, such studies are not intended to acquire new knowledge but to provide specific answers to specific problems (generally immediate, localized and perhaps temporary). The day-to-day operations of units concerned with departmental planning, organization or management are not normally included (i.e. administrative records kept by departments of education) but special projects may be relevant.

Sub categories under Special services and studies include:

Economic and feasibility studies – the investigation of the socio-economic characteristics and implications of specific situations. In the social sciences, feasibility studies are investigations of the socio-economic characteristics and implications of specific situations (e.g. a study of the variability of a petrochemical complex in a certain region). Note that feasibility studies on research projects are part of R&D.

Operations and policy-related studies – covers a range of activities, such as the analysis and assessment of the existing programs, policies and operations of government departments and other in institutions; the work of units concerned with the continuing analysis and monitoring of external phenomena (e.g. defence and security analysis); and the work of legislative commissions of inquiry concerned with general government or departmental policy or operations.

Any activity aimed at providing close support to policy actions, as well as to legislative activity, should be included as a related scientific activity (RSA). This includes policy advice and relations with the media, legal advice, public relations or even technical support for the administrative activity (e.g. accounting).

Research activities aimed at providing the decision makers with a thorough knowledge of social, economic or natural phenomena have to be included in R&D. These R&D activities are usually performed by skilled personnel – researchers – in small teams of experts and consultants and meet the standard academic criteria for scientific work (in addition to the R&D criteria).

Education support – grants to individuals or institutions on behalf of individuals which are intended to support the post-secondary education of students in technology and the social sciences. General purpose grants to educational institutions are excluded. The activity includes the support of foreign students in their studies of the social sciences at Canadian or foreign institutions. Grants intended primarily to support the research of individuals at universities are either R&D grants or research fellowships.

Awards intended primarily to support the education of the recipients should be reported as “education support”.

Item 7. In-house RSA – RSA performed by personnel of the reporting program. It may include RSA carried out on behalf of another program or federal government department.

In-house RSA activities include all current expenditures incurred for scientific activities carried out by in-house personnel of units assigned to the program; the purchase of goods and services to support in-house scientific activities (include royalties or licences for the use of patents and other intellectual property rights, and the rental of buildings to support scientific activities performed by the statistical unit in the reference year). Also include expenses of persons who provide ancillary services such as security, cleaning and maintenance work, finance and administration that are proportional to the RSA being conducted. However, the personnel providing these services are not to be included in the in-house personnel counts (see Section 2. Personnel).

The intramural expenditures reported to RSA are those direct costs, including salaries, associated with scientific programs. The cost should include that portion of a program’s contribution to employee benefit plans (e.g., superannuation and compensation) which is applicable to the scientific personnel within the program. Also include the costs of self-employed individuals, consultants and researchers who are working on-site on the departments’ RSA projects.

Item 8. RSA contracts – contracts to an outside institution or individual to fund RSA performed by the institution or individual. The criterion is: would the performer report the RSA contract as in-house (intramural) RSA that is government-funded? If the answer is yes the activity would be an RSA contract. If no, and the funding is for the purchase goods and services to support the in-house RSA of the federal government department, it should be reported as In-house RSA (Item 7).

Contracts to other federal government departments should be reported as a transfer of funds in question 3A (i) and 3A (ii) of the questionnaire.

Item 9. RSA grants and contributions – awards to organizations or individuals for the conduct of RSA and intended to benefit the recipients rather than provide the program with goods, services or information. These funds are normally identical to that portion of the budgetary “grants and contributions” line object of expenditure which is devoted to RSA.

Item 10. Administration of extramural programs – the costs of identifiable units engaged in the administration of contracts and grants and contributions for scientific activities that are to be performed outside the federal government. These expenditures should be broken down by the type of scientific activity supported, i.e. R&D or RSA.

Item 11. Capital expenditures – the annual gross amount paid for the acquisition of fixed assets that are used repeatedly or continuously in the performance of scientific activities for more than one year. They should be reported in full for the period when they took place, whether acquired or developed in house, and should not be registered as an element of depreciation.

The most relevant types of assets used for capital expenditures are:

- Land and buildings
- Machinery and equipment
- Capitalized computer software
- Other intellectual property products.

2. Personnel

Personnel data are collected for intramural scientific activities only. A head count of personnel working on intramural scientific activities is not requested, rather the amount of time a worker dedicates to scientific and technological activities during a specific reference period as a percentage of the total number of hours conventionally worked in the same period. This is noted as full-time equivalent research and development personnel or full-time equivalent related scientific activity personnel. For example, an employee who is engaged in scientific activities for half a year has a full-time equivalence of 0.5. Personnel data reported should be consistent with expenditure data.

Most intramural scientific activities are performed primarily by persons employed by the department or agency. Extramural personnel contributing directly to the intramural scientific activities of the department or agency that are located on site should also be included in the personnel counts.

Not all of the personnel contributing to or facilitating the performance of scientific activities are to be included in the personnel totals. Individuals undertaking indirect support or ancillary activities are excluded. For example specific services to R&D or RSA provided by central computer department and libraries; services by central finance and human resources departments dealing with R&D or RSA projects; provision of services for security, cleaning, maintenance, canteens, etc. to R&D or RSA performing units. These services are not included in the intramural scientific activities personnel totals, however their related costs should be included with in-house expenditures.

Scientific and professional – researchers and professionals engaged in the conception or creation of new knowledge. They conduct research and improve or develop concepts, theories, models, techniques instrumentation, software or operational methods. They require at least one academic degree or nationally recognized professional qualification, as well as those with equivalent experience.

Technical – technicians and equivalent staff are persons whose main tasks require technical knowledge and experience in one or more fields of engineering, the physical and life sciences, or the social sciences, humanities and the arts. They perform scientific and technical tasks involving the application of concepts and operational methods and the use of research equipment, normally under the supervision of researchers.

Other – other supporting staff include skilled and unskilled craftsmen, and administrative, secretarial and clerical staff participating in science and technology projects or directly associated with such projects.

3A (i). Transfers for social sciences, humanities and the arts activities

Include payments or recipients for contracts, transfers and joint programs from/to other federal government departments. Please identify the amount and names of the origination and recipient programs.

3A (ii). Sources of funds for total scientific and technological activities

This question identifies the sources of funds for expenditures on scientific activities reported for all three years. It will help to ensure that work funded from outside the department is not overlooked.

Departmental S&T budget – that portion of the total departmental budget which was spent on social sciences, humanities and the arts activities.

Revenues to / from other federal departments – money transferred from this program to another federal department or money transferred into this program from another federal department for activities in the social sciences, humanities and the arts.

Provincial government departments – all funds from the provincial government used for social sciences, humanities and the arts activities. The funds are referred to as payments, contributions, transfers, etc. Also include provincial portions of federal-provincial cost sharing programs performed by the department program.

Business enterprises – all funds from business enterprises used for social sciences, humanities and the arts activities performed by the department.

Other – all funds for social sciences, humanities and the arts activities from sources not specified above.

4. Scientific and technological expenditures by socio-economic objectives

Socio-economic objectives allow departments to classify their S&T resource allocations according to the purpose for which the expenditure is intended. The objectives are listed in 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 a department should assign its expenditures consistent with the stated objectives of the department. Care must be taken to avoid “double counting”.

The objectives are based on the European Union classification adopted by Eurostat for the Nomenclature for the Analysis and Comparison of Scientific Programmes and Budgets (NABSP) at the one-digit level.

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, as well as 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 (objective 6)

- Hydrology – excludes scientific activities on: water supplied and disposal (objective 2) and water pollution (objective 3)
- Sea and oceans
- Atmosphere

Excludes: scientific activities on pollution (objective 3), soil improvement (objective 2), land-use 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 research into other types of pollution (objective 3).

2.1 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 is 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.

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

2.3 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 building
- 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 aimed at improving the control of pollution, including 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 humans, species (fauna, flora, micro-organisms) and the biosphere. The 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
- Solid waste
- Protection of ambient water
- 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 cares

5. Production, distribution and rational utilization of energy – covers scientific activities aimed at improving 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
- Radioactive waste management including decommissioning with regard to fuel/energy
- Nuclear fusion
- 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, or further knowledge on chemical fertilizers, biocides, biological pest control and the mechanization of agriculture, as well as concerning the impact of agricultural and forestry activities on the environment. Also covers scientific activities on improving food productivity and technology.

6.1 Agriculture – covers scientific activities on animal products, veterinary medicine, crops, food technology and other scientific activities on agricultural production and technology.

6.2 Fishing – covers scientific activities on fishing, salting, drying and initial freezing of products (but not on preparation and canning (objective 7)), scientific activities on fish-farming, exploration of new fishing grounds, exploration and development of new and unconventional sources of seafood.

6.3 Forestry – covers scientific activities into the ecological and economic aspects of forestry and timber production.

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 machinery and apparatus
- Manufacture of non-electronic and non-electronical machinery
- Manufacture of medical and surgical equipment and orthopaedic appliances
- Manufacture of food products and beverages
- Manufacture of 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.

This objective comprises:

- **Education** – covers scientific activities aimed at supporting general or special education, including training, pedagogy, didactics, and targeted methods for specially gifted persons or those with learning disabilities. Applies to all levels of education as well as to subsidiary services to education.
- **Cultural, recreation, religion and mass media** – covers scientific activities aimed at improving the understanding of social phenomena related to cultural activities, religion and leisure activities so as to define their impact on life in society, as well as to racial and cultural integration and on socio-cultural changes in these areas. The concept of “culture” covers sociology of science, religion, art, sport and leisure, and also comprises inter alia R&D on the media, the mastery of language and social integration, libraries, archives and external cultural policy.
- **Political and social systems, structures and processes** – covers scientific activities aimed at improving the understanding and supporting the political structure of society, public administration issues and economic policy, regional studies and multi-level governance, social change, social processes and social conflicts, the development of social security and social assistance systems, and the social aspects of the organization of work.

9. Exploration and exploitation of space – all civil space scientific activities relating to the scientific exploration of space, space laboratories, space travel and launch systems. Although civil space R&D is not, in general, concerned with particular objectives, it frequently has a specific goal, such as the advancement of general (e.g. astronomy), or relates to particular applications (e.g. telecommunications satellites or earth observation).

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 the Department of National 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.

5. Expenditures and personnel of scientific and technological establishment engaged in activities in the social sciences, humanities and the arts, by region

Since 1978, Statistics Canada has been collecting detailed expenditure and person year data on intramural scientific activities of federal government departments and agencies by region. These data, coupled with data from other surveys, have been used by policy planners in federal and provincial governments, research managers and the media to assess the provincial distribution of science activities in Canada.

Again this year, we are asking for the information at the regional level. We are also asking for information in both natural science and engineering establishments as well as those performing activities in the social sciences, humanities and the arts, as international gross domestic expenditures on research and development (GERD) statistics include activities in both science fields.

The Canada total expenditures and personnel reported for the actual year must be consistent with data reported on intramural expenditures in question 1A, and total personnel in question 2A.

General information

Data-sharing agreements

To reduce respondent burden, Statistics Canada has entered into data-sharing agreements with provincial and territorial statistical agencies and other government organizations, which have agreed to keep the data confidential and use them only for statistical purposes. Statistics Canada will only share data from this survey with those organizations that have demonstrated a requirement to use the data.

Section 11 of the *Statistics Act* provides for the sharing of information with provincial and territorial statistical agencies that meet certain conditions. These agencies must have the legislative authority to collect the same information, on a mandatory basis, and the legislation must provide substantially the same provisions for confidentiality and penalties for disclosure of confidential information as the *Statistics Act*. Because these agencies have the legal authority to compel businesses to provide the same information, consent is not requested and businesses may not object to the sharing of the data.

For this survey, there are Section 11 agreements with the provincial and territorial statistical agencies of Newfoundland and Labrador, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, and the Yukon.

The shared data will be limited to information pertaining to federal departments and agencies located within the jurisdiction of the respective province or territory.

Section 12 of the *Statistics Act* provides for the sharing of information with federal, provincial or territorial government organizations. Under section 12, you may refuse to share your information with any of these organizations by writing a letter of objection to the Chief Statistician and returning it with the completed questionnaire. Please specify the organizations with which you do not want to share your data.

For this survey, there are Section 12 agreements with the statistical agencies of Prince Edward Island, the Northwest Territories, Nunavut and Industry Canada.

The shared data will be limited to information pertaining to federal departments and agencies located within the jurisdiction of the respective province or territory.

Record linkages

To enhance the data from this survey and to minimize the reporting burden, Statistics Canada may combine it with information from other surveys or from administrative sources.

Please forward the completed questionnaire and listing of extramural performers through the Electronic File Transfer service (EFT) by November 30, 2017.

For further inquiries:

Phone Number: 613-951-2591 or toll free at 1-888-659-8229

Fax number: 613-951-0709 or toll free at 1-800-755-5514

Email: statcan.fsepsurv-enqdmf.statcan@canada.ca

Your participation is greatly appreciated and will contribute to providing useful information on federal S&T expenditures. You will be able to access the results through “The Daily” and [CANSIM tables 358-0142 to 358-0151](#) and [CANSIM tables 358-0163 to 358-0166](#) on Statistics Canada’s web site. The data will also be available on Science.gc.ca.

THANK YOU FOR YOUR CO-OPERATION