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Industrial Research and Development, 2001 to 2005**Highlights**

- ▶ Industrial research and development (R&D) spending is set to rise 1.6% to \$13.8 billion in 2005 according to reported intentions. While this signals a third consecutive annual increase, industrial R&D spending remains 3.3% below the peak level of \$14.3 billion observed in 2001. In 2002 R&D spending fell an unprecedented 6.6% to \$13.4 billion as a result of decreased spending in the Information and communications technology sector (ICT) and more specifically the Communications equipment manufacturing industry. R&D spending in all sectors with the exception of the ICT sector increased over the 5 year period of 2001 to 2005 by \$967 million dollars, or 12.7%. ICT sector spending fell 21.5% during the same period.
- ▶ The largest contributors to the increase in intended R&D spending in 2005 were the Aerospace products and parts (+3.6%), Scientific research and development services (+3.3%), Semi-conductor and components manufacturing (+3.4%), and Communications equipment manufacturing (+1.8%) industries. Despite the reported increases in intended R&D spending the Aerospace products and parts, Communications equipment manufacturing, and Semi-conductor and components manufacturing industries all remain at or below 2001 spending levels. In contrast, spending on R&D by the Scientific research and development services industry increased consistently throughout the 2001-2005 period.
- ▶ Despite declines throughout the 2002 to 2004 period, Communications equipment manufacturing remains the largest R&D spending industry, representing 12.1% of total R&D spending. The next largest R&D spenders were the Pharmaceutical and medicine manufacturing (8.8%), Computer system design and related services (7.8%), and Scientific research and development services industry (7.4%).

Note to users:

A new estimation system has been put in place for 2003. Data for outstanding administrative records have been estimated thereby reducing the previous understatement of R&D and in particular R&D employment counts. The new estimation system has projected data for more than 2,000 firms. The estimation of these records is also reflected in the 2004 planned expenditures and the 2005 spending intentions.

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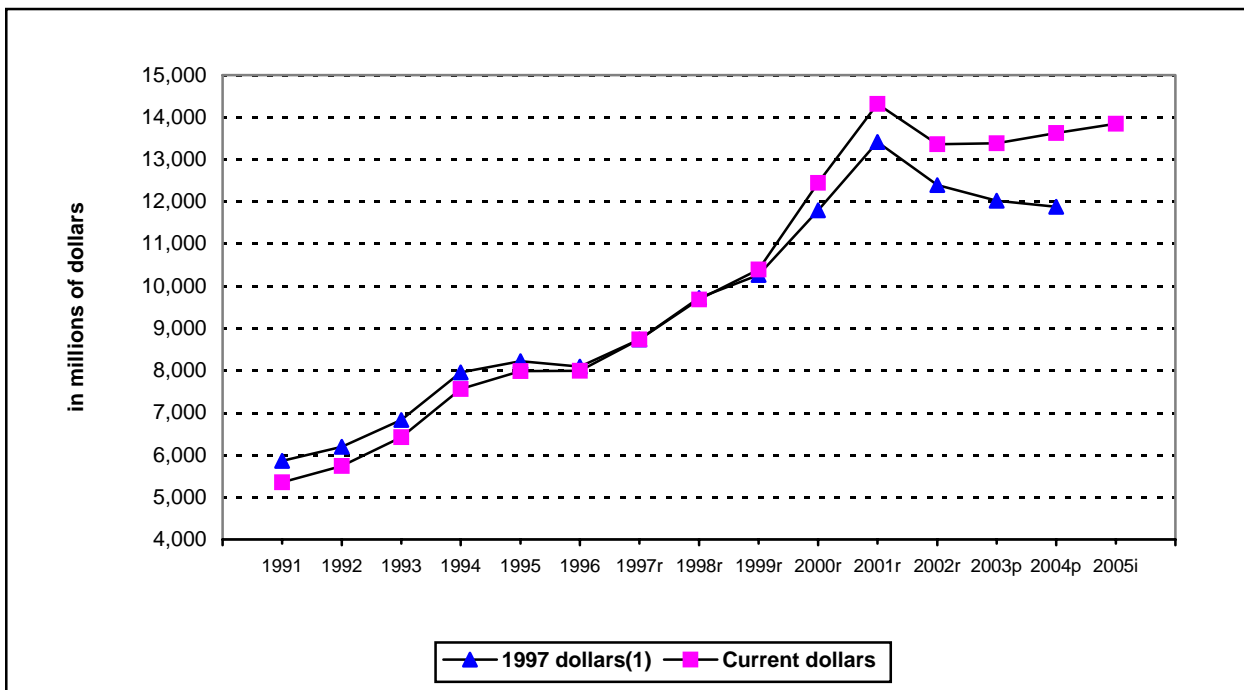
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The statistics in this bulletin are derived from the 2003 survey of industrial R&D activities in Canada, which covers firms spending a million dollars or more on the performance or funding of R&D in Canada, and from the administrative data of the Canada Revenue Agency (CRA) for firms which spend less than a million dollars on the performance or funding of R&D in Canada. CRA data is supplemented with estimates data, to allow for the timing difference between CRA filing and the survey. This is explained in the note on Methodology on page 13. The 2003 survey conducted in 2004, collects data on actual R&D spending in 2003, on preliminary figures for 2004, and on spending intentions for 2005.

R&D statistics are provided for 46 industries falling under 6 sub-groups: Agriculture, forestry, fishing and hunting; Mining and oil and gas extraction; Utilities; Construction; Manufacturing and Services industries. The industry breakdown is in accordance with the 2002 North American Industry Classification System (NAICS) (Catalogue no. 12-501-XPE) and is necessary to preserve the confidentiality of the respondents. In a small number of cases, adjustments to the NAICS classification was necessary in order to adhere to the international guidelines for science and technological surveys as defined in the OECD (Organisation for Economic Co-operation and Development) Frascati Manual.

Chart 1. Research and development in Canadian industry, 1991 to 2005



1. The deflator for 1991-2004 is the implicit price index of the GDP: 1997=100.

Chart 1 indicates an increase in R&D spending after the 2002, however R&D spending on a 1997 constant dollar basis continued to decline between 2001 and 2004.

Table 1. Total intramural R&D expenditures, by industry, 2001 to 2005					
Industries	2001 ^f	2002 ^f	2003 ^p	2004 ^p	2005 ^f
in millions of dollars					
Agriculture, forestry, fishing and hunting					
Agriculture	70	80	64	62	62
Forestry and logging	15	16	21	21	20
Fishing, hunting and trapping	7	5	5	5	5
Total agriculture, forestry, fishing and hunting	92	101	89	87	87
Mining and oil and gas extraction					
Oil and gas extraction	164	182	182	205	211
Mining	50	41	45	55	54
Total mining and oil and gas extraction	214	223	227	260	266
Utilities					
Electric power	165	125	115	115	115
Other utilities	7	4	7	7	7
Total utilities	171	129	121	122	122
Construction					
	51	44	40	40	40
Manufacturing					
Food	71	81	91	91	90
Beverage and tobacco	22	27	42	26	30
Textile	48	42	45	44	44
Wood products	48	50	51	51	51
Paper	420	371	390	428	435
Printing	16	16	20	20	20
Petroleum and coal products	54	89	122	123	116
Pharmaceutical and medicine	889	1,163	1,166	1,219	1,219
Other chemicals	274	267	267	242	238
Plastic products	79	78	94	118	121
Rubber products	22	15	20	20	20
Non-metallic mineral products	20	14	20	20	20
Primary metal (ferrous)	52	36	30	32	31
Primary metal (non-ferrous)	162	191	231	244	243
Fabricated metal products	112	143	155	154	156
Machinery	441	433	436	430	450
Computer and peripheral equipment	202	204	187	175	180
Communications equipment	3,180	1,994	1,706	1,640	1,670
Semiconductor and other electronic components	872	802	729	786	813
Navig., measuring, medical and control instruments	424	418	402	385	396
Other computer and electronic products	23	18	17	18	18
Electrical equipment, appliance and components	311	212	196	185	184
Motor vehicle and parts	407	423	469	464	469
Aerospace products and parts	949	896	914	916	949
All other transportation equipment	26	16	22	23	23
Furniture and related products	14	19	19	20	20
Other manufacturing industries	143	138	151	145	144
Total manufacturing	9,283	8,155	7,992	8,019	8,149
Services					
Wholesale trade	617	594	625	648	655
Retail trade	45	41	30	31	29
Transportation and warehousing	33	43	32	34	36
Information and cultural industries	571	730	910	899	913
Finance, insurance and real estate	169	200	225	233	232
Architectural, engineering and related services	548	490	462	504	498
Computer system design and related services	1,103	1,058	1,053	1,071	1,081
Management, scientific and technical consulting	83	83	78	93	95
Scientific research and development services	777	879	931	1,009	1,042
Health care and social assistance	341	385	382	372	393
All other services	221	210	193	207	210
Total services	4,508	4,714	4,921	5,101	5,184
Total all industries	14,320	13,367	13,391	13,630	13,848

Table 2. R&D Expenditures and personnel in information and communications technology (ICT), 2001 to 2005					
	2001	2002	2003 ^p	2004 ^p	2005 ⁱ
ICT industries					
in millions of dollars					
Total R&D expenditures	6,688	5,390	5,181	5,146	5,249
Current	5,940	4,972	4,837	4,831	4,911
Capital	748	418	343	315	338
full-time equivalent					
Total R&D personnel	51,525	48,005	47,560	..	..
Professional	38,676	35,113	33,783	..	..
Technicians	10,149	9,441	9,293	..	..
Other	2,700	3,451	4,484	..	..
Non ICT industries					
in millions of dollars					
Total R&D expenditures	7,632	7,976	8,210	8,484	8,599
Current	6,880	7,285	7,594	7,813	7,967
Capital	753	692	616	671	632
full-time equivalent					
Total R&D personnel	64,113	65,403	68,733	..	..
Professional	34,833	35,576	37,013	..	..
Technicians	19,471	20,185	21,934	..	..
Other	9,809	9,642	9,786	..	..

The ICT sector is comprised of a subset of the NAICS codes from various industries already included in this service bulletin. Table 2 presents the ICT sector industries in comparison to the non ICT sector industry. This comparison indicates that the decline in R&D spending in 2002 was contained within the ICT group whereas non ICT industries show constant growth in all five years. The same can be said for R&D personnel where ICT industries saw a decline of 7.7%, non ICT industries increased their R&D personnel by 7.2%. ICT based industries are found in a variety of industry groups including manufacturing (NAICS 3333, 33411, 33421, 33422, 33431, 33441, 33451 and 33592); Wholesale trade (NAICS 4173 and 41791); Information and cultural industries (NAICS 5112, 517 to 518); Real estate and rental leasing (NAICS 53242); Professional, scientific and technical services (NAICS 5415) and Other services (NAICS 8112). For a complete description of these NAICS, refer to the 2002 North American Industry Classification System (NAICS) (Catalogue no. 12-501-XPE).

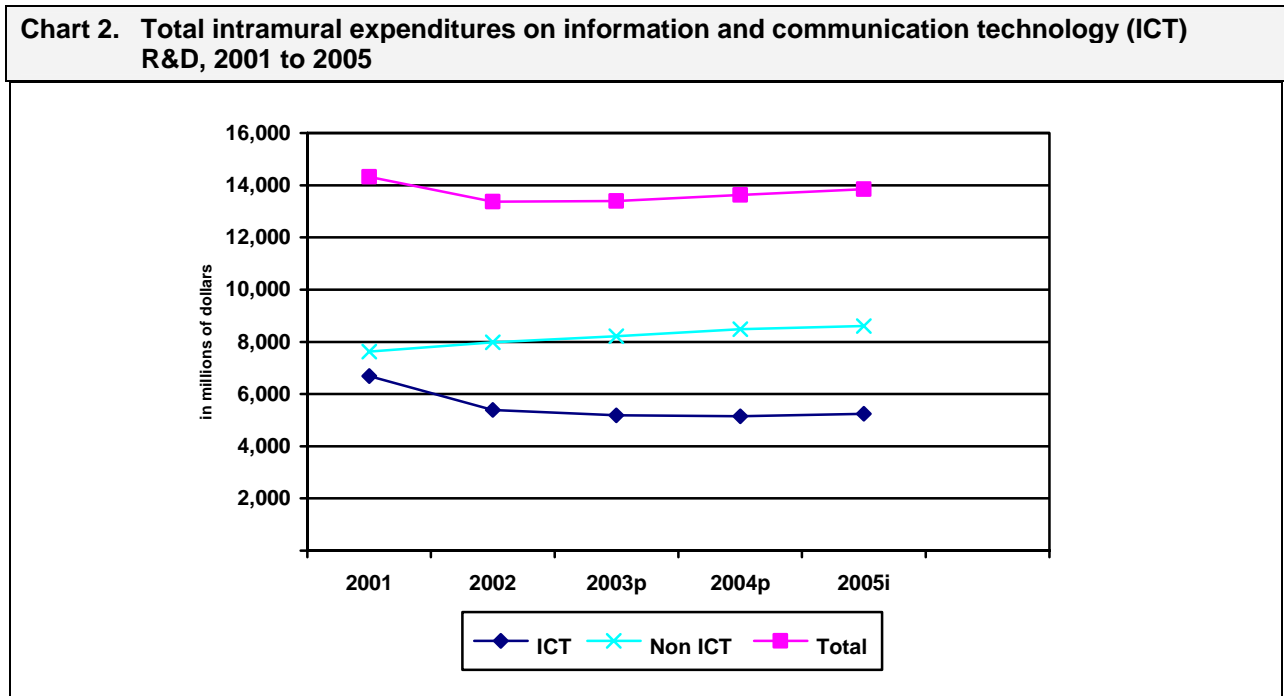
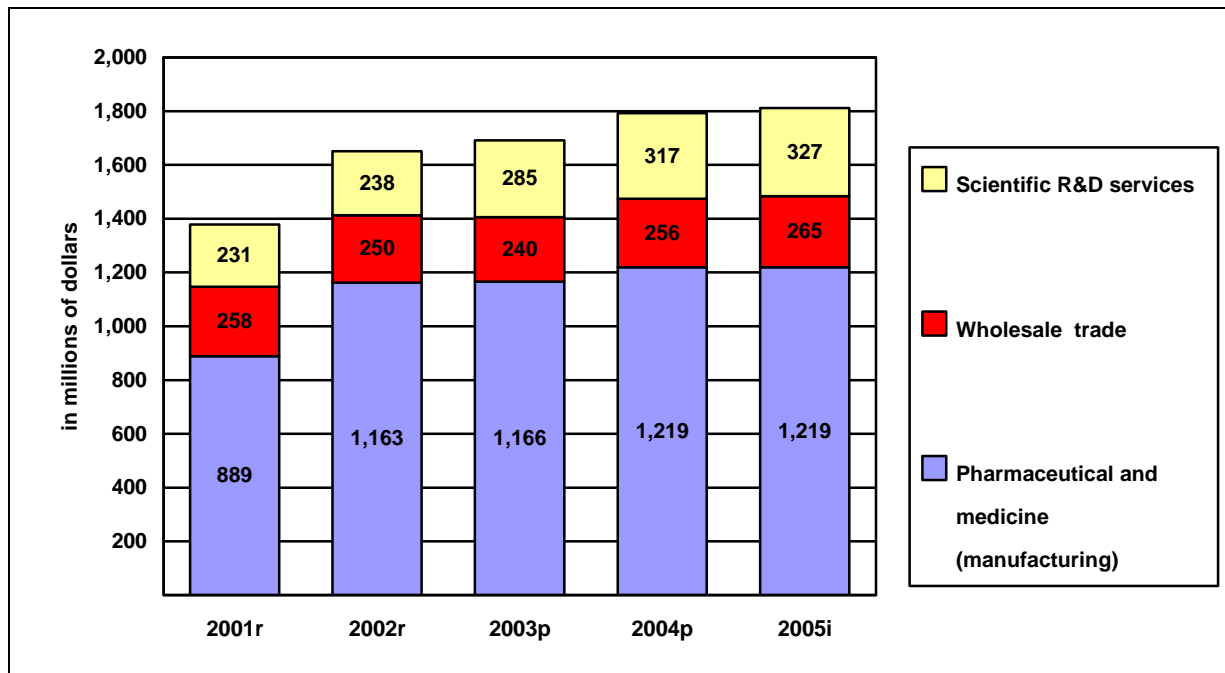


Table 3. Total intramural expenditures, on pharmaceutical and medicine R&D, 2001 to 2005

Industries	2001 ^r	2002 ^r	2003 ^p	2004 ^p	2005 ⁱ
in millions of dollars					
Pharmaceutical and medicine (manufacturing)	889	1,163	1,166	1,219	1,219
Wholesale trade (pharmaceutical)	258	250	240	256	265
Scientific research and development services (pharmaceutical)	231	238	285	317	327
Total pharmaceutical and medicine R&D	1,378	1,651	1,691	1,792	1,811

The Pharmaceutical and medicine manufacturing industry was the second largest industry in terms of R&D expenditures in 2003. Because of the nature of our classification of firms, which is based on the principal source of revenue, rather than R&D objective, pharmaceutical R&D can be found in several industries, most significantly in Wholesale trade and Scientific research and development services. NAICS code 414510 identified the pharmaceutical industries within Wholesale trade. In the Scientific research and development services industry, major performers of pharmaceutical R&D were identified on a case by case basis. Table 3 identifies the value of the pharmaceutical R&D from these industry classifications. When we combine these values, the impact this industry has in Canada accounted for 12.6% of all R&D in 2003.

Chart 3. Total intramural expenditures on pharmaceutical and medicine R&D, 2001 to 2005



Most of the industrial R&D in Canada is performed in Ontario and Quebec (Table 4). About 53% of all R&D in 2003 was performed in Ontario, where Communications equipment manufacturing industries are particularly prominent. In Quebec, the Aerospace products and parts industry is of major importance, with 57% of total R&D expenditures by this industry in 2003 occurring in that province. British Columbia and Alberta together account for 13.8% of all R&D performed in Canada in 2003. The manufacturing and services industries were responsible for the majority of R&D in both Alberta and British Columbia however, Alberta dominated the Mining and oil and gas extraction industries with 95% of the R&D performed in this sector, while British Columbia performs 62% of the R&D in Fishing, hunting and trapping.

Table 4. Total intramural R&D expenditures, by province, 1994 to 2003										
Province	1994	1995	1996	1997 ^r	1998 ^r	1999 ^r	2000 ^r	2001 ^r	2002 ^r	2003 ^p
	in millions of dollars									
Newfoundland and Labrador	12	11	17	14	17	18	20	21	18	19
Prince Edward Island	2	3	3	3	3	3	5	6	5	7
Nova Scotia	61	64	54	54	62	62	67	91	90	78
New Brunswick	49	52	59	35	39	38	40	45	44	43
Quebec	2,056	2,277	2,394	2,519	2,764	3,047	3,642	4,155	4,057	4,115
Ontario	4,112	4,320	4,256	4,833	5,394	5,799	6,903	7,944	7,048	7,066
Manitoba	102	96	93	89	102	148	133	173	138	126
Saskatchewan	70	74	58	82	74	78	76	87	113	83
Alberta	509	491	524	546	618	491	591	718	767	779
British Columbia	591	602	538	564	608	714	973	1,080	1,086	1,075
Yukon, Northwest Territories and Nunavut	3	1	0	1	1	2	0	1	0	1
Total	7,568	7,992	7,994	8,739	9,682	10,400	12,450	14,320	13,367	13,391

Table 5. Total Intramural R&D expenditures, by major NAICS industry – Canada, 1994 to 2003										
Industrial sector	1994	1995	1996	1997 ^r	1998 ^r	1999 ^r	2000 ^r	2001 ^r	2002 ^r	2003 ^p
	in millions of dollars									
Agriculture, forestry, fishing and hunting	56	58	63	61	53	70	77	92	101	89
Mining and oil and gas extraction	192	202	197	189	154	134	182	214	223	227
Utilities	224	206	234	185	218	196	187	171	129	121
Construction	27	24	24	37	26	35	45	51	44	40
Manufacturing	4,529	4,977	5,117	5,789	6,505	7,077	8,564	9,283	8,155	7,992
Services	2,539	2,524	2,362	2,478	2,728	2,888	3,395	4,508	4,714	4,921
Total¹	7,568	7,992	7,994	8,739	9,682	10,400	12,450	14,320	13,367	13,391

1. Canada totals include the Territories

Table 6. Total Intramural R&D expenditures, by major NAICS industry – Atlantic Canada, 1994 to 2003										
Industrial sector	1994	1995	1996	1997 ^r	1998 ^r	1999 ^r	2000 ^r	2001 ^r	2002 ^r	2003 ^p
	in millions of dollars									
Agriculture, forestry, fishing and hunting	5	5	5	3	2	2	3	2	2	2
Mining and oil and gas extraction	x	2	x	x	1	x	x	x	2	x
Utilities	x	x	x	x	x	1	4	4	x	2
Construction	1	x	x	x	x	x	x	x	x	x
Manufacturing	53	57	57	55	70	69	61	84	70	77
Services	63	67	65	47	46	48	61	69	77	65
Total	124	130	133	106	121	121	132	163	157	147

Table 7. Total Intramural R&D expenditures, by major NAICS industry – Quebec, 1994 to 2003										
Industrial sector	1994	1995	1996	1997	1998	1999	2000 ^r	2001 ^r	2002 ^r	2003 ^p
in millions of dollars										
Agriculture, forestry, fishing and hunting	9	11	13	12	13	17	23	27	36	37
Mining and oil and gas extraction	17	19	11	x	3	x	2	x	3	3
Utilities	x	x	x	x	x	x	x	x	x	x
Construction	x	x	x	x	x	x	x	x	x	x
Manufacturing	1,200	1,371	1,434	1,551	1,640	1,811	2,136	2,453	2,387	2,409
Services	683	724	810	825	963	1,086	1,358	1,543	1,508	1,545
Total	2,056	2,277	2,394	2,519	2,764	3,047	3,642	4,155	4,057	4,115

Table 8. Total Intramural R&D expenditures, by major NAICS industry – Ontario, 1994 to 2003										
Industrial sector	1994	1995	1996	1997	1998	1999	2000 ^r	2001 ^r	2002 ^r	2003 ^p
in millions of dollars										
Agriculture, forestry, fishing and hunting	22	20	26	21	19	23	18	25	25	25
Mining and oil and gas extraction	x	22	18	30	29	25	27	20	12	27
Utilities	x	x	x	x	x	x	x	52	12	9
Construction	x	x	x	x	x	x	x	20	18	14
Manufacturing	2,802	3,041	3,085	3,581	4,098	4,453	5,418	5,699	4,863	4,711
Services	1,180	1,171	1,009	1,115	1,167	1,215	1,361	2,129	2,118	2,279
Total	4,112	4,320	4,256	4,833	5,394	5,799	6,903	7,944	7,048	7,066

Table 9. Total Intramural R&D expenditures, by major NAICS industry – Manitoba, 1994 to 2003										
Industrial sector	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003 ^p
in millions of dollars										
Agriculture, forestry, fishing and hunting	1	0 ^s	0 ^s	0 ^s	1	1	1	2	2	1
Mining and oil and gas extraction	x	x	x	x	x	x	x	x	x	x
Utilities	x	x	x	x	x	x	x	x	x	x
Construction	0 ^s	0 ^s	0 ^s	0 ^s	0 ^s	0 ^s	1	0 ^s	1	1
Manufacturing	45	49	42	34	43	83	75	124	83	80
Services	54	43	49	53	52	59	49	45	51	43
Total	102	96	93	89	102	148	133	173	138	126

Table 10. Total Intramural R&D expenditures, by major NAICS industry –Saskatchewan, 1994 to 2003										
Industrial sector	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003 ^P
in millions of dollars										
Agriculture, forestry, fishing and hunting	2	6	4	7	3	x	4	7	7	3
Mining and oil and gas extraction	x	x	x	x	x	x	x	x	x	x
Utilities	0	0	0	0	0	0	0	0	x	0
Construction	x	x	x	x	x	0	x	x	0	x
Manufacturing	34	39	28	27	33	35	34	37	33	32
Services	30	25	24	26	36	36	31	31	40	32
Total	70	74	58	82	74	78	76	87	113	83

Table 11. Total Intramural R&D expenditures, by major NAICS industry – Alberta, 1994 to 2003										
Industrial sector	1994	1995	1996	1997	1998	1999	2000 ^f	2001 ^f	2002 ^f	2003 ^P
in millions of dollars										
Agriculture, forestry, fishing and hunting	7	5	4	2	4	9	8	7	7	6
Mining and oil and gas extraction	138	138	155	118	101	84	129	161	156	173
Utilities	2	x	x	x	x	x	x	1	1	x
Construction	2	x	x	x	x	x	x	2	2	x
Manufacturing	158	157	203	259	298	219	266	309	289	282
Services	205	188	160	163	213	177	187	240	313	315
Total	509	491	524	546	618	491	591	718	767	779

Table 12. Total Intramural R&D expenditures, by major NAICS industry – British Columbia, 1994 to 2003										
Industrial sector	1994	1995	1996	1997	1998	1999	2000 ^f	2001 ^f	2002 ^f	2003 ^P
in millions of dollars										
Agriculture, forestry, fishing and hunting	13	12	11	15	11	15	20	23	21	15
Mining and oil and gas extraction	11	16	x	13	12	11	x	18	18	x
Utilities	x	x	6	5	5	x	x	6	5	x
Construction	x	x	x	2	5	x	9	5	4	4
Manufacturing	237	261	267	281	323	407	574	577	431	402
Services	322	307	246	248	252	266	348	451	607	642
Total	591	602	538	564	608	714	973	1,080	1,086	1,075

Table 13. Total intramural R&D expenditures, by employment size, 2001 to 2005					
Employment size	2001 ^f	2002 ^f	2003 ^p	2004 ^{E(1)}	2005 ^{E(1)}
in millions of dollars					
Non-commercial enterprise	177	163	185	201	204
1 to 49	1,792	1,844	1,980	2,022	2,066
50 to 99	1,145	1,145	1,042	1,054	1,080
100 to 199	1,308	1,183	1,034	1,057	1,109
200 to 499	1,253	1,235	1,234	1,223	1,230
500 to 999	1,270	1,259	1,314	1,300	1,377
1,000 to 1,999	1,610	1,862	1,933	2,035	2,023
Greater than 1,999	5,760	4,675	4,670	4,738	4,759
Total	14,320	13,367	13,391	13,630	13,848

1. 2004 and 2005 values are estimated based on employment size as reported for 2003 fiscal year.

The decline in R&D expenditures between 2001 and 2002 can mostly be attributed to the larger firms, as shown in tables 13 and 14. Subsequently, the increase in 2005 can be seen in all employment size groups and in all but the largest revenue size groups which continues to show a small decline.

Table 14. Total intramural R&D expenditures, by performing company revenue size, 2001 to 2005					
Revenue size	2001 ^f	2002 ^p	2003 ^p	2004 ^{E(1)}	2005 ^{E(1)}
in millions of dollars					
Non-commercial firms	177	163	185	201	204
< \$ 1,000,000	966	1,032	1,102	1,102	1,156
\$ 1,000,000 – 9,999,999	1,929	1,873	1,846	1,887	1,915
\$ 10,000,000 – 49,999,999	1,822	1,652	1,534	1,575	1,610
\$ 50,000,000 – 99,999,999	797	884	890	864	882
\$ 100,000,000 - \$399,999,999	1,820	1,704	1,875	1,877	1,982
> \$ 399,999,999	6,810	6,058	5,959	6,124	6,099
Total	14,320	13,367	13,391	13,630	13,848

1. 2004 and 2005 values are estimated based on revenue size as reported for 2003 fiscal year.

The principal source of funding in 2003 came from the performing business enterprises themselves. They financed 78% of the total R&D expenditures. Funding of the industrial R&D from foreign sources was equivalent to 15% of the total industrial R&D while the Federal Government's contribution was 2% and other Canadian sources accounted for 5% (Table 15).

Federal Government financing was concentrated in the Aerospace products and parts industry which received \$87 million, Navigational, measuring, medical and control instruments which received \$20 million, Machinery which received \$19 million and Architectural, engineering and related services which received \$16 million in federal funding. Foreign funding was particularly significant in the Pharmaceutical and medicine industry (\$348 million), the Semiconductor and other electronic component industry (\$233 million) and the Computer system design and related services industry (\$217 million). Other Canadian sources of funds included \$433 million made available by Canadian corporations to their R&D affiliates, \$197 million paid by Canadian corporations for R&D undertaken by unaffiliated companies and research institutes, and \$69 million funded by provincial governments.

Table 15. Sources of funds for intramural R&D, by industrial sector 2003, with total values for 2002					
Industrial sector	Canadian performing company	Federal government ¹	Other Canadian sources ²	Foreign sources	Total
in millions of dollars					
Agriculture, forestry, fishing and hunting	60	5	10	14	89
Mining and oil and gas extraction	184	0	37	6	227
Utilities	98	1	17	5	121
Construction	39	0	0	0	39
Manufacturing	6,510	200	283	999	7,992
Services	3,546	65	351	959	4,921
Total 2003	10,437	272	698	1,984	13,391
Total 2002	10,587	265	707	1,807	13,367

1. Taxes foregone as a result of income tax incentives for R&D are not considered direct government support and are not attributed to the Federal Government according to international standards.

2. Includes funds from related companies, from R&D contracts for other firms and grants and contracts from the provincial governments.

The number of FTE's (full-time equivalent) engaged in industrial R&D in 2003 increased by 2.5% (2,885 workers) from the previous year. Those with a university degree increased by less than 1%, while technicians and others (others are those without a degree or technical certificate) increased by 6.5% (Table 16).

The preliminary R&D personnel for 2003 have been estimated for the outstanding smaller firms. This is the result of the revised survey methodology as explained on page 13. The 2002 revised R&D personnel increased by 12.5% in comparison to the previously released 2002 data. This new estimation system should improve the quality of the 2003 preliminary estimate.

Table 16. Number of FTE's engaged in R&D, by occupational category and by degree level, 2001 to 2003			
Occupation/degree level	2001 ^r	2002 ^r	2003 ^p
	full-time equivalent		
Professionals			
Bachelor's	60,672	57,099	53,760
Master's	8,594	9,078	11,597
Doctorate	4,243	4,512	5,439
<i>Sub-total, Professionals</i>	<i>73,509</i>	<i>70,689</i>	<i>70,796</i>
Technicians	29,620	29,626	31,227
Other	12,509	13,093	14,270
Total	115,638	113,408	116,293

Methodology

The Annual survey "Research and Development in Canadian Industry, 2003" was mailed out in June 2004, to all companies known to be performing or funding \$1 million or more in R&D. The data collected from this survey are augmented by tax data for those companies falling below the \$1 million threshold.

Prior to 1997, Statistics Canada surveyed all firms that performed or funded R&D in Canada. Virtually all of these firms also provided information to CRA in order to claim tax benefits under the Scientific Research and Experimental Development (SR&ED) program. In an effort to reduce respondent burden, Statistics Canada stopped surveying the small performers and funders (those with less than \$1 million of R&D in Canada) and instead, imputes their R&D data using CRA administrative data from the SR&ED program.

This initiative resulted in a understatement of the total value of intramural expenditure and of the total number of R&D personnel, for the most recent years reported. The understatement was a result of the different time frame for the collection of the survey and the administrative data. Beginning this year a new estimation system has been put in place to impute values for these outstanding data. The estimation system uses industry trends and Statistics Canada's extensive Business Register database, to ensure the company is active, before applying an estimate.

The 2003 survey collected data on four years. The four years were: 2002 for which the data are expected to be final; 2003, for which the data are expected to be close to final, 2004 for which the data are planned expenditures, and 2005 for which the data are a forecast of spending intentions.

Data from the surveyed firms in 2003 represent approximately 87% of the total expenditures. Estimates are not available for administrative data for 2004 and 2005. Therefore, based on the percentage increase or decrease by industry reported by the surveyed firms, forecasts are made for planned expenditures and spending intentions based on the administrative data.

Trends in R&D spending are important economic signals and the trends are not seriously affected by a small estimation of the outstanding CRA data. For this reason, the R&D data are published as soon as possible after the survey is conducted, and revised in subsequent publications.

Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0 ⁵	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
P	preliminary
r	revised
X	suppressed to meet the confidentiality requirements of the Statistics Act
E	use with caution
F	too unreliable to be published

Other symbols

i intentions

NOTE: Due to rounding, components may not add to totals.

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<http://www.statcan.ca:8096/bsolc/english/bsolc?catno=88-001-X>

Current publications of the Science and Innovation Surveys section include:

Industrial Research and Development, 2004 Intentions (with 2003 preliminary estimates and 2002 actual expenditures) Catalogue No. 88-202-XIE, annual. It presents statistics on research and development (R&D) activities performed and funded by Canadian business enterprises. The report covers current and capital expenditures on R&D, R&D as a percent of performing company revenues, R&D expenditures by province, the company's country of control, personnel engaged in R&D and payments for technological services.

<http://www.statcan.ca:8096/bsolc/english/bsolc?catno=88-202-X>

Federal Science Activities, 2003-2004, Catalogue No. 88-204-XIE, annual. It presents statistics on the federal government's activities in science and technology (S&T). It covers expenditures and full-time equivalent by type of science, performing sectors, provinces, federal departments and agencies.

<http://www.statcan.ca:8096/bsolc/english/bsolc?catno=88-204-X>

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