

Canada's Top 100 Corporate R&D Spenders List 2006 Analysis

R&D Spending Pace Quickens

Corporate spending on research and development made a healthy comeback in Fiscal 2005. Canada's Top 100 Corporate R&D Spenders reported a 4.9% increase in their combined R&D spending, compared with a tepid 3.0% gain in Fiscal 2004.

The news is even better when the spending result of Nortel Networks is omitted from the calculation. (Nortel's Top 100-leading R&D spending often masks underlying trends.) Without Nortel in the mix, R&D spending by the remaining 99 Top 100 firms jumped by 9.7%, outperforming last year's 6.4% gain. Even better news is that R&D spending growth outpaced the 8.9% revenue gain at the 93 firms for which revenue data was available. (With Nortel's results included the 94 leading companies that supplied data grew their revenue by 8.5%.)

In the wake of flat revenues (\$12.8 billion) Nortel Networks, the country's largest R&D performer, lowered its 2005 worldwide spending on research and development by -11.8% to \$2.2 billion, compared with \$2.5 billion in 2004. Nortel's research intensity – its R&D spending as a percent of revenues – was 17.6%, which easily keeps the firm among the leaders.

Because revenues rose faster than R&D spending, overall research intensity at the 94 leading companies where complete data were available fell to 3.8%, a -3.5% dropped from last year's 4.0% intensity result. Without Nortel in the mix, research intensity fell to 3.2%, but managed a small 0.7% increase from the prior year.

Overall, R&D spending in Fiscal 2005 increased at 69 of the Top 100 firms and declined at 30 companies. (One company was newly formed in Fiscal 2005.) This was better than last year's result, when 62 firms increased their spending on research, and 35 firms lowered their spending. In contrast, research intensity improved at only 47 companies in Fiscal 2005, and declined at a further 42 companies (research intensity could not be calculated for 11 firms).

The \$100 Million Club

For Fiscal 2005, 22 companies qualified for membership in the RESEARCH Infosource \$100 Million Club, compared with 21 companies in Fiscal 2004. These top-rated firms each spent over \$100 million on research and development last year. New to the \$100 Million Club are TELUS Corporation (\$125 million), Research in Motion Limited (\$122.6 million), Suncor Energy Inc. (\$108 million), Biovail Corporation (\$107.7 million) and PMC Sierra, Ltd. (\$103.1 million).

The \$100 Million Club members dominate the R&D spending results, accounting for 72% of all Top 100 research spending, the same proportion as the prior year. Nortel Networks accounted for 26% of \$100 Million Club spending. Without Nortel, Club members accounted for 66% of Top 100 R&D, up from 64% last year. Bucking their declining revenues (down overall by – 3.5%), this elite group of companies posted a 4.4% increase in R&D spending. But without Nortel in the mix R&D spending by 21 other Club companies jumped by a sizzling 11.7%, more than the Top 100 average gain of 4.9%.

The \$100 Million Club		
2005 Rank	Company	Industry
1	Nortel Networks	Comm/telecom equipment
2	Bell Canada	Telecommunications services
3	Magna International	Automotive
4	Pratt & Whitney Canada (fs)	Aerospace
5	ATI Technologies Inc.	Computer equipment
6	IBM Canada (fs)	Software and computer services
7	Alcan	Mining and metals
8	Atomic Energy of Canada	Energy/oil and gas
9	Bombardier	Aerospace
10	Ericsson Canada (fs)	Comm/telecom equipment
11	Alcatel Canada (fs)	Comm/telecom equipment
12	Apotex	Pharmaceuticals/biotechnology
13	Pfizer Canada (fs)	Pharmaceuticals/biotechnology
14	GlaxoSmithKline (fs)	Pharmaceuticals/biotechnology
15	Cognos	Software and computer services
16	TELUS	Telecommunications services
17	Research In Motion	Comm/telecom equipment
18	Merck Frosst Canada (fs)	Pharmaceuticals/biotechnology
19	Suncor Energy	Energy/oil and gas
20	Biovail	Pharmaceuticals/biotechnology
21	CAE	Aerospace
22	PMC Sierra (fs)	Electronic parts and components

fs = Foreign subsidiary (includes R&D expenditures for Canadian operations only)

Industry Performance

Fiscal 2005 again saw the Information Technology (IT) industry dominate Top 100 R&D spending. Thirty-three (33) IT companies in all sectors accounted for 55% of all Top 100 spending. The leading IT sector for research spending is Communications/telecom equipment, which accounted for 26% of the total, largely due to Nortel's nearly \$2.3 billion worldwide effort, around 60% of which was in Canada.

Next in total spending was the Pharmaceuticals/biotechnology sector, which accounted for 16% of Top 100 R&D spending. When its worldwide spending is taken into account Canadian manufacturer Apotex led the firms in this industry in total R&D spending (\$183 million). However, domestic spending in the sector is dominated by multinational pharmaceutical companies, for which we report only in-Canada R&D. Here, Pfizer Canada is the clear leader with nearly \$179 million of domestic research spending.

Not to be overlooked is the Aerospace sector. Although only 5 Aerospace companies appear on the Top 100 list, they accounted for 8% of total spending, led by Pratt & Whitney Canada, with \$472 million of R&D.

Whereas the Automotive sector is mostly notable by its absence from the Top 100 list (companies such as GM, Ford, Daimler-Chrysler, Toyota, and Honda have not revealed their domestic R&D spending data) one company, Magna International, stands out. Magna spent almost \$824 million on R&D in Fiscal 2005, and increased its year-over-year spending by 19.4%.

Top 100 – Leading Industries	
Industry	R&D Spending (% of Total)
Communications/telecom (13)	26
Pharmaceuticals/biotechnology (37)	16
Telecommunications services (3)	16
Aerospace (5)	8
Software and computer services (10)	7
Automotive (1)	7
Energy/oil and gas (9)	6

The Top 10 R&D Intensive Firms

The requirement for high levels of sustained R&D spending in advance of revenue means that firms in the Pharma/biotechnology sector traditionally lead in research intensity. Eight of the 10 most research intensive companies in Fiscal 2005 were in this sector. These firms spend more on research than they earn in revenue, which confirms they are typically in a startup or growth phase.

Top 10 Research Intensive Companies*			
2005 Rank		Company	R&D as % of Revenue
Research Intensity	Overall		
1	82	Isotechnika	1,650.9
2	45	Neurochem	1,137.0
3	83	Labopharm	693.4
4	92	Biomira	386.3
5	91	MethylGene	280.2
6	54	Cardiome Pharma	257.4
7	95	ProMetic Life Sciences	187.3
8	29	Ballard Power Systems	140.5
9	61	Westaim	131.9
10	98	Theratechnologies	100.9

*\$1 million or more of revenue

Gainers and Losers

Ten companies stand out in R&D spending growth in Fiscal 2005. Among them is a mix of newer (e.g. Adherex Technologies, Aspreva Pharmaceuticals) and established (e.g. TELUS, Aastra Technologies) firms. Topping the list was Adherex Technologies, which expanded funding by over 200%. Equally impressive was TELUS, which ramped up spending by 120.5%. Corel (50.6%) and Shell Canada (46.4%) also stand out this year.

Top 10 Companies by R&D Growth			
2005 Rank		Company	% Change 2004-2005
R&D Growth	Overall		
1	96	Adherex Technologies	203.7
2	64	Aspreva Pharmaceuticals	175.0
3	16	TELUS	120.5
4	43	Aastra Technologies	110.6
5	45	Neurochem	62.1
6	69	Constellation Software	55.9
7	79	ViXS Systems	55.2
8	70	Corel	50.6
9	59	Axcan Pharma	49.3
10	55	Shell Canada	46.4

Regrettably, rising R&D spending tides do not lift all boats, and a number of firms suffered spending drops last year. The list includes a number of smaller Pharma/biotech companies, but also several well-known firms from other sectors.

Bottom 10 Companies by R&D Growth			
2005 Rank		Company	% Change 2004-2005
R&D Growth	Overall		
1	99	Lorus Therapeutics	-46.3
2	76	ConjuChem	-32.5
3	81	SR Telecom	-29.5
4	78	Westport Innovations	-28.5
5	73	Emergis	-25.4
6	29	Ballard Power Systems	-23.4
7	56	Janssen-Ortho (fs)	-21.4
8	23	EnCana	-21.3
9	84	Stressgen Biotechnologies	-19.9
10	32	Zarlink Semiconductor	-19.2

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Looking Ahead

Fiscal 2005 was a good year for corporate research. Spending was up overall and two-thirds of the Top 100 companies expanded their commitment to research. Most encouraging is that R&D spending growth exceeded revenue growth at many firms. And a good thing too, because the competitive pressure on Canada's R&D companies - in particular the manufacturing sector - show no signs of letting up. A high dollar and relentless international competition demand high levels of innovation on the part of all firms, and especially exporters, on whom we rely to earn the foreign currency we need to sustain our high levels of imports.

It is still the case that Canadians' high standard of living is being sustained by exports of natural resources. Fortunately, we have a rich resource endowment and efficient resource companies. Moreover, prices have been high in recent years, producing pleasantly unexpected levels of return.

The federal government is currently readying a new strategy designed to promote a more innovative economy. Many provincial governments are introducing new measures to spur innovation. But ultimately our future success will depend on the foresight of business leaders in companies large and small, and their ability to adapt to changing circumstances.

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