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Key Statistics on ICT Infrastructure, Use and Content

Canada



Key Statistics on ICT Infrastructure, Use and Content

October 2001

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This publication provides information on the latest trends in the information and communications technologies (ICT) sector, in Internet access and use, and in new applications and content including electronic commerce, online courses, telehealth and e-government.

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The data in this statistical compendium were current as of September 2001. Readers are encouraged to check throughout the year for more up-to-date information at <http://strategis.ic.gc.ca>

Spectrum, Information Technologies and Telecommunications Sector

Industry Canada

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<http://sitt.ic.gc.ca/default.htm>

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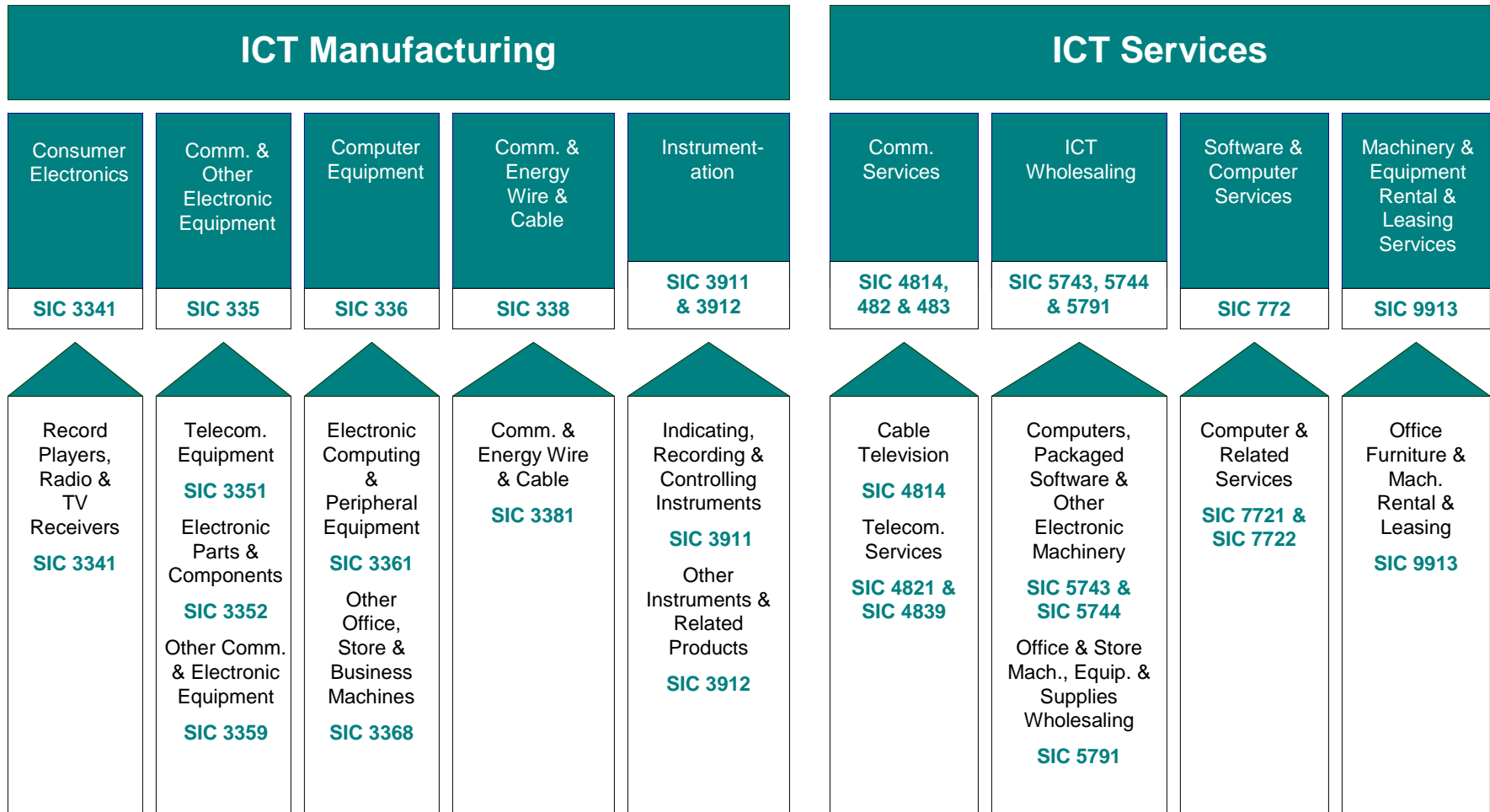
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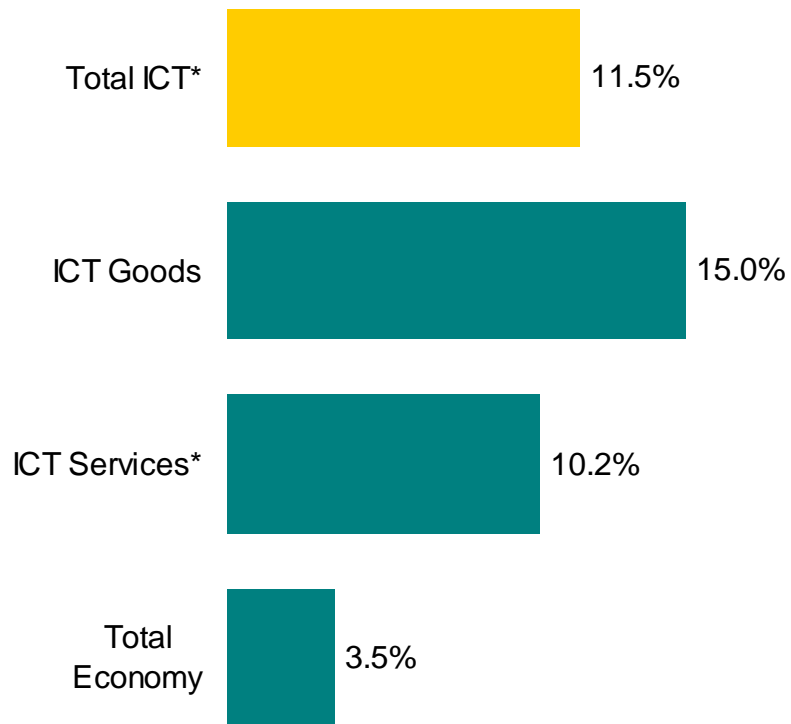
Information and Communications Technologies (ICT) Sector Definition*



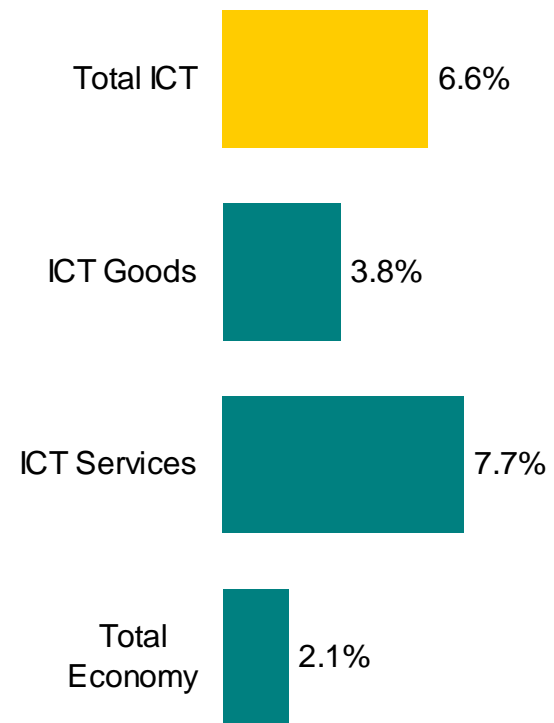
* In future publications the ICT Sector will be defined using the North American Classification System (NAICS).
For more details see <http://strategis.gc.ca/SSG/it05387e.html>

The ICT Sector is Growing Faster than the Canadian Economy

**Growth of Real GDP, 1993-2000
Compound Annual Growth Rate**



**Employment Growth, 1993-2000
Compound Annual Growth Rate**



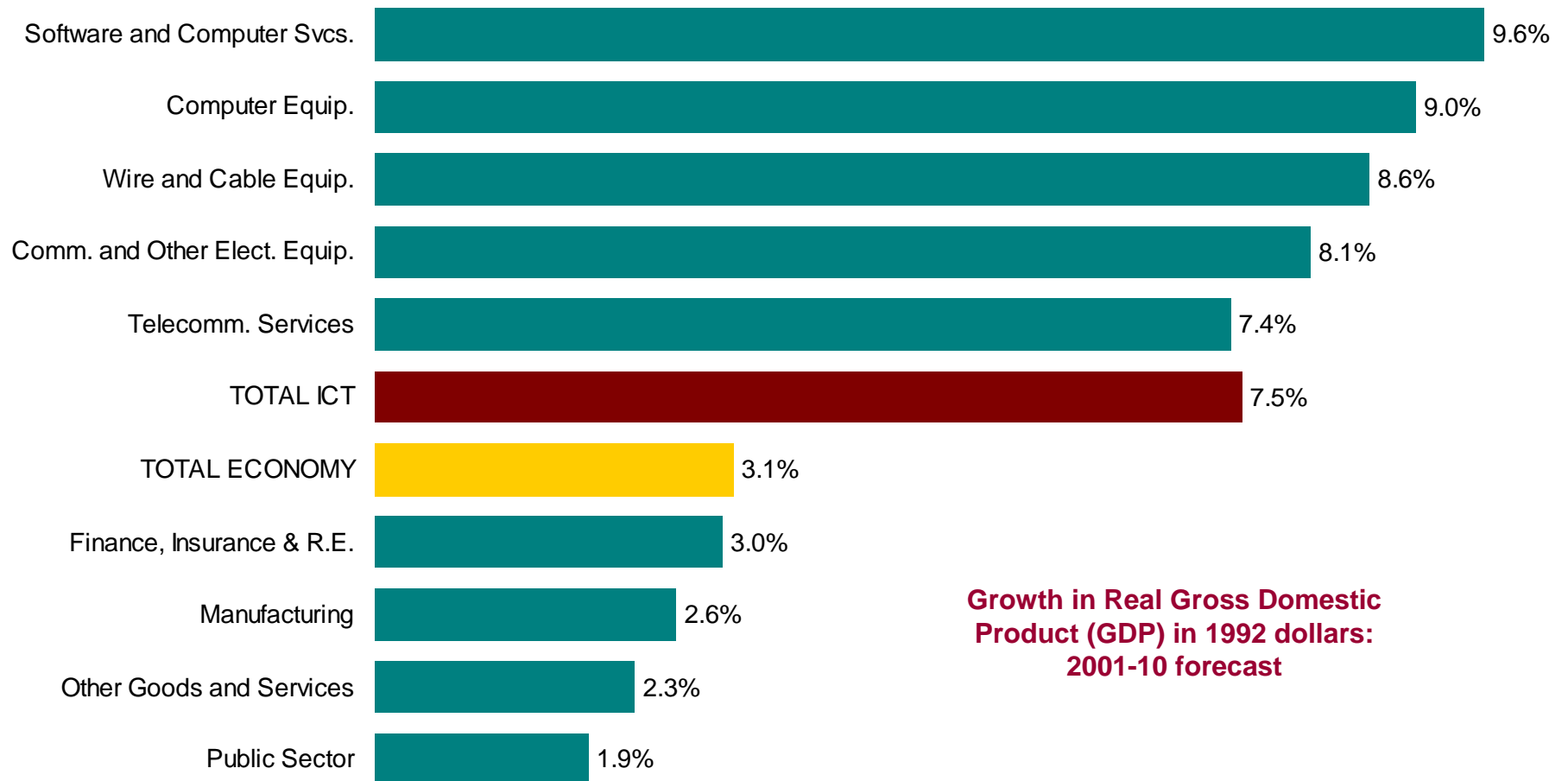
* Does not include ICT wholesaling.

Source: ICT Statistical Overview (ICTSO); Industry Canada, June 2001.

ICTs Seen as Engine of Economic Growth

Canadian Industrial Outlook: 2001 – 2010

Average Annual Growth Rates



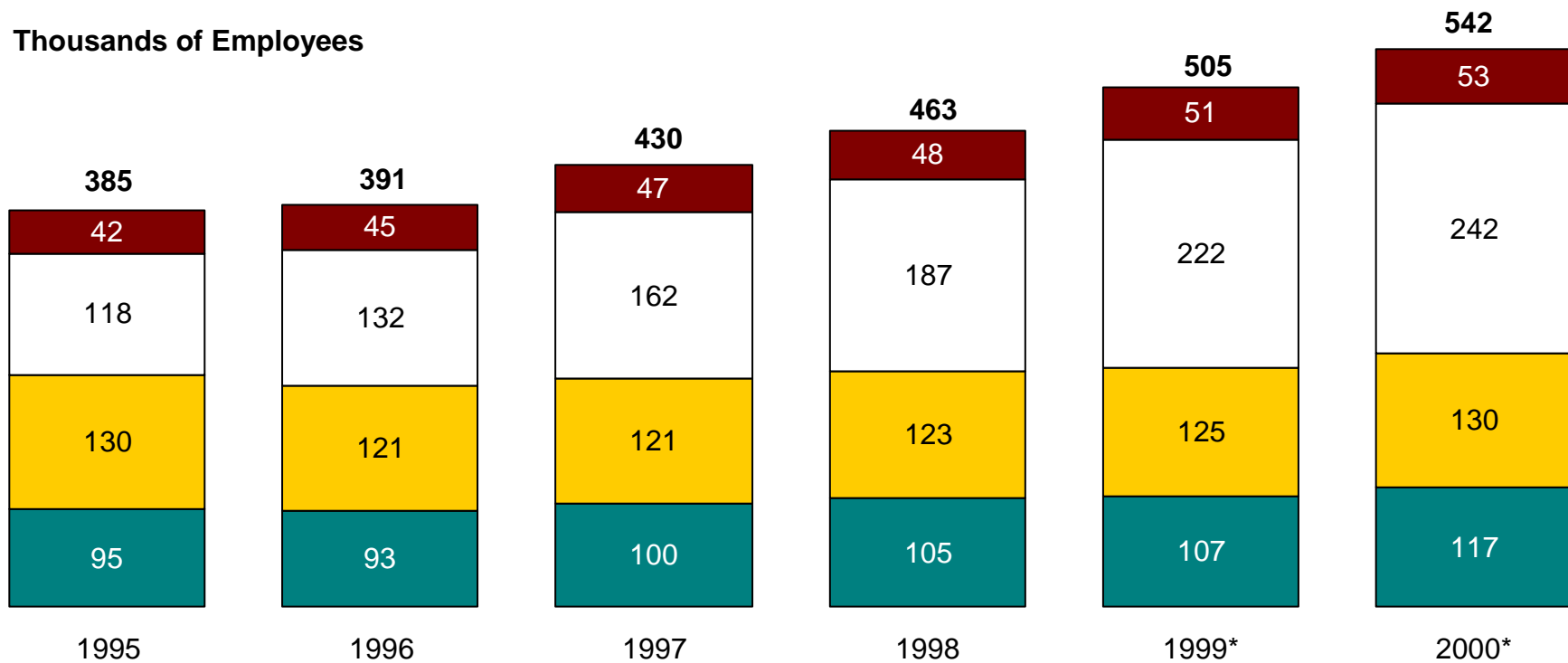
Growth in Real Gross Domestic Product (GDP) in 1992 dollars: 2001-10 forecast

Employment Growth is Strong, Particularly for Software and Computer Services

ICT Employment by Segment

- ICT Manufacturing
- Software and Computer Services (inc. self employed)
- Telecommunications + Cable
- ICT Goods Related Services (Wholesalers)

Thousands of Employees



* Industry Canada estimates.

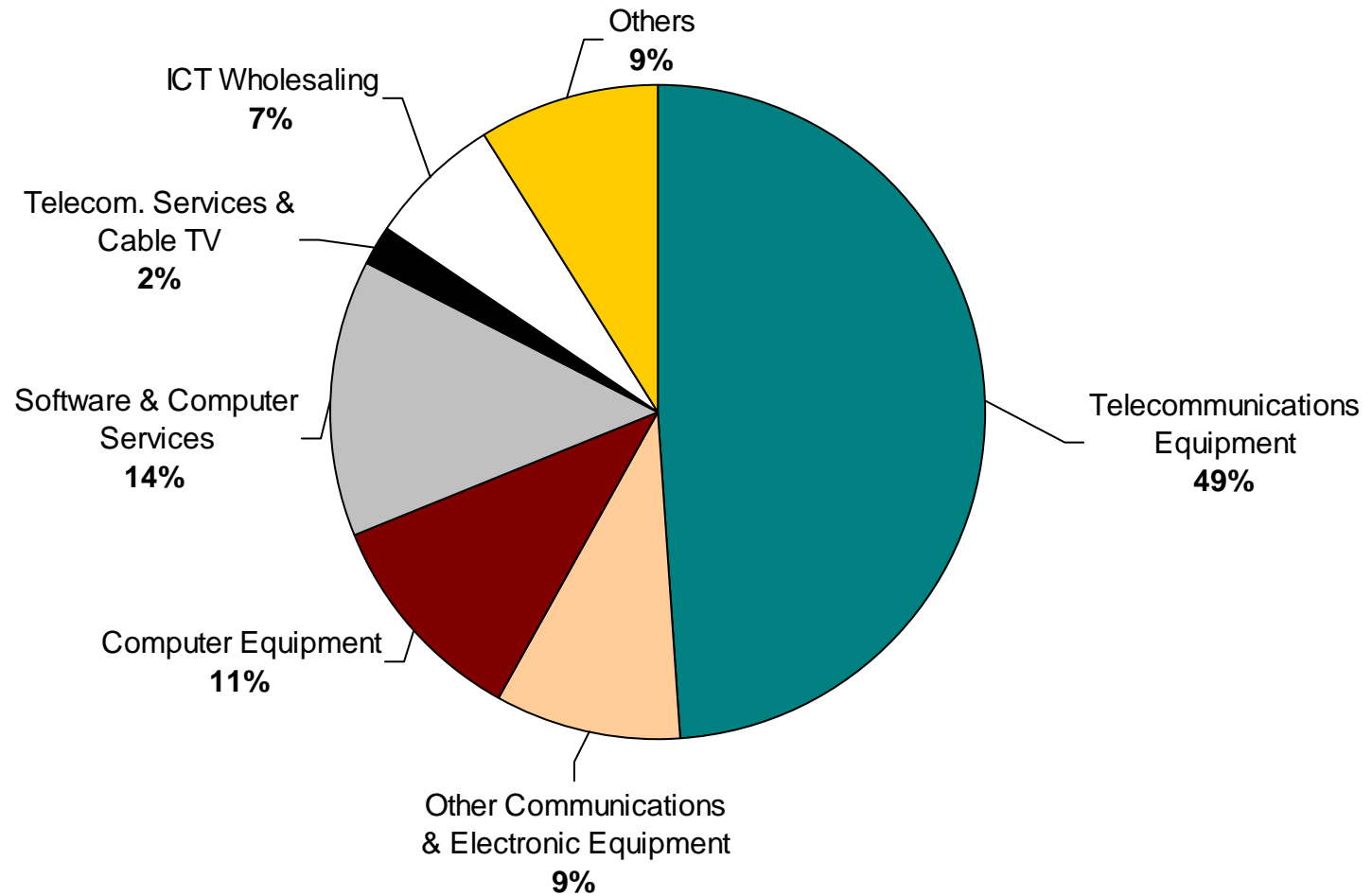
NOTE: These figures are based on NAICS categories. For more details see <http://strategis.ic.gc.ca/SSG/it05387e.html>

Source: Statistics Canada and Industry Canada.

ICT is One of Canada's Largest R&D Performers

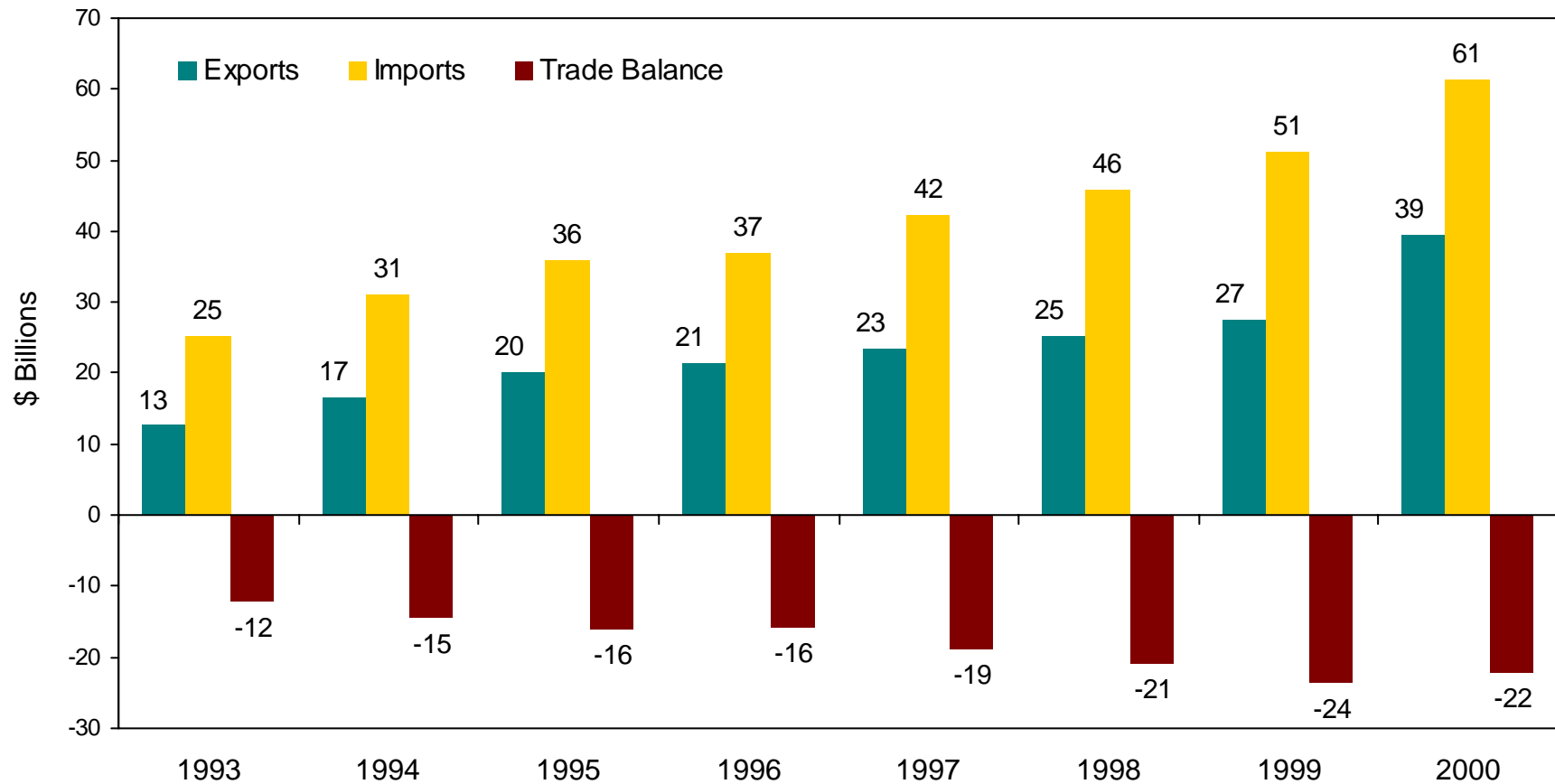
R&D Expenditure by ICT Segment

2001 Intentions \$5.3 Billion Total - 2000 Actual \$4.7 Billion Total

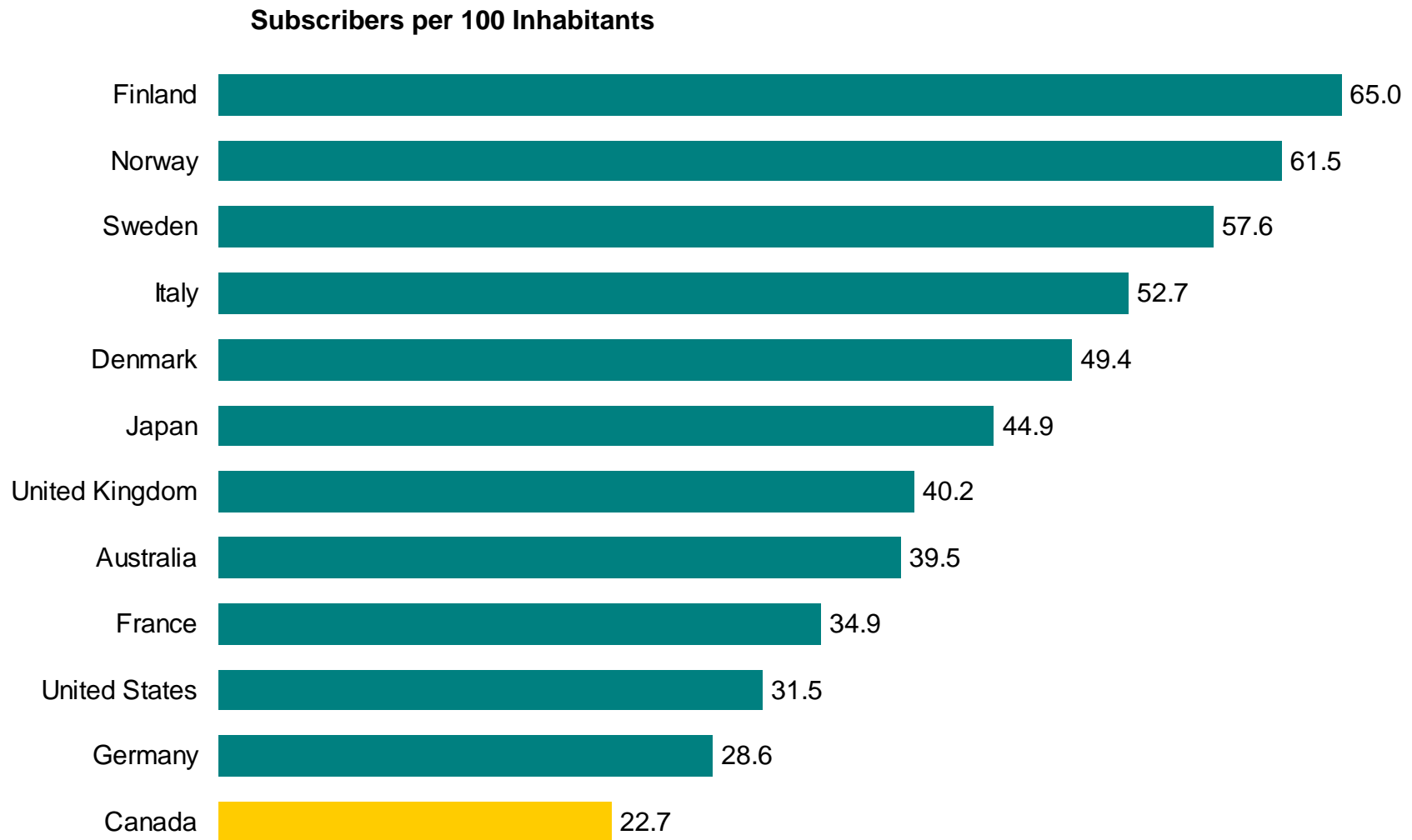


Despite Strong ICT Manufacturing Export Growth, a Large ICT Trade Deficit Exists

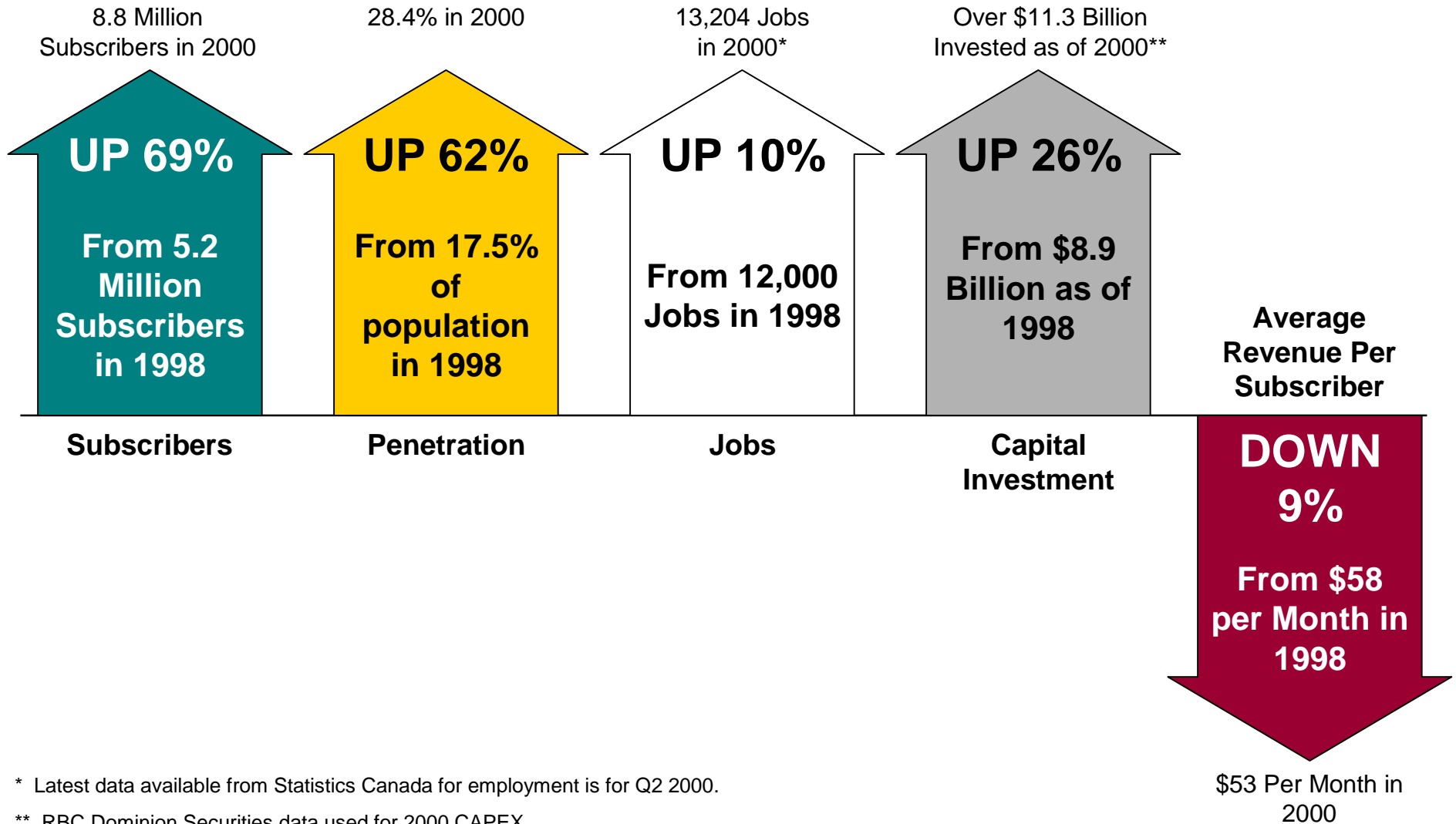
ICT Manufacturing Trade, 1993 to 2000



International Comparison of Cellular Mobile Subscribers, 1999



Canadian Mobile Telephone – A Key Industry



* Latest data available from Statistics Canada for employment is for Q2 2000.

** RBC Dominion Securities data used for 2000 CAPEX.

Source: Industry Canada compilations based on company reports.

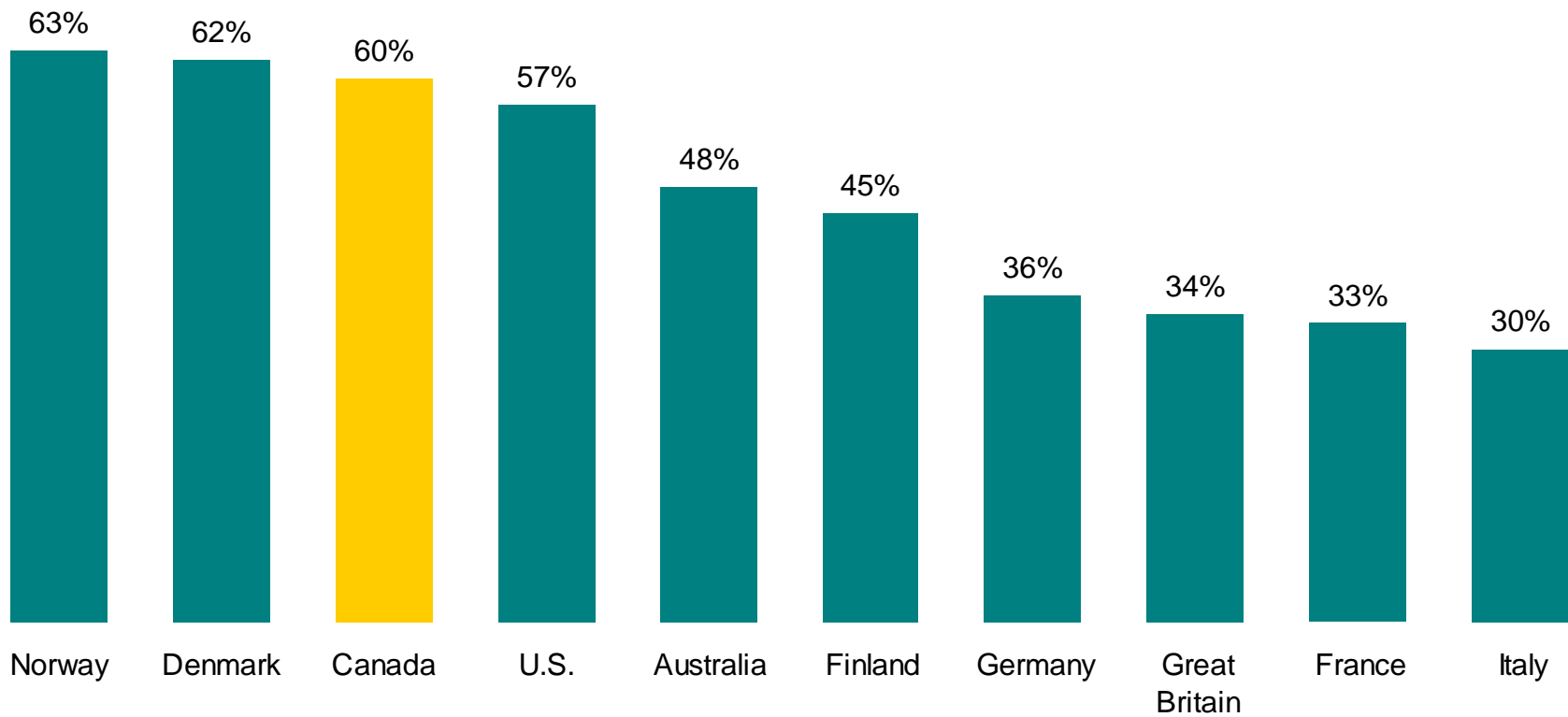
Canada Ranks Second in Connectedness Index

Country	OVERALL		AVAILABILITY		PRICE		REACH		USE	
	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index
United States	1	130	1	204	2	106	2	106.8	1	114
Canada	2	126	2	186	3	105	3	106.6	2	113
Sweden	3	121	3	181	6	99	1	109	3	105
Finland	4	117	5	174	1	107	4	104	4	102
United Kingdom	5	115	4	180	10	89	7	97	5	100
Australia	6	113	6	168	4	103	6	98	6	99
Germany	7	108	7	161	7	98	9	94	7	95
Japan	8	104	9	144	9	95	5	100	8	92
France	9	104	8	156	5	100	10	92	10	89
Italy	10	99	10	130	8	98	8	94	9	90

Source: Conference Board of Canada, January 2001.

Canada is Well Connected Relative to Other Countries

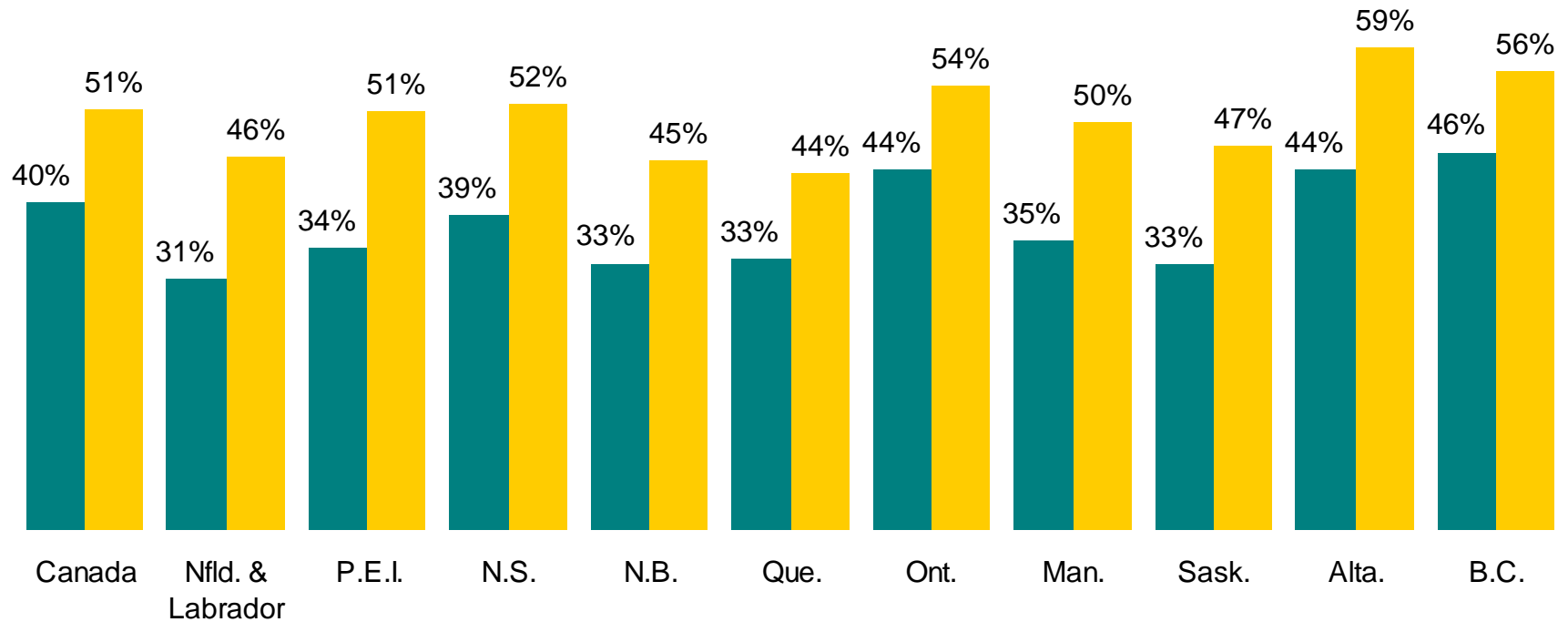
% of Population Online (as of April 2001)



Internet Penetration by Province*, 2000

■ From Home ■ From Any Location

% of Households with at Least One Regular User



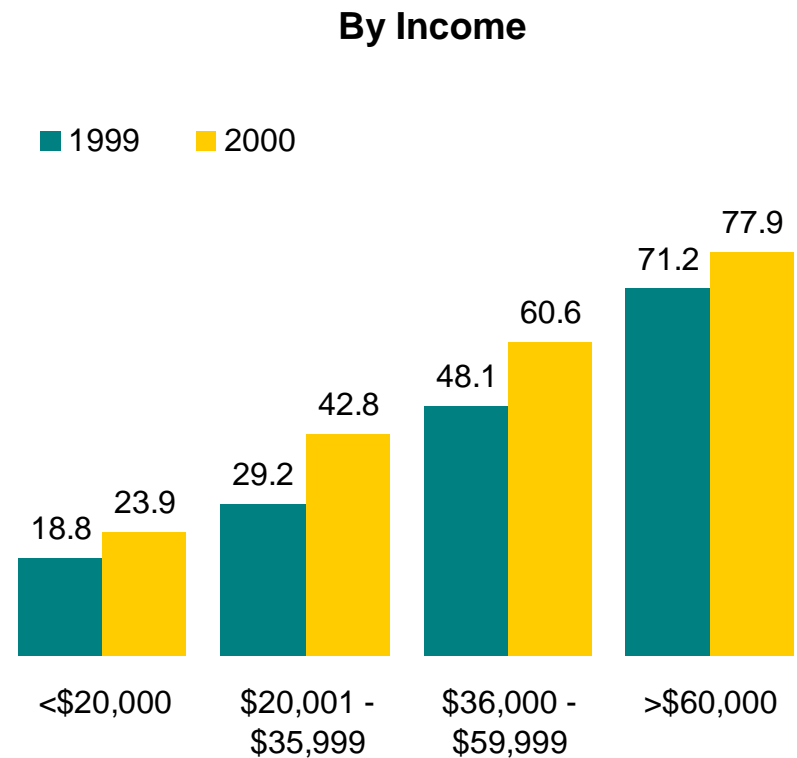
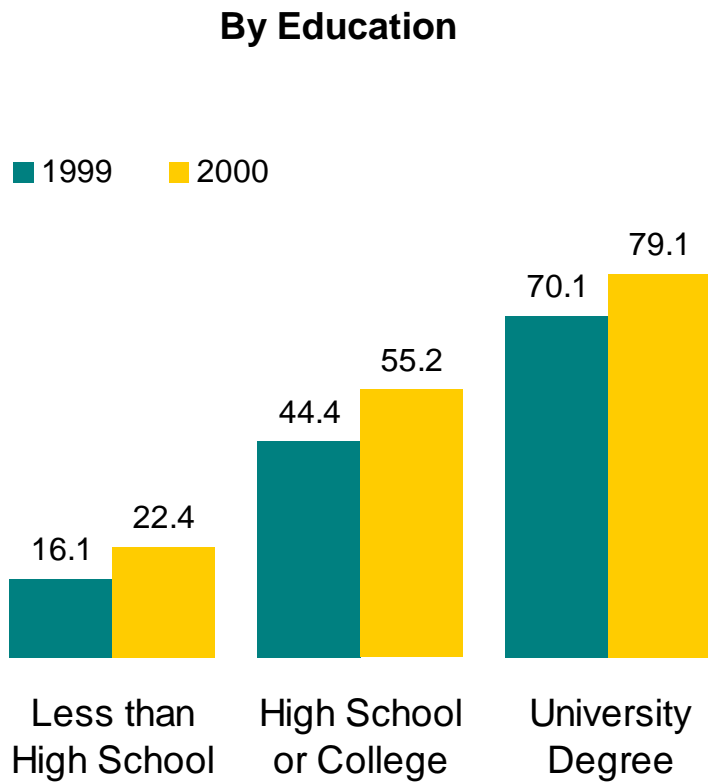
* Excludes the territories.

Source: Household Internet Use Survey; Statistics Canada, 2001.

Information Haves and Have-Nots: 1999 and 2000

Internet Use from Any Location

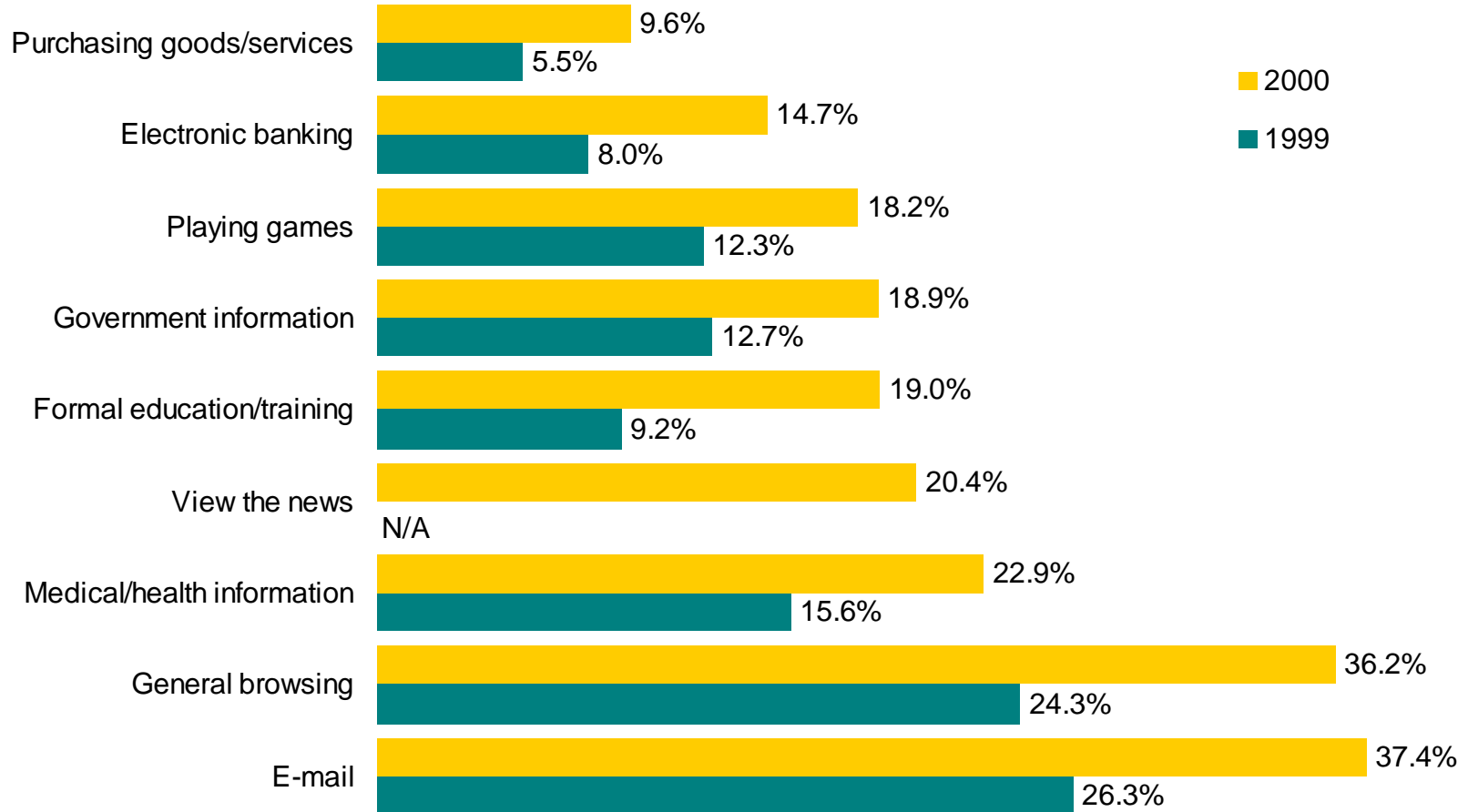
% of Households



Source: Household Internet Use Survey; Statistics Canada, 2001.

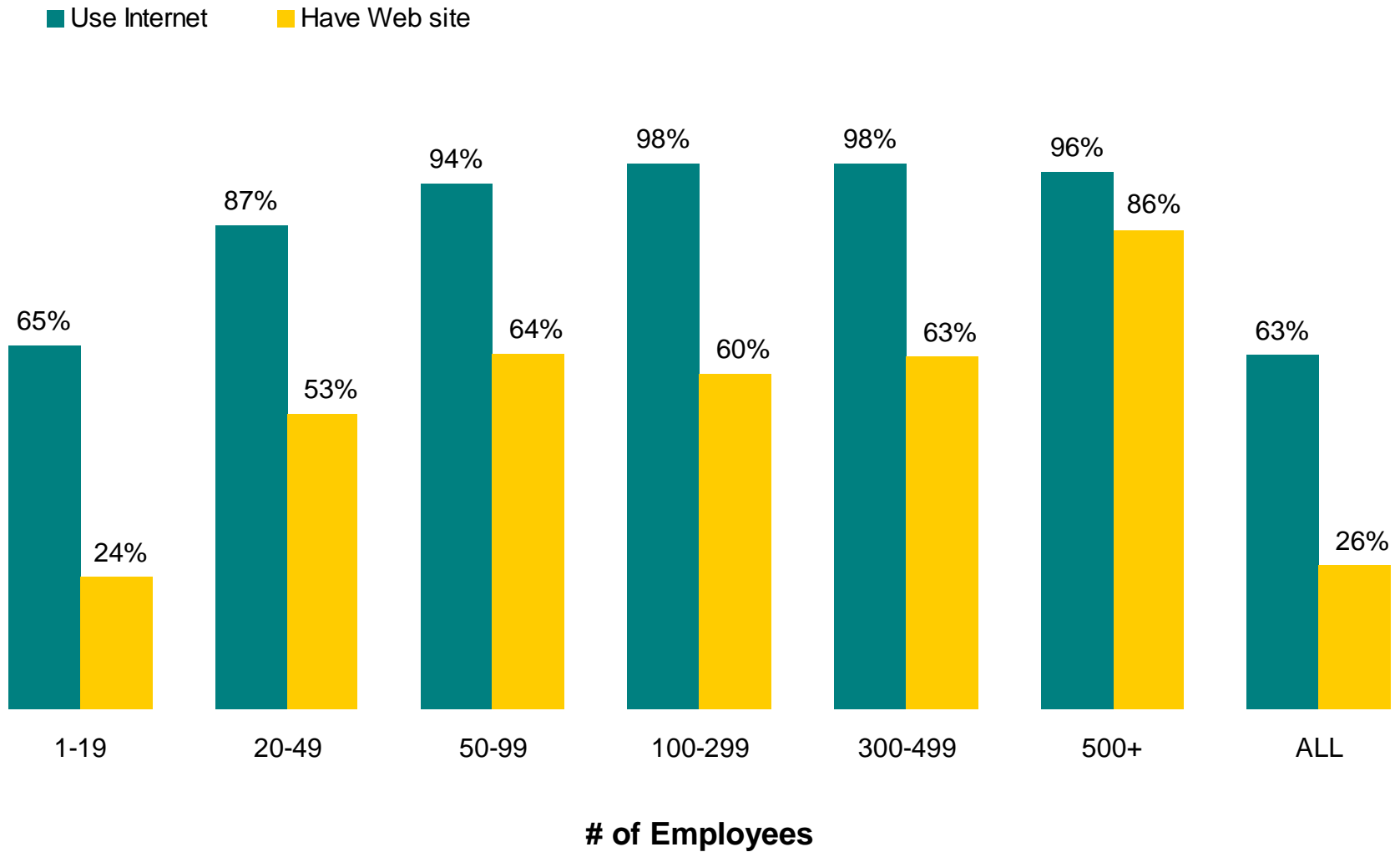
What are Canadians Doing Online?

Proportions of households using the Internet from home, by purpose of use

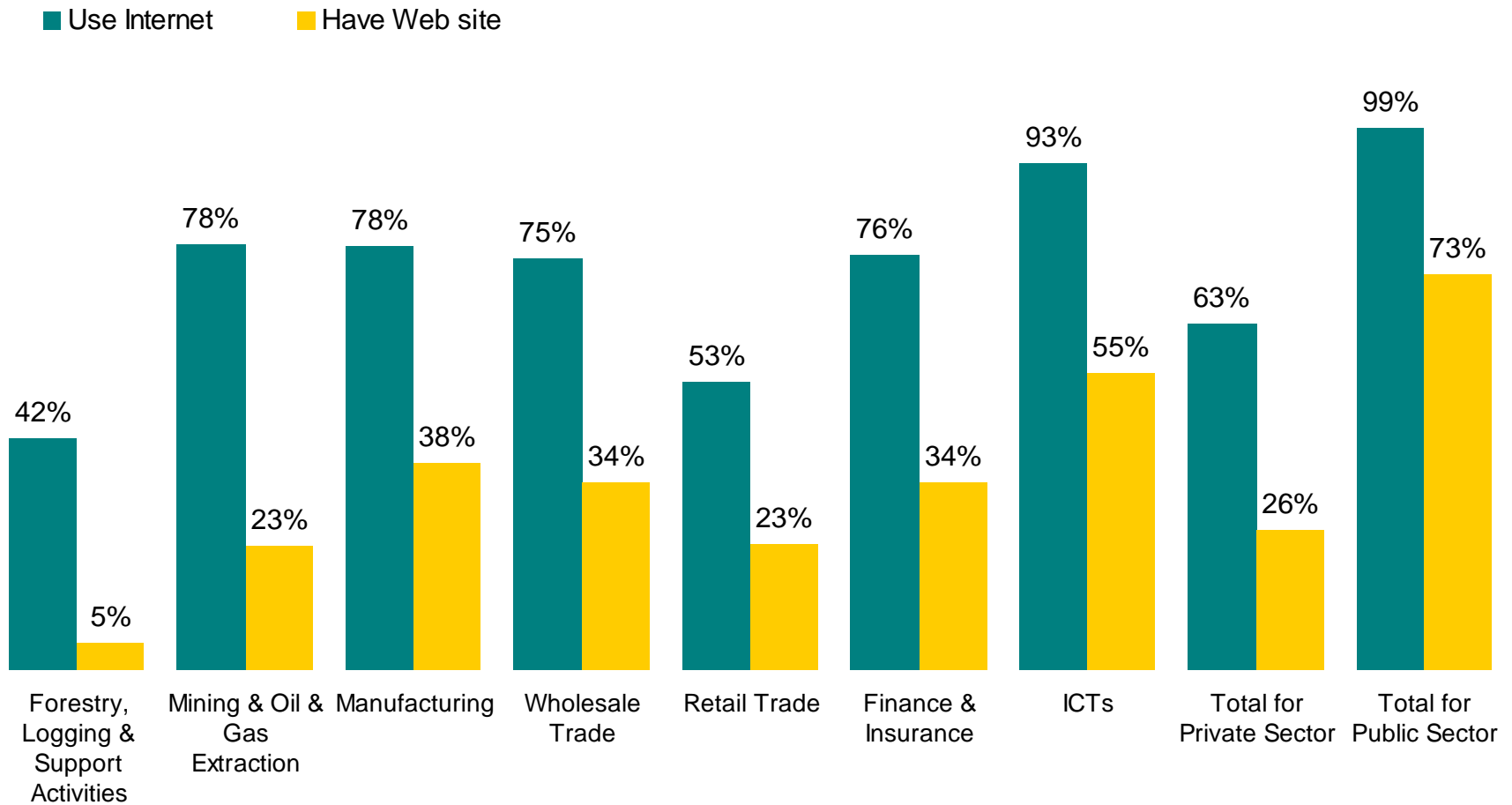


Source: Household Internet Use Survey; Statistics Canada, 2001.

Business Technology Use in Canada by Size of Firm, 2000

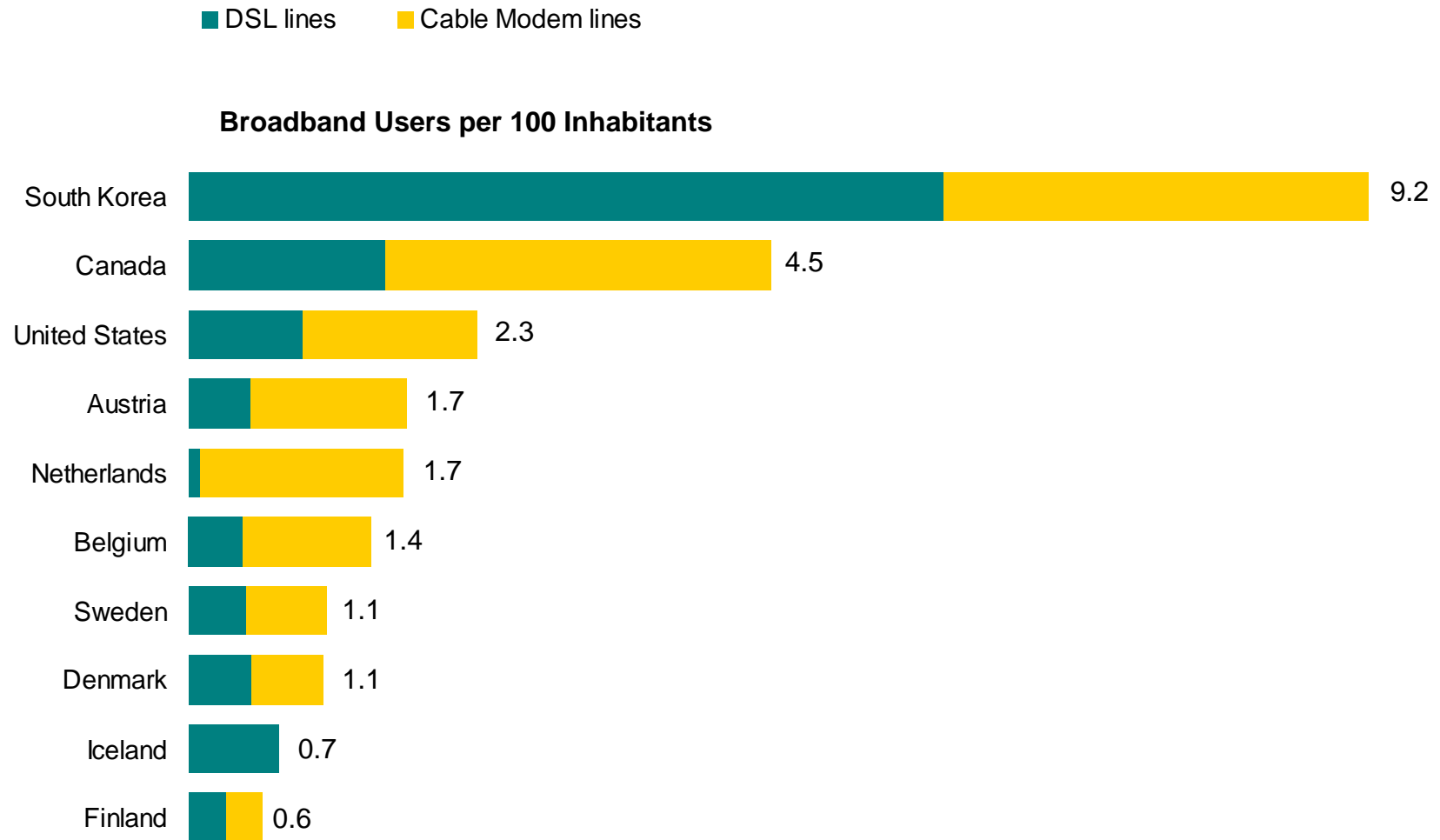


Business Technology Use in Canada by Sector, 2000



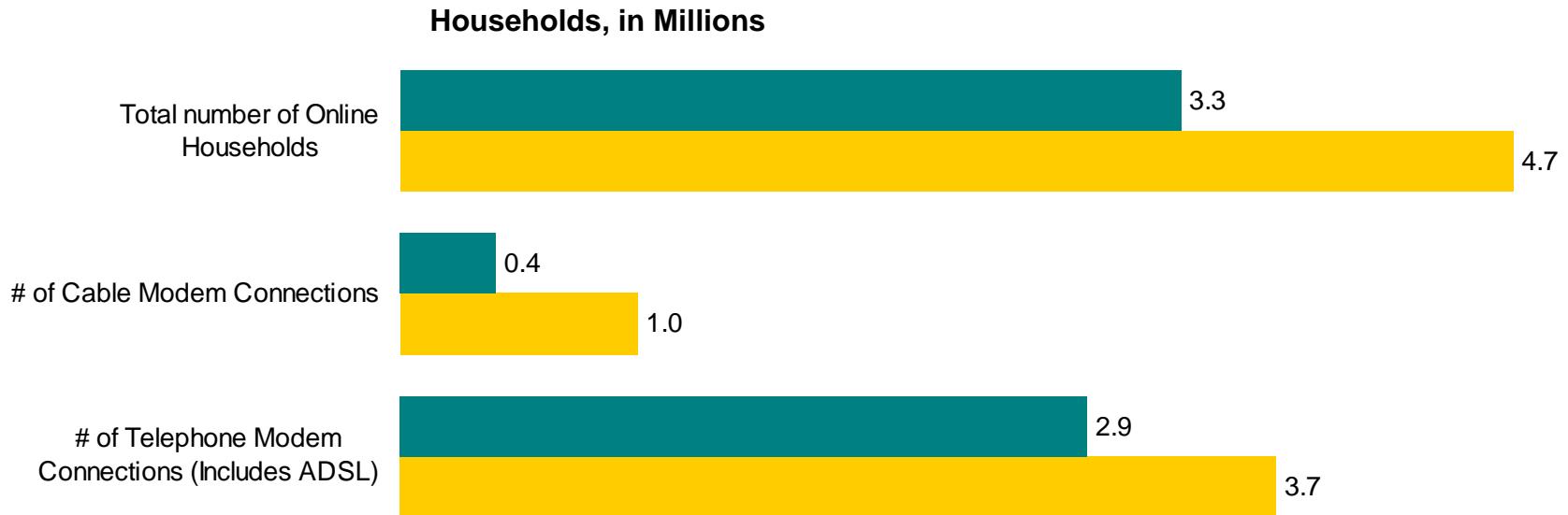
Source: Electronic Commerce and Technology Survey; Statistics Canada, 2000.

Broadband Penetration in OECD Countries, January 2001



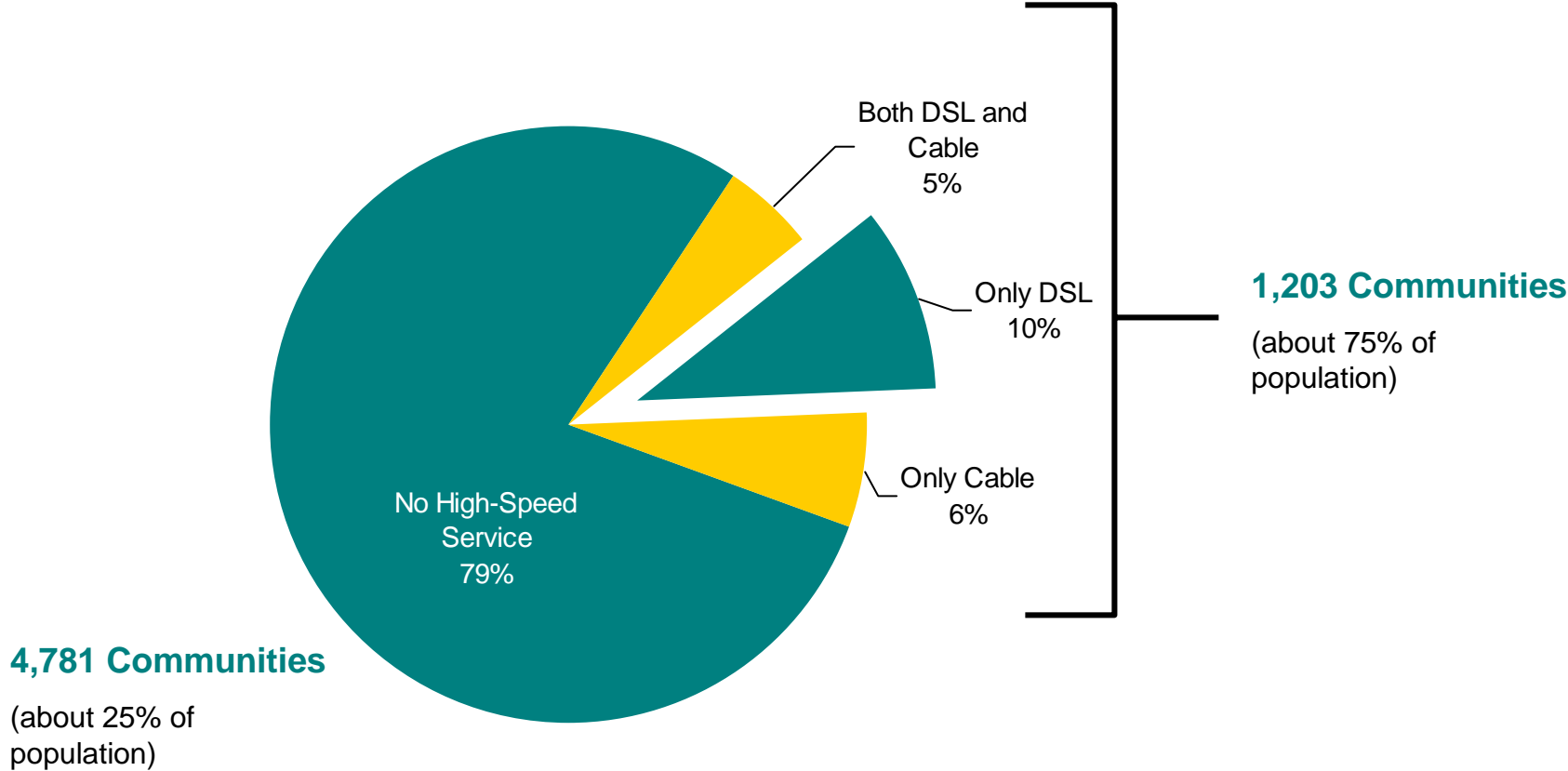
Household Cable Modem Connections More than Doubled in Canada, 2000

■ 2000 ■ 1999



	1999 (3.3 million online households)	2000 (4.7 million online households)
# of households with Cable Modem connections (millions)	0.4 12.1% of total	1.0 21.3% of total
# of households with Telephone connections, including ADSL (millions)	2.9 87.9% of total	3.7 78.7% of total

Approximately Three-Quarters of Canadian Communities* Do Not Have High-Speed Access



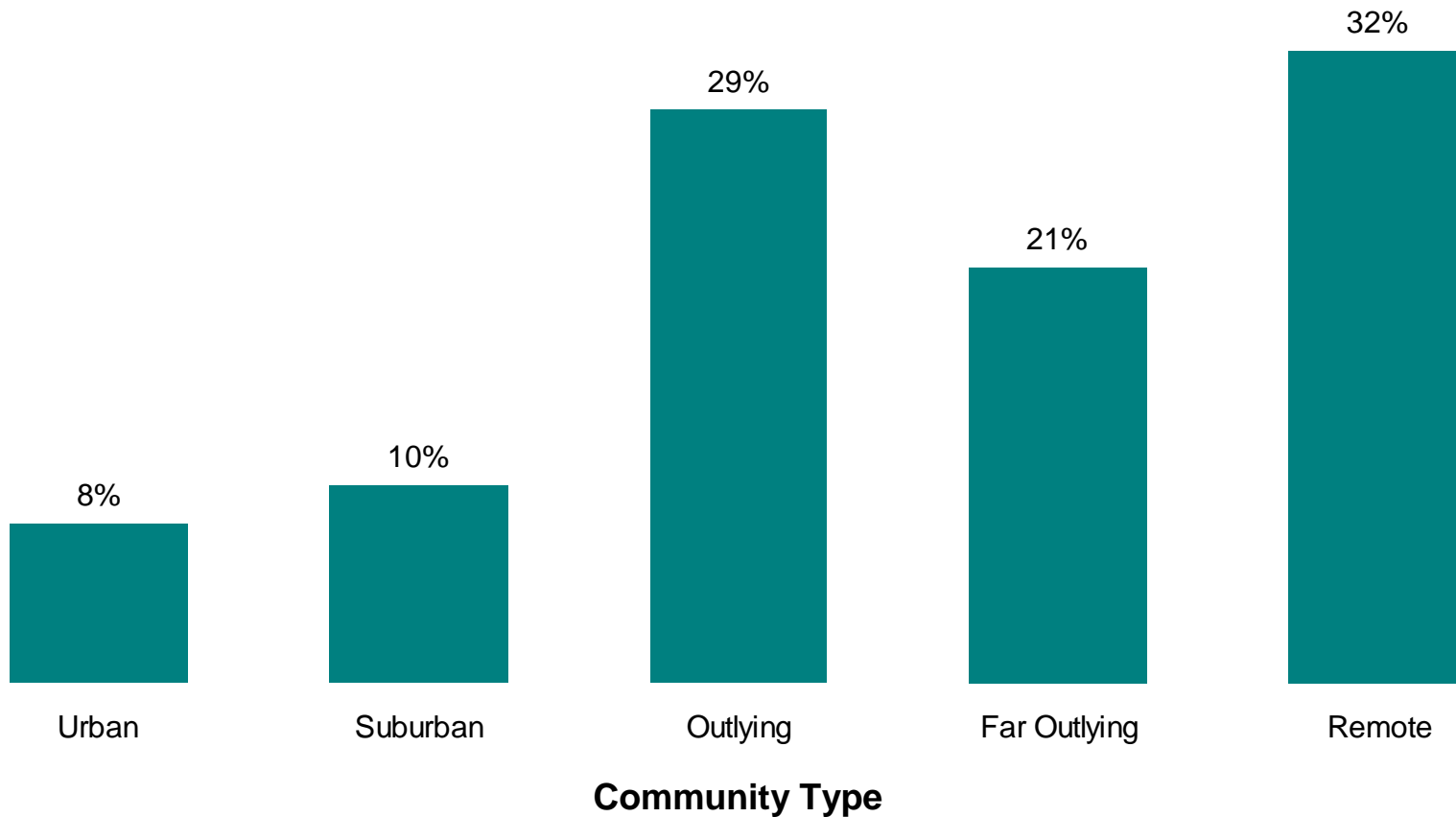
* Communities refer to Statistics Canada Census Sub-division (CSD) breakdown.

Source: The New National Dream: Networking the Nation for Broadband Access; Report of the National Broadband Task Force, 2001.

Urban Proximity (MIZ)* of Unserved Communities

No access to high-speed service – 4,781 Communities

% of Communities Without High-Speed Service



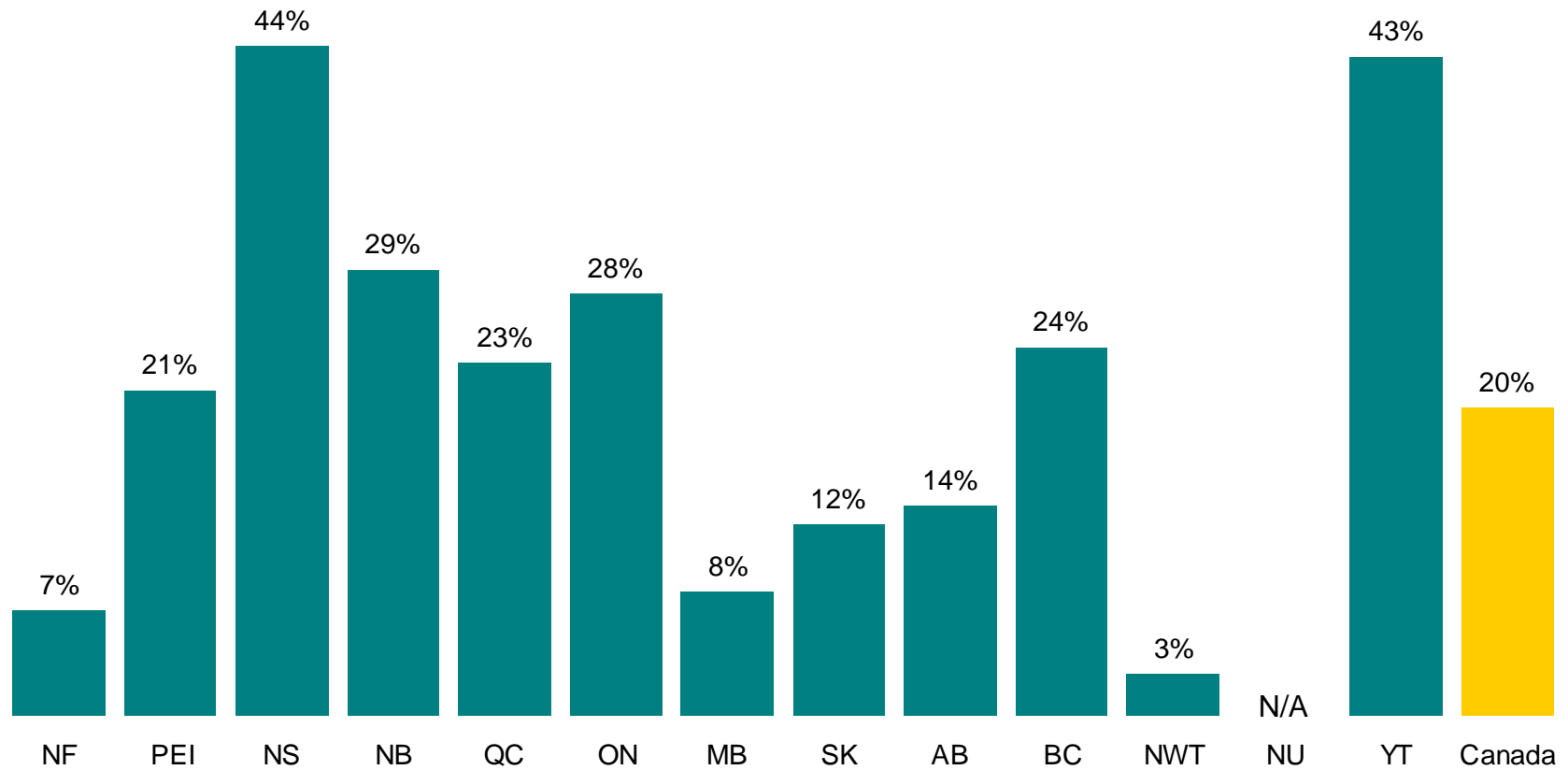
* Statistics Canada has classified census sub-divisions by proximity to metropolitan centers – the metropolitan influenced zone (MIZ).

Source: The New National Dream: Networking the Nation for Broadband Access; Report of the National Broadband Task Force, 2001.

Access to High-Speed Service Varies by Province

Access to high-speed service - 1,203 communities*

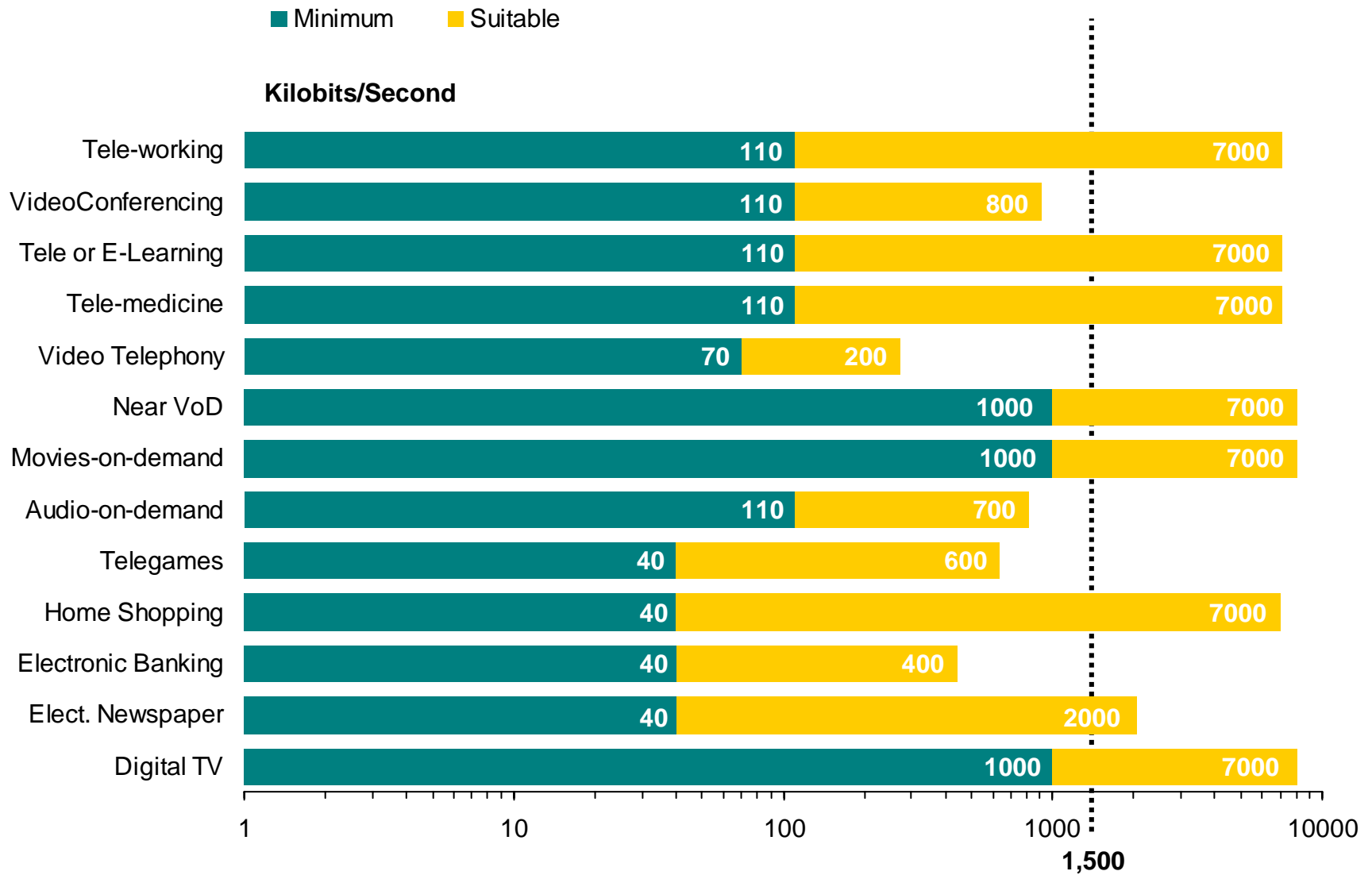
% of Provincial Communities



* Communities refer to Statistics Canada Census Sub-division (CSD) breakdown; 1,023 communities.

Source: The New National Dream: Networking the Nation for Broadband Access; Report of the National Broadband Task Force, 2001.

New Applications Require More Capacity and Speed



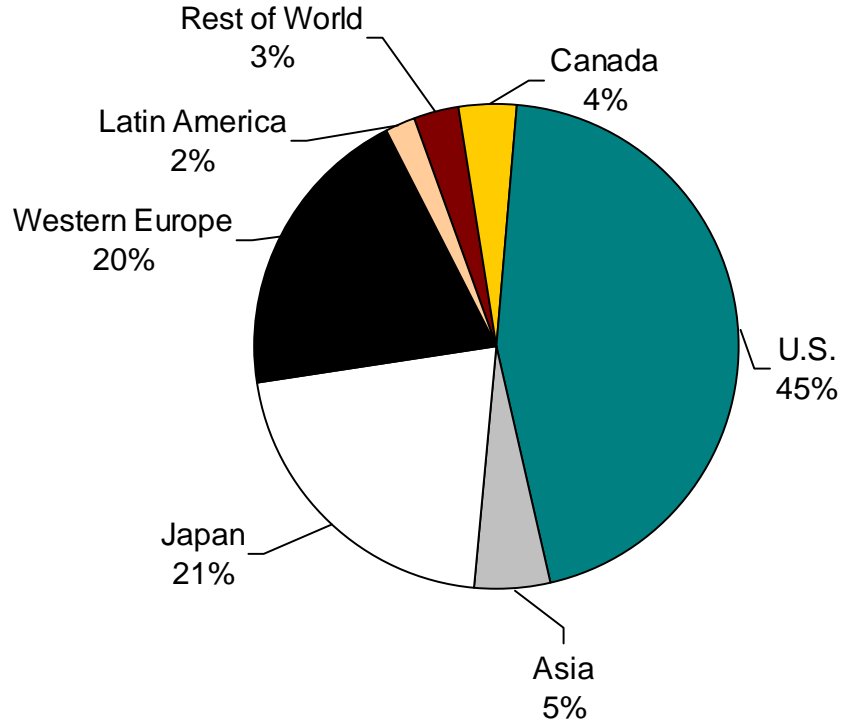
Estimates of Worldwide E-Commerce Growth (U.S. \$ Billions)

Source	1999	2000	2001	2002	2003	2004
eMarketer	\$98.4	\$233.4	\$449.89	\$841.08	\$1542.8	\$2775
Forrester Research	\$170	\$657	\$1233	\$2231	\$3979	\$6790
Gartner Group	-----	\$403	\$953	\$2180	\$3950	\$5950
IDC	\$131.5	\$354	\$634.1	\$1152.8	\$1871.2	\$3144
Goldman Sachs	-----	\$357	\$740	\$1304	\$2088	\$3201
Ovum	-----	\$218	\$345	\$543	\$858	\$1400

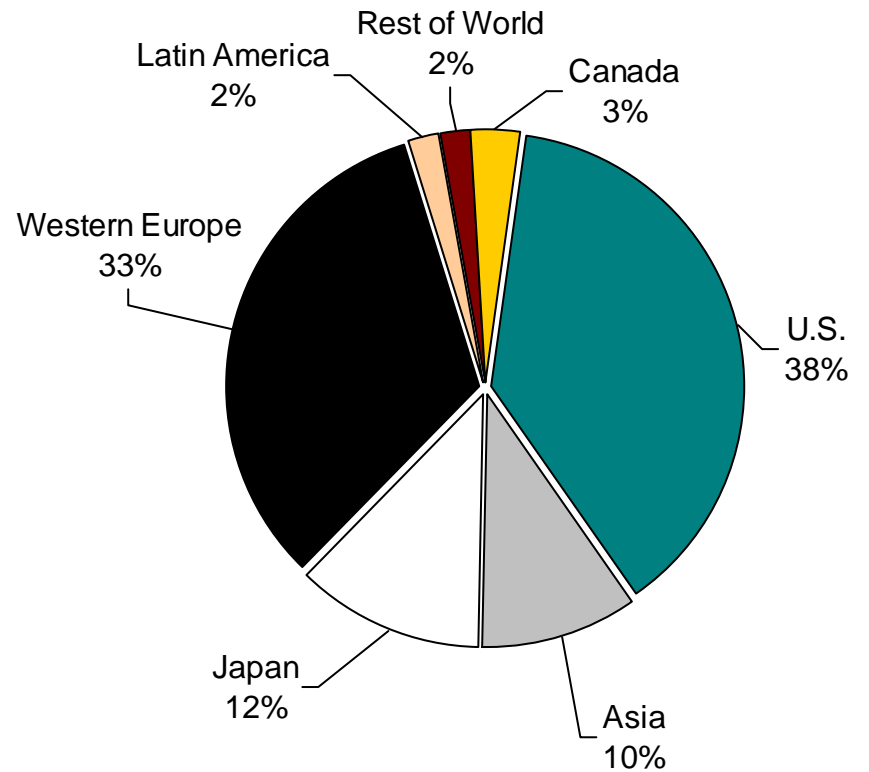
Source: eMarketer, 2001; Forrester Research, April 2001; International Data Corporation (IDC), 2001.

Canada's Current and Projected Share of World E-Commerce

2000
U.S. \$354 Billion



2004
U.S. \$3,144 Billion



Source: International Data Corporation, 2001.

Value of E-Commerce Sales, B2B & B2C (private sector only) (CDN \$ Millions)

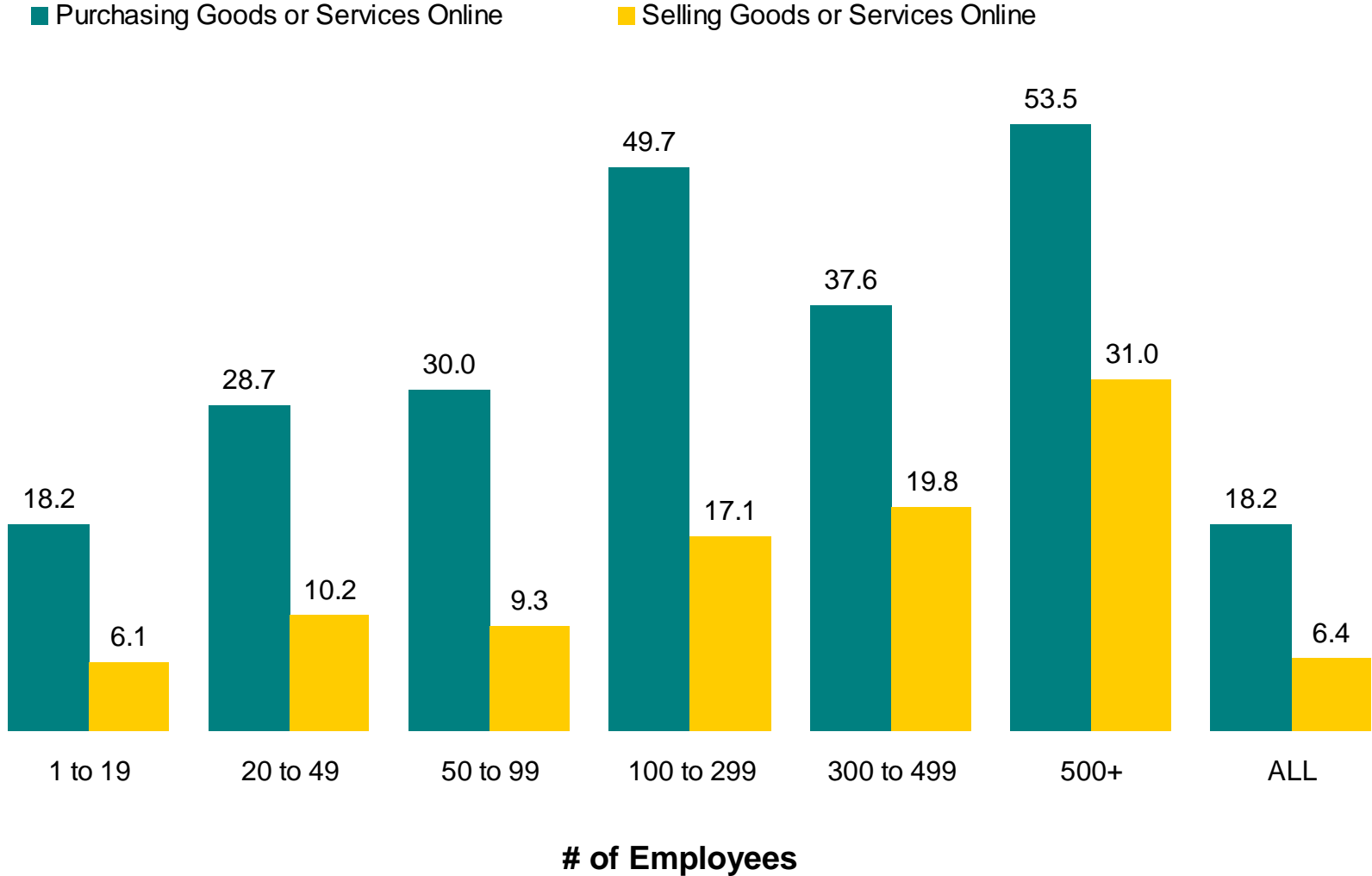
	1999	2000	Change
All private sector	4,179.7	7,245.6	3,065.9
Manufacturing	900.0	1304.8	404.8
Wholesale trade	156.3	1041.2	884.9
Transportation and warehousing	164.3	990.2	825.9
Retail trade	610.6	889.9	279.3
Finance and insurance	320.8	634.5	313.7
Professional, scientific and technical services	406.1	334.6	-71.5
Information and cultural industries	552.7	273.9	-278.8
Accommodation and food services	429.3	175.3	-254.0
Real estate, rental and leasing	114.8	137.0	22.2
Educational services (private sector)	...	71.4	...
Administration and support, waste management and remediation services	...	63.5	...
Arts, entertainment and recreation	...	10.5	...
Management of companies and enterprises	...	7.2	...
Health care and social assistance (private sector)	10.0	3.1	-6.9
Utilities	15.8	X	...
Mining, oil and gas extraction	15.0	X	...
Forestry, logging and support activities
Other services (except public administration)	27.4	X	...

} Growth concentrated in few key sectors

- 80% of sales B2B
- 20% B2C
- 17% of sales exported

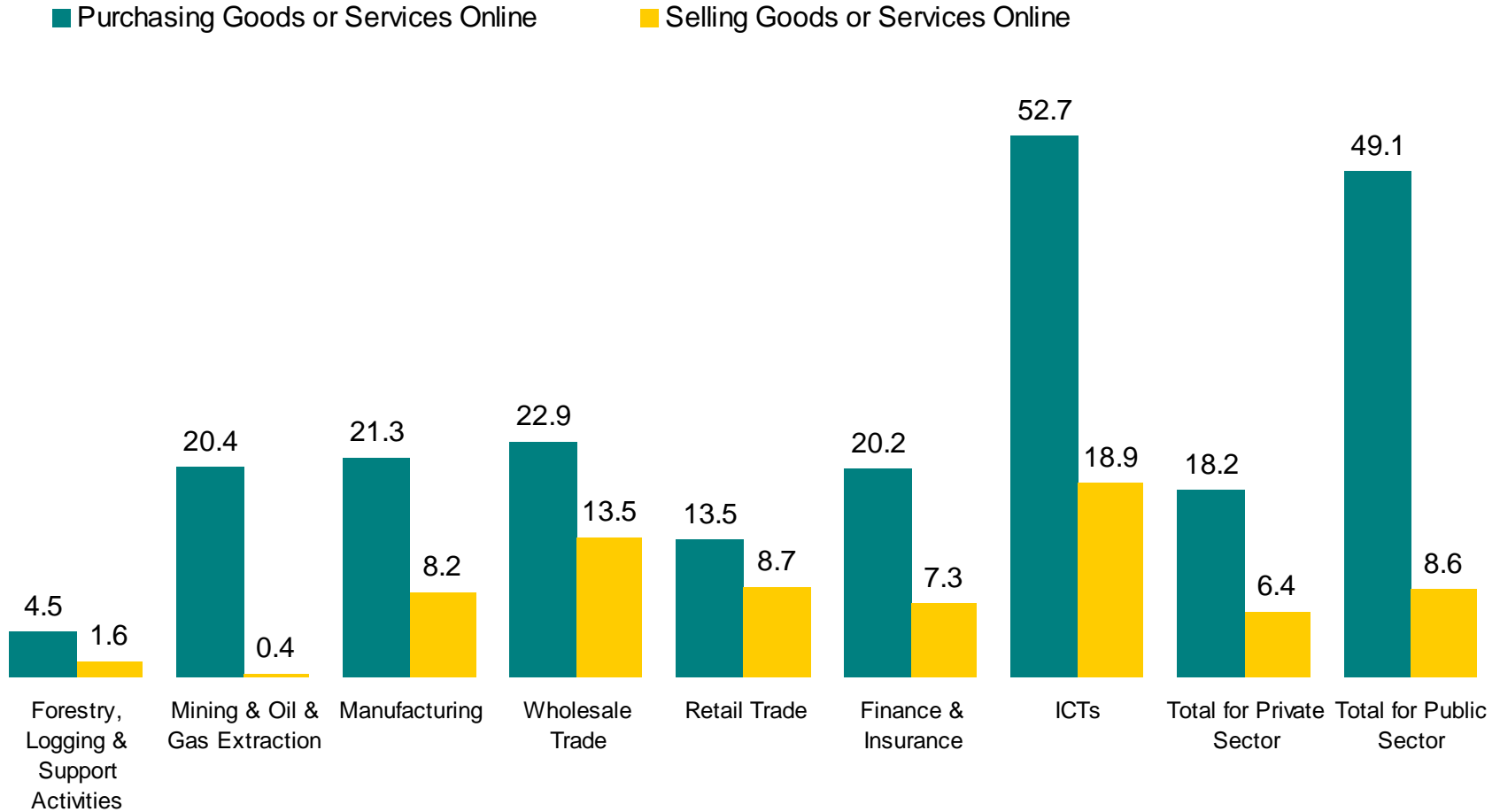
Note: ... Figures not available X Confidential Data

Buying and Selling Online by Size of Firm, 2000



Source: Electronic Commerce and Technology Survey; Statistics Canada, 2000.

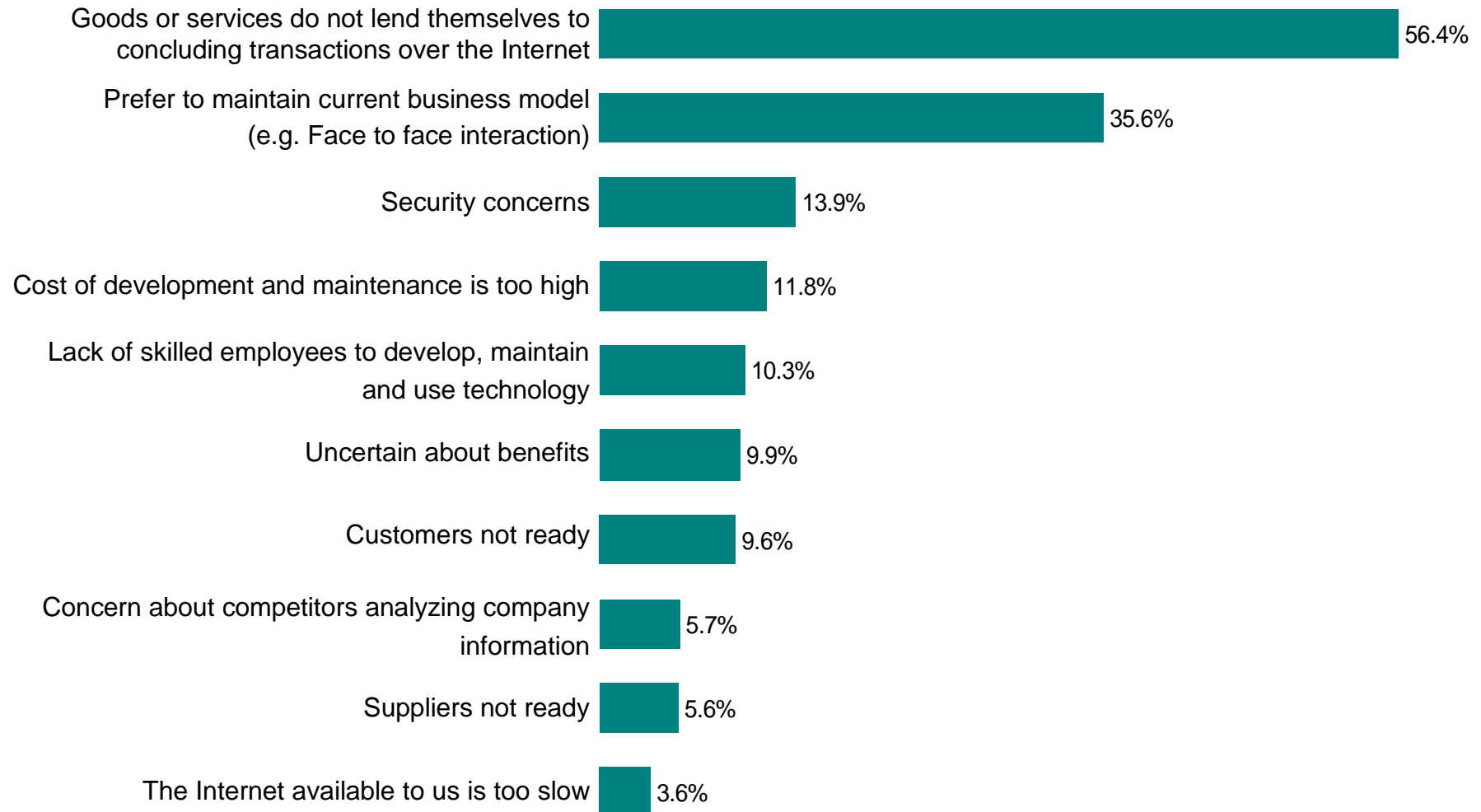
Buying and Selling Online by Sector, 2000



Source: Electronic Commerce and Technology Survey; Statistics Canada, 2000.

Reasons Canadian Companies Do Not Buy or Sell Online, 2000

Reasons for not using the Internet to purchase or sell (Non-Internet Users)

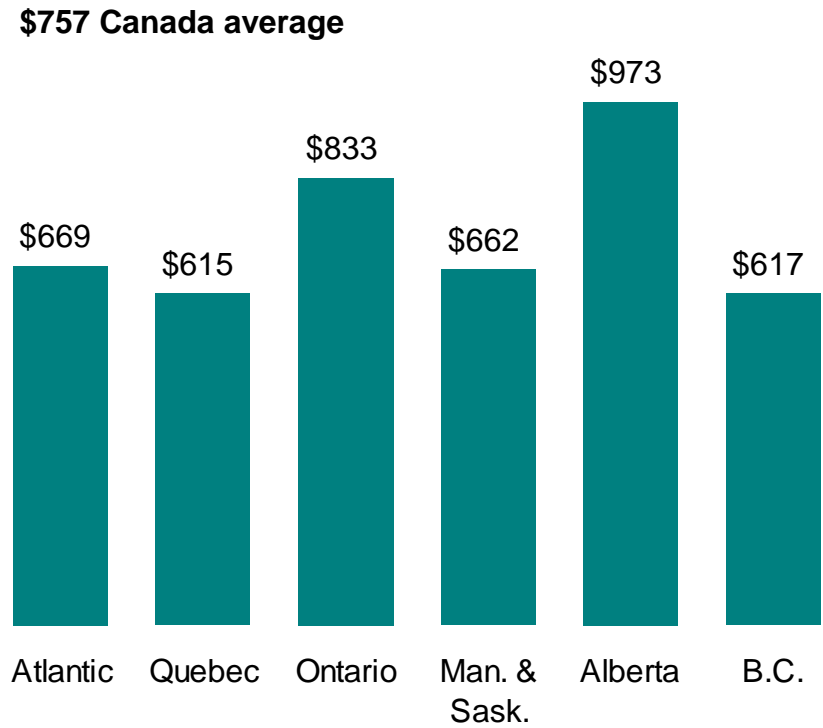


Canadian Households Purchasing Over the Internet, 2000

Business to Household Sales



Annual Average Expenditure for Internet Purchases by Region

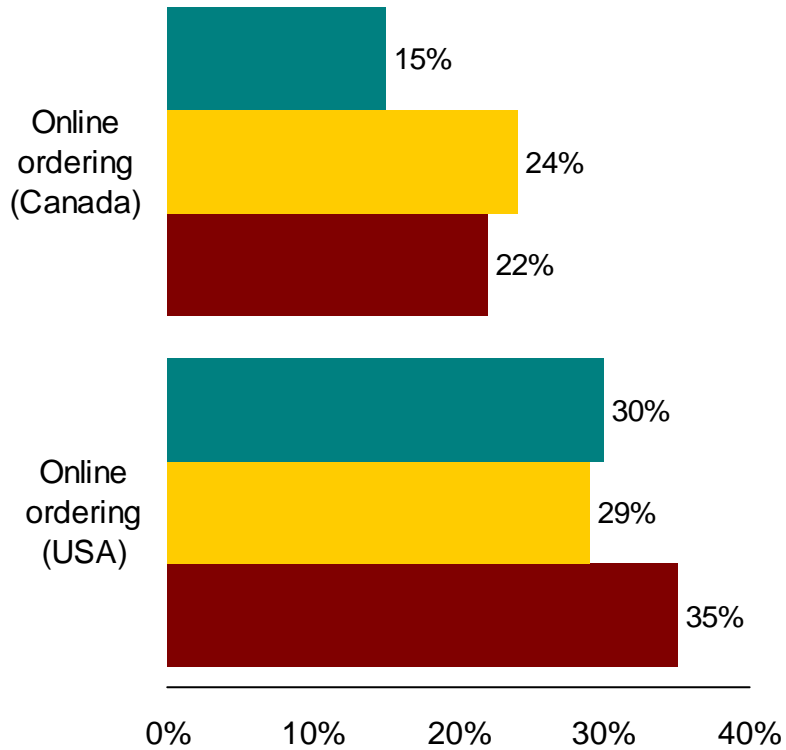


U.S. Ahead of Canada in E-Commerce

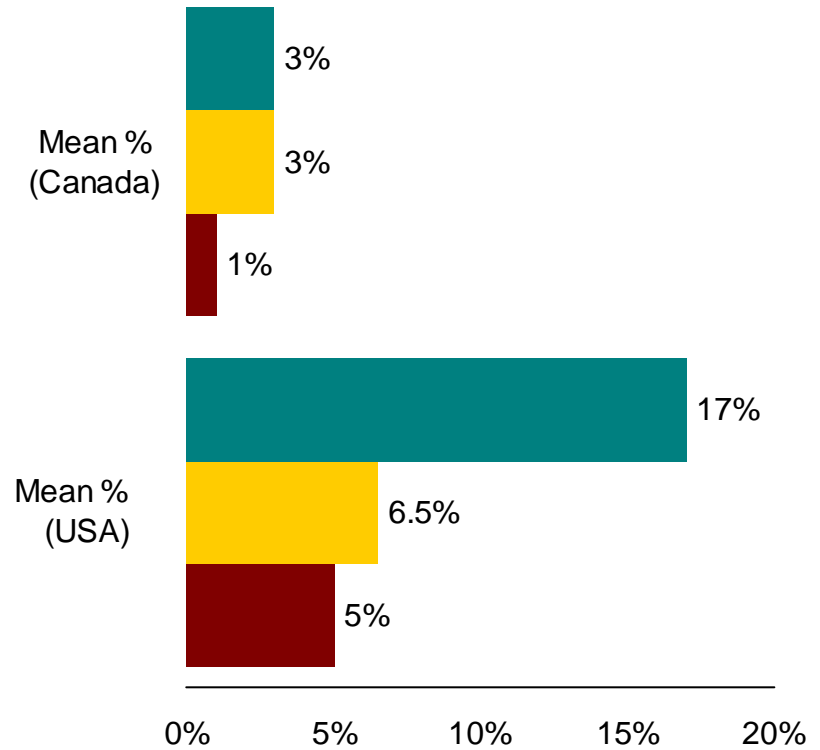
Activities currently available on business website

Percent of revenues expected to be from Internet sales in 2001

■ Small = <100 Employees
 ■ Medium = 100-499 Employees
 ■ Large = 500+ Employees



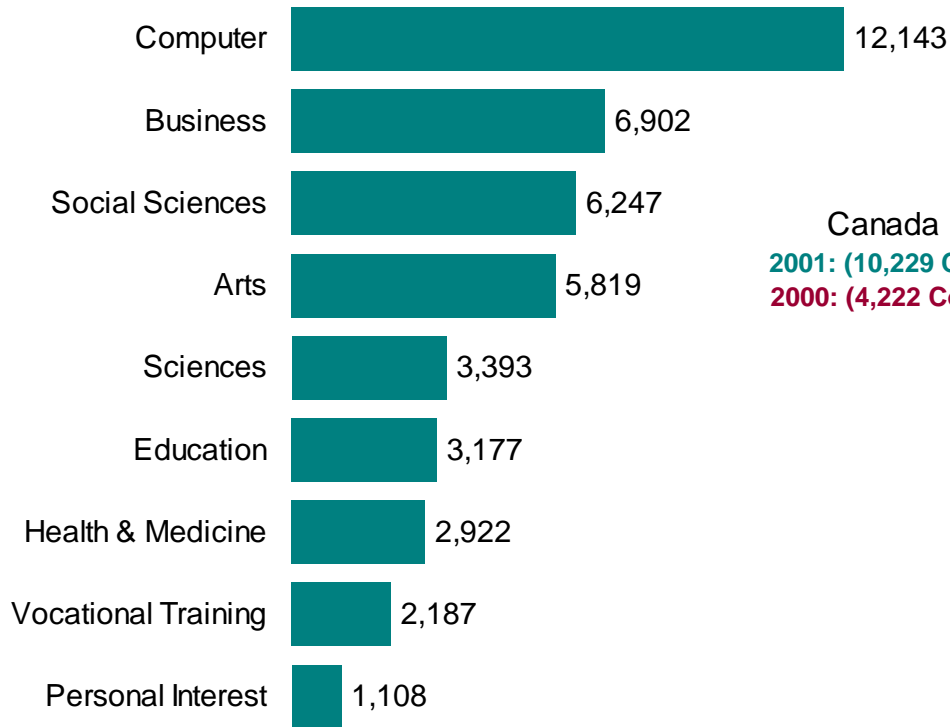
Canada N = 341; US N = 758



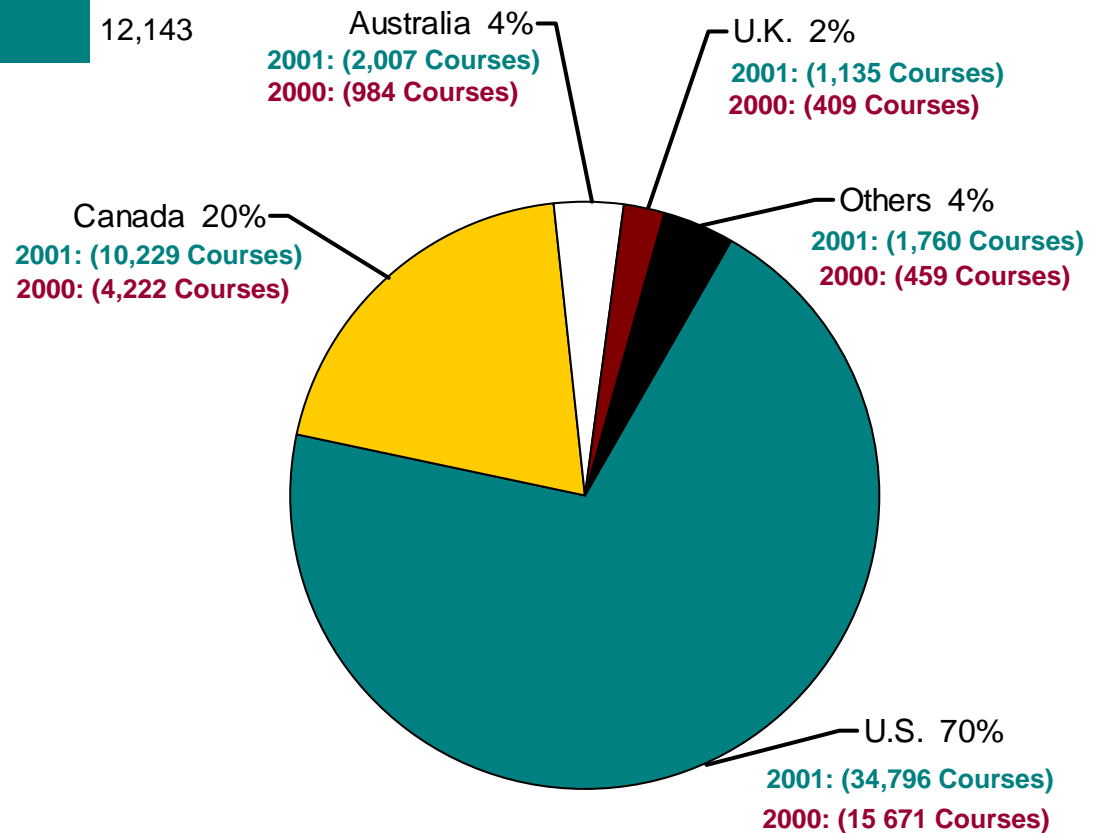
Canada N = 358; US N = 630

Online Courses are Growing in Popularity

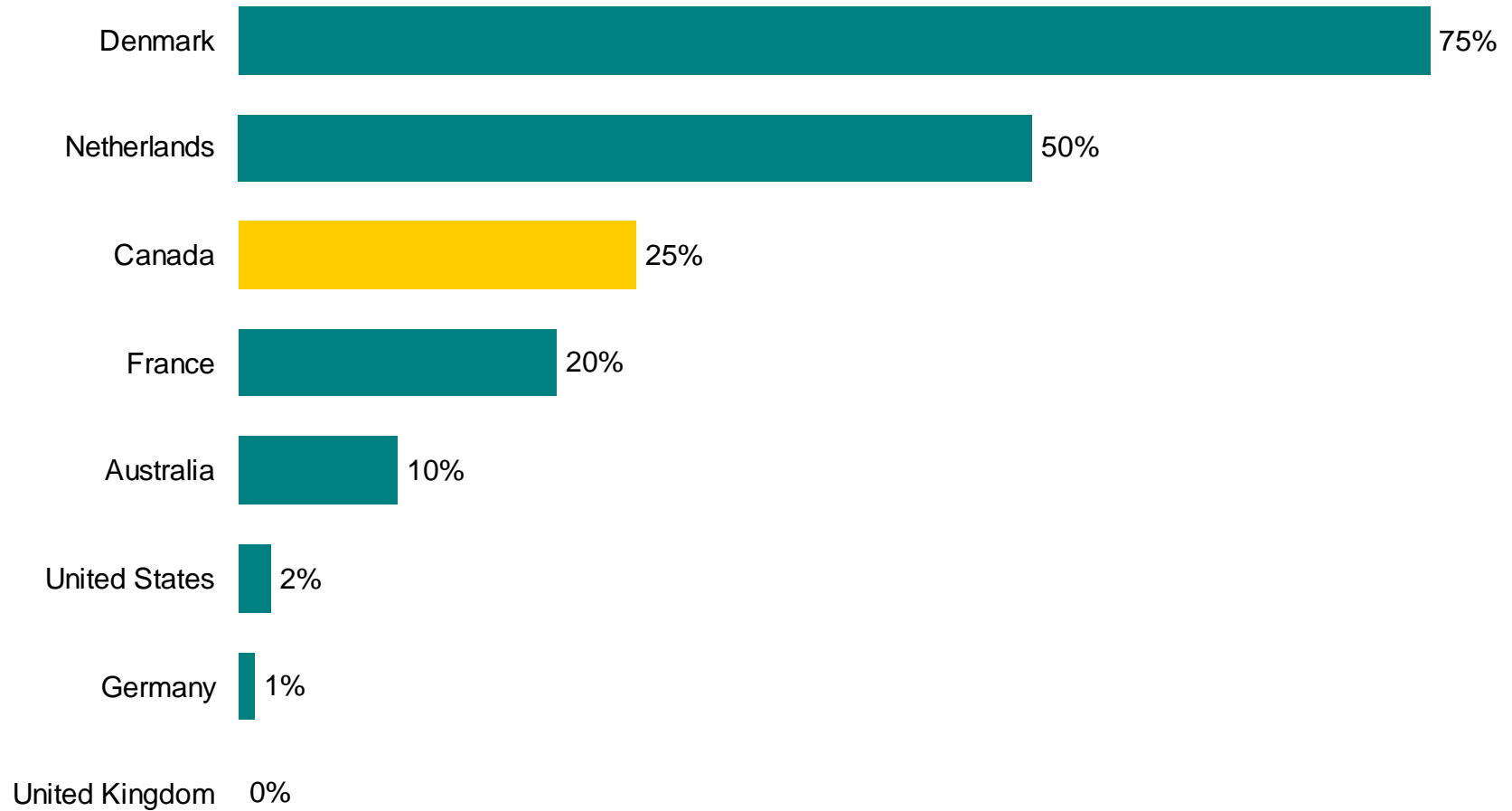
**Online Courses by Subject Area
Worldwide, March 2001**



**Canada Ranks 2nd for Online Courses
Worldwide, August 2001**

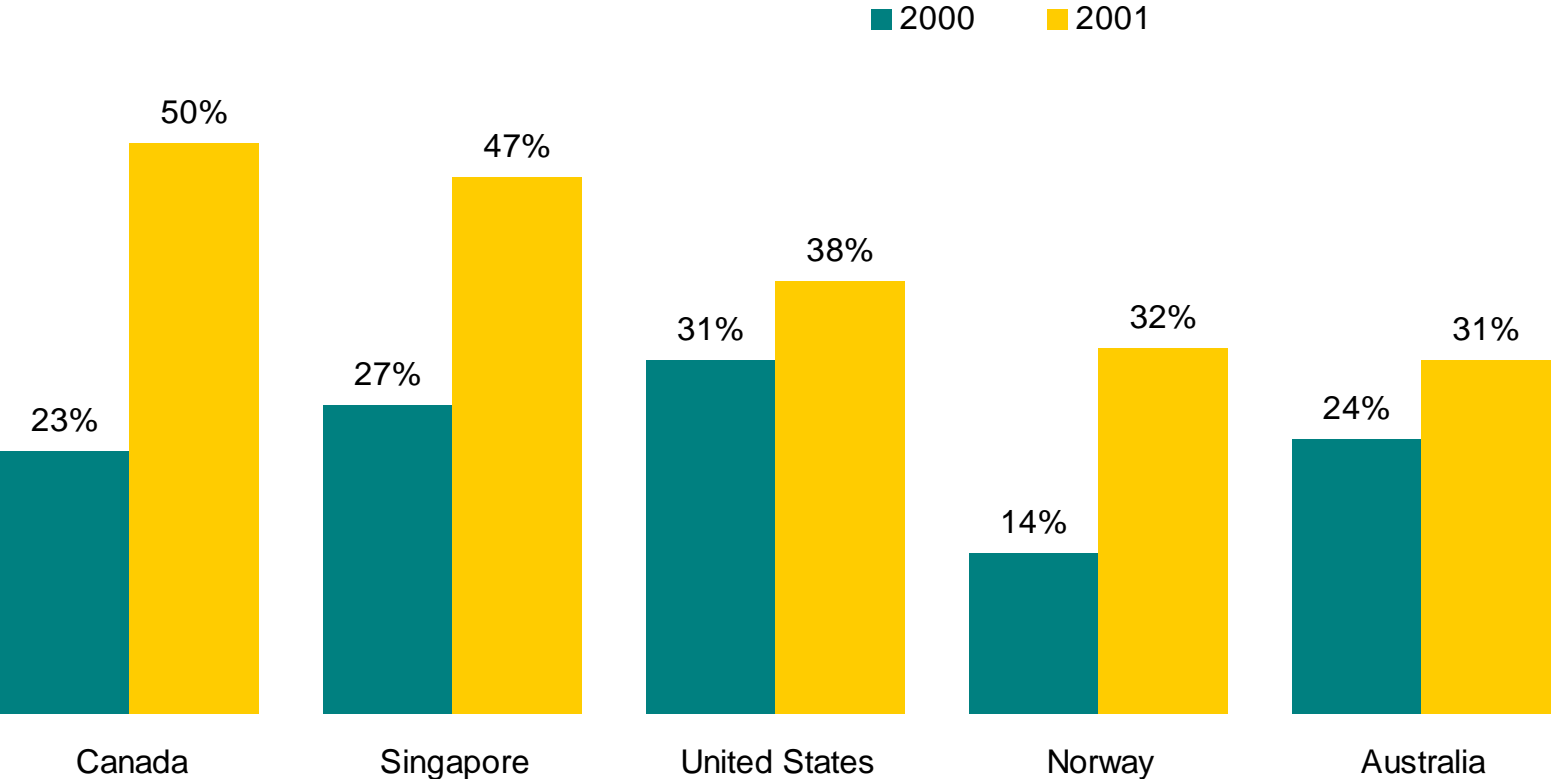


Hospitals Using External Networks for Electronic Patient Records



Canada Leads in Government Online Services

Overall Maturity*

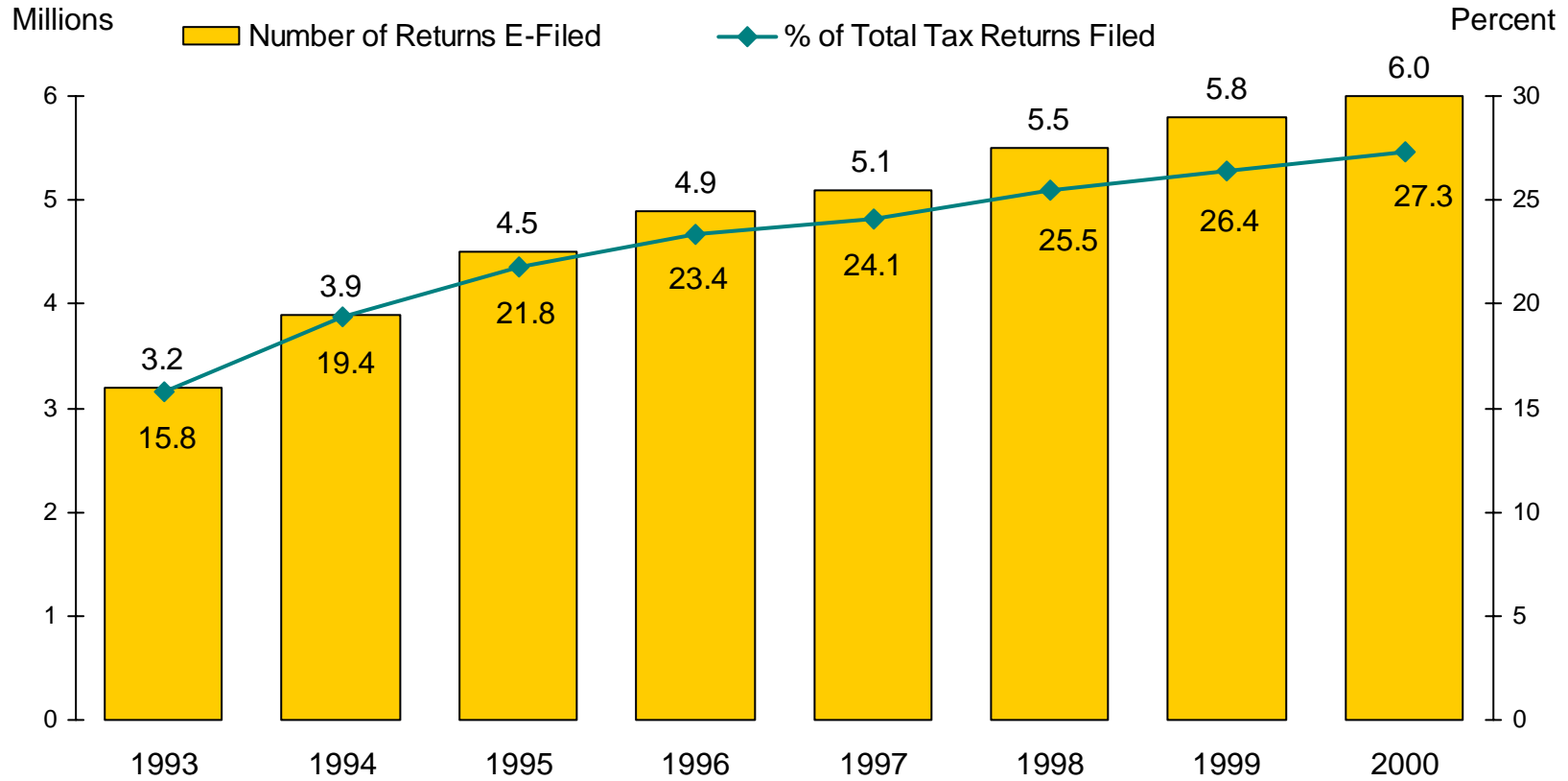


*Overall Maturity is a measure of the sophistication of online services; the extent to which governments are incorporating techniques such as customer relationship management, intentions based design and portal models in their online delivery.

Source: Accenture, April 2001.

Canadians are Receptive to Government Online Services

E-Filed Tax Returns in Canada



Also increasing use of net-filing from 530 in 1998 to 1.4 million in 2000