Report of the Canadian E-Business Opportunities Roundtable

February 2001

FAST FORWARD 2.0

Taking Canada to the Next Level

Prepared by The Boston Consulting Group (Canada)

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OPENING NOTES

The Canadian E-Business Opportunities Roundtable is a private sector-led, public sector-supported initiative to accelerate Canada's leadership in the Internet economy. Founded in mid-1999, the Roundtable's goal is to establish Canada as a globally recognized e-business leader to promote economic growth, job creation and better access to information, goods and services.

The Roundtable issued its first report, "*Fast* Forward: Accelerating Canada's Leadership in the Internet Economy," in January 2000. This second report draws on the activities of the six e-teams over the last year and the research of The Boston Consulting Group to assess Canada's progress and chart new prospects for creating competitive advantage in the Internet economy. It provides a snapshot of Canada's 'Net gains' over the past 12 months, identifying successes, stumbling blocks and emerging issues. It also points to new opportunities to build on Canada's e-business momentum and capture a significant share of the global Internet economy.

The Roundtable is grateful to the many individuals and organizations involved in the development of this report. We would like to offer special thanks to The Boston Consulting Group team, led by Matt Holland and Kevin Bright, and including Richard Florizone, Jason Macdonnell and Shane Smyth; to the Electronic Commerce Branch of Industry Canada, including Director General Richard Simpson, and Jay Illingworth and Sheila Smail of the Roundtable Support Team; and to Helen Burstyn and Karen Rosen of Advance Planning/MS&L.

We would also like to recognize the efforts of the Industry Canada "Roundtable Champions" and their staff: Keith Parsonage (Information and Communications Technology), Doug Hull (Information Highway Applications Branch), Michael Jenkin (Office of Consumer Affairs), Rocco Delvecchio (Investment Partnerships Canada), Lucien Bradet (Industry Sector) and Vinita Watson (Chief Information Officer).

Finally, we would like to recognize the significant contribution of the six e-teams, which has been central to the work the Roundtable has undertaken over the last year. (See Appendix A) In particular, we extend our thanks to the following individuals: Robert Tritt of Bell Canada, Shirley-Ann George of IBM Canada, Matthew Ivis of the Canadian Chamber of Commerce, Robert Crow of Information Technology Association of Canada (ITAC), and Kim Haaland of Industry Canada.

ROUNDTABLE MEMBERS

David Pecaut, Co-Chair
President, iFormation Group

John Roth, Co-Chair
Chief Executive Officer, Nortel Networks Ltd.

Kathryn Beaton, Chief Information Officer, Hydro One Inc.
Leonard Brody, Vice President, Corporate Development, General Counsel, Onvia.com Inc.
Rick Brown, Vice President, Strategic Planning, Sears Canada Inc.
Jeff Chisholm, Vice Chair, Personal and Commercial, Bank of Montreal
Gaylen Duncan, President and CEO, Information Technology Association of Canada
John Eckert, Managing Partner, McLean Watson Capital Inc.
Robert Greenhill, President, Bombardier International
Louise Guay, President, Public Technology Multimedia Inc.
Peter Harder, Deputy Minister, Industry Canada
Matt Holland, Vice President and Managing Director, The Boston Consulting Group (Canada)
Dean Hopkins, President, Cyberplex Inc.
Pierre Laferrière, Senior Vice President, Business Networks and Knowledge, Telesystem Ltd.
Claude Lajeunesse, President and Vice Chancellor, Ryerson Polytechnic University
Pat Lavelle, Chairman of the Board, Export Development Corporation
Martin Lippert, Vice Chairman and CIO, Royal Bank of Canada
Vernon Lobo, Managing Director, Mosaic Venture Partners
Ronan McGrath, CIO, President of Shared Services Company, Rogers Communications Inc.
Richard Nathan, Managing Director and Co-Founder, The Brightspark Group of Companies
Peter Nicholson, Chief Strategy Officer, BCE Inc.
Ken Nickerson, Co-founder, Ice Angels.com
Kelvin Ogilvie, President, Acadia University
Gerry Pond, President, IT and Emerging Business, Aliant Inc.
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Gerri Sinclair, President and CEO, NCompass Labs Inc.
Jean-Pierre Soublière, President, Anderson Soublière Inc.
Larry Stevenson, President and CEO, Chapters Online Inc.
John Wetmore, President and CEO, IBM Canada Ltd.
Sheelagh Whittaker, President and CEO, EDS Canada Inc.
Ted Wozniak, Vice President, Information Technology & Executive Director, Magna International Inc.

Strategic Advisors:

Kevin Lynch, Deputy Minister, Department of Finance, Government of Canada
Mary Macdonald, Macdonald and Associates • Canadian Venture Capital
Michael O'Neil, IDC Canada • Internet Data and Research
Scott Wilkie, Osler, Hoskin and Harcourt LLP • Tax and Public Policy

For further information about the Canadian E-Business Opportunities Roundtable and its activities, please visit the e-Team Canada Web site at: http://ebusinessroundtable.ca

MAKING E-BUSINESS CANADA'S BUSINESS

A year ago, the Roundtable reported that Canada was well-positioned to accelerate its leadership in the Internet economy, but not aggressively rising to the challenge. A year later, Canadian businesses, governments, institutions, entrepreneurs and consumers have still not capitalized fully or quickly enough on the e-business opportunity.

There have been some encouraging signs of progress. Canadians have become more aware and more adept Internet users. Our population's level of connectivity is still among the highest in the world and growing as more Canadians move online. Many large, traditional businesses that were cautiously watching the Internet Revolution unfold are now participating in it and dealing with consumers, suppliers and other businesses online. New venture capital investment has reached record highs for Canada. Significant changes in taxation policy have made Canada a more attractive place to invest, work and live.

But many challenges remain unmet. Some parts of our economy have responded less swiftly and effectively to the call to arms sounded by the Roundtable a year ago. Too many Canadian businesses, educators and governments are still talking about e-business, but not enough are engaging in it.

Canada must come to terms with the fact that there is no more business as usual. Globalization has been hastened by the Internet's powerful reach and distribution capabilities. Decades-old industries are facing massive change, and new industries are rapidly emerging. Traditional value chains are unraveling, and entire businesses are being rebuilt from the ground up. This is as true for traditional businesses as it is for emerging e-businesses, and for small businesses as much as larger ones. All businesses will have to become e-businesses in some form to survive.

Canada's smaller enterprises have much to gain from the Internet boom. But too many of these smaller firms have either missed or chosen to ignore the fact that they are part of the Internet economy. They are watching bigger businesses vying for market share in this new economy and staying out of the fray themselves.

The real challenge for Canada in the Internet economy is no longer raising awareness of e-business among smaller enterprises but accelerating their adoption. The message is out, but not enough of these businesses are responding to it – and those that are responding are often not moving fast enough or far enough.

The importance of e-business has not diminished over the past year. Despite headlines proclaiming the death of dot-coms and the cooling of over-heated technology markets, e-business matters more than ever. The stock market froth stirred up by Internet companies is masking a very fundamental shift in the economy. While much has been made of the big sell-off in dot-com stocks, little has been made of the fact that technology is driving much of the wealth creation in Canada and worldwide.

E-business matters more than ever because, as the Internet Revolution continues, the new economy has become the whole economy. It matters because the rise of e-business is escalating the competition for talent, capital and jobs across companies, industries and nations. It matters because governments around the world are racing to create competitive and attractive environments. It matters because the performance of incumbent and insurgent businesses will determine how well Canada succeeds in an increasingly global and technology-driven economy.

E-business is about much more than dot-coms and IT jobs. Entrepreneurs and technology companies are not the only ones who will reap the rewards of Canada's success in the Internet economy. All parts of our economy stand to gain by embracing e-business. Canada's e-business performance will have a growing impact on employment, sales, productivity and investment throughout the economy. The majority of the jobs created by e-business will not be in information technology, but in sales, marketing, administration and manufacturing.

Canada has made some impressive gains over the last year. But the advances we have made could quickly evaporate as the U.S., Canada's most significant competitor for investment and talent, keeps pulling ahead.

The next year will be a telling one. Canada will need to do more than catch up to other contenders in the Internet economy; it will need to overtake them. If all we have done after another year is moved farther ahead, we will not have done enough. Our businesses and institutions will have to make quantum gains, not modest ones, to vault us to the forefront of the Internet economy. E-business must become Canada's business.

ONE YEAR LATER

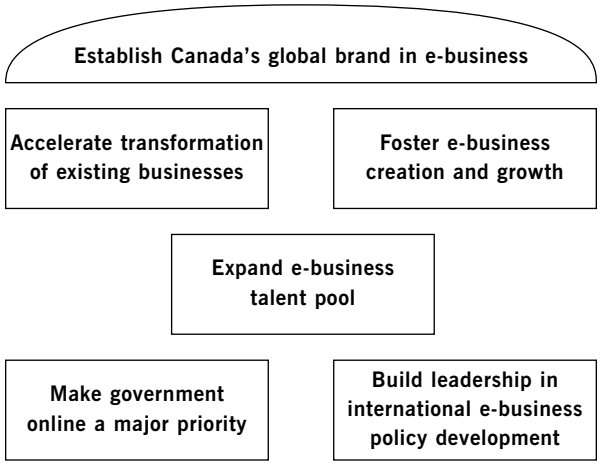
FAST FORWARD 1.0

When the Canadian E-Business Opportunities Roundtable issued its first report in January 2000, we concluded that Canada was poised to succeed – indeed, to lead – in the Internet economy. Canada was advantaged by its strong Internet infrastructure, highly connected population, emerging e-business clusters, and early leadership in e-business policy and government online.

But Canada was also facing some daunting challenges. Existing businesses, organizations and leaders were far too complacent about the Internet, preferring to wait and watch its progress unfold rather than seize the opportunity. Canadian enterprises, facing a critical shortage of technology and managerial talent, were watching their best prospects sign on with U.S. companies. Promising Canadian Internet businesses, struggling to raise capital in Canada, were folding up their tents or turning to U.S. sources for financing. High capital gains taxes and a restrictive securities regime were making Canada an unattractive environment for business, investment and growth.

In January 2000, the Roundtable outlined its Six Building Blocks for Canadian Leadership in e-business. (See Exhibit 1) A year later, some of the challenges facing Canada in the Internet economy have been addressed, others have intensified, and new ones have arisen. Meanwhile, success in the Internet economy has become more important and urgent than ever.

Exhibit 1: Six Building Blocks for Canadian Leadership

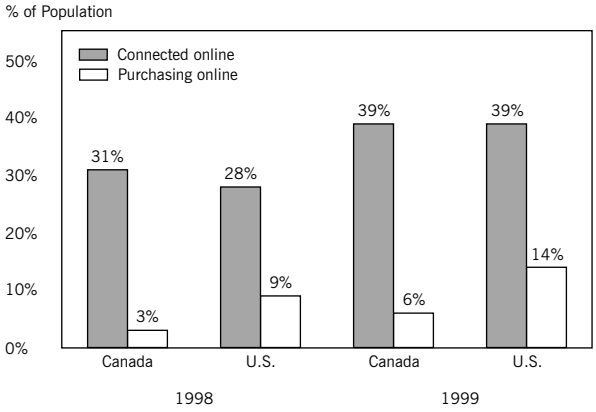


CANADA'S E-REPORT CARD 2000

» Fast Forward – Progressing Rapidly	> Forward – Progressing Slowly	|| Pause – No Progress

Performance Indicators	Progress in 2000	Performance Indicators	Progress in 2000
Consumer Connectivity	>	E-Business Talent	>
Businesses Online	>	Governments Online	||
Venture Investment	>	Trustmarks	>
Internet IPOs in Canada	||	Global E-Business Brand	||
Tax Policies	»	**Average**	>

Exhibit 2: Consumer Connectivity and Online Purchasing Growing



Source:
IDC Internet Commerce Market Model – Worldwide Summary (version 6.3), 1999

CANADA'S E-REPORT CARD 2000

> ***A More Connected Canada***

In 1999, the number of Canadians moving online continued to increase. The percentage of the population accessing the Internet grew from 31% to 39%. However, U.S. levels of connectivity have now caught up, outpacing Canada's rate of growth. Equally disconcerting, while the Canadian population shopping online doubled from the previous year, it remained at less than half the U.S. level. (See Exhibit 2)

> ***More Businesses Moving Online***

Canadian small businesses expanded their online efforts, with the total percentage of small businesses online growing from 15% to 35%. However, relative to their U.S. counterparts, Canadian small businesses continue to be under-represented online. Mid-size Canadian businesses narrowed the gap with the U.S., while the percentage of large businesses online in both countries remained roughly equal.

In terms of selling online, large Canadian companies are on par with their U.S. counterparts, but Canadian small and medium-sized enterprises with less than 500 employees (SMEs) are trailing those in the U.S. (See Exhibits 3 and 4)

> *Venture Investment Rising*

Canada's venture capital disbursements increased 59%, from $1.7 billion in 1998 to $2.7 billion in 1999.[1] In the first six months of 2000, $2.3 billion in venture capital was disbursed.

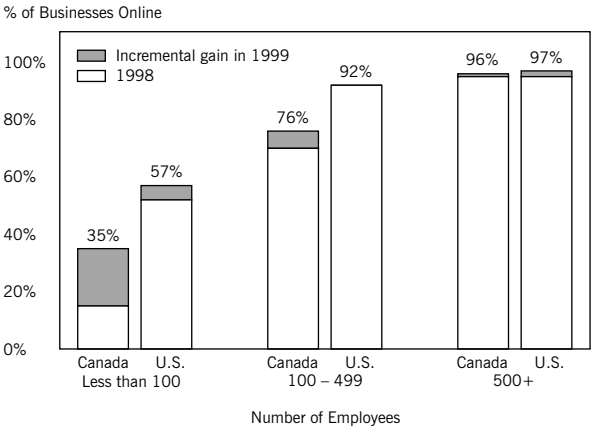
Despite impressive growth in Canadian venture capital, growth in U.S. venture capital investment has been staggering. The U.S. saw a 170% increase, as the $32.2 billion in new venture capital disbursements in 1998 rose to $86.8 billion in 1999. In the first half of 2000, U.S. venture capital investment had already reached $79.8 billion.[2]

New U.S. venture capital disbursements were 19 times larger than Canada's at year end 1998, 32 times larger at year end 1999 and 35 times larger by the end of Q2 2000. On a per capita basis, new U.S. venture capital went from double the size of Canada's in 1998 to over triple the size in 1999. (See Exhibit 5)

|| *Internet IPOs Stay the Course*

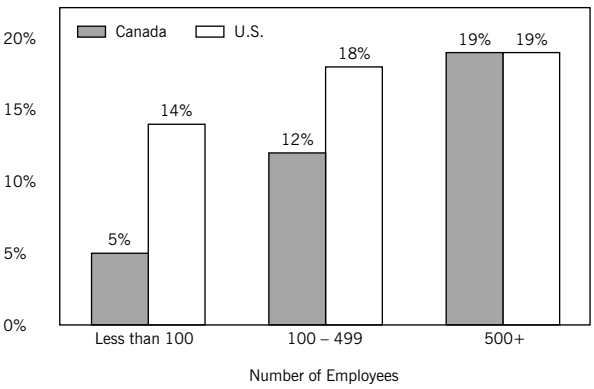
While the Nasdaq experienced a 44% decline in Internet-related initial public offerings (IPOs) in 2000, Canadian IPOs managed to hold to a steady but small number. Given the size of our economy and population relative to the U.S., Canada should have seen between eight and 12 Internet-related IPOs in 2000. We fell short of even these modest expectations. (See Exhibit 6)

Exhibit 3: Fewer Canadian SMEs Online Compared to U.S.



Source:
IDC Global IT Survey, 1999

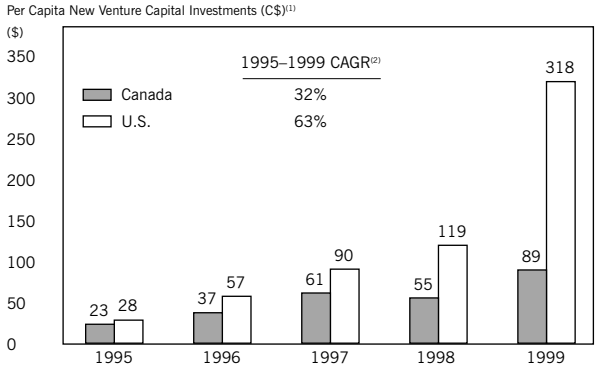
Exhibit 4: Canadian SMEs Trailing U.S. in Online Sales



Source:
IDC Global IT Survey, 1999; data not comparable to "*Fast* Forward: Accelerating Canada's Leadership in the Internet Economy" due to different methodologies and segment definitions

(1) Includes all foreign and domestic sources of disbursements to Canadian enterprises, as recorded by Macdonald and Associates
(2) Canadian Venture Capital Association, National Venture Capital Association

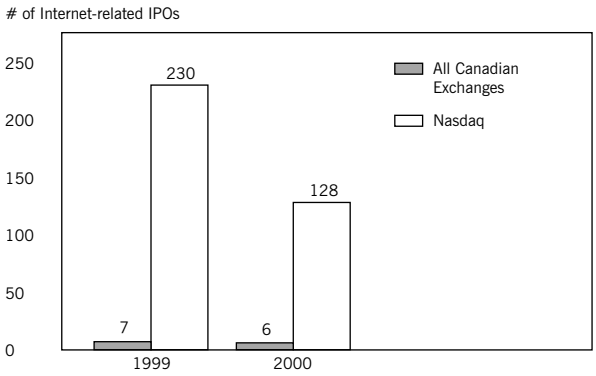
Exhibit 5: Canadian Venture Capital Rising, But Trailing U.S. Growth



Notes:
(1) U.S. currency converted to Canadian dollars at the average exchange rate for the given year
(2) Compound annual growth rate

Source:
BCG Analysis based on data from the National Venture Capital Association, Canadian Venture Capital Association, Statistics Canada, U.S. Census Bureau

Exhibit 6: Canadian Internet-related IPOs Continue to Trail U.S.



Source:
Thomson Financial Securities Data, 2000

Progressive Tax Policies

Over the course of 2000, the federal government announced the most progressive package of tax changes this country has seen in decades. Many of these changes were advocated by the Roundtable; of the nine amendments recommended, six were directly addressed in either the February 2000 budget or the October 2000 mini-budget.

Canadian businesses, entrepreneurs and employees will benefit from changes to the treatment of capital gains, capital gains deferral upon reinvestment, stock options, personal income taxes and corporate taxes. These amendments have gone a long way towards leveling the playing field with the U.S. and making Canada a stronger draw for talent and investment:

- The February 2000 budget provisions for exercising employee stock options for publicly traded shares put us on par with current U.S. practices.
- The federal capital gains inclusion rate – reduced from 75% to 66.7% in the February 2000 budget, and further decreased to 50% in the October 2000 mini-budget – essentially equalized Canadian and American effective capital gains rates. (See Exhibit 7)
- The October 2000 mini-budget accelerated the timetable for reducing the corporate tax rate to 21% from 28%. The rate drop means that the average Canadian federal/provincial corporate tax rate will be lower than the comparable average U.S. federal/state rate by 2005. (See Exhibit 8)

The U.S. is by far Canada's most significant competitor for investment capital and human resources – two of the most valuable and mobile assets in the Internet economy. While recent tax rate changes put us on a stronger footing relative to the U.S., the playing field may be about to tilt again in their favour. With the new U.S. administration planning deeper tax cuts, Canada could soon find itself playing a new game of catch-up. We should also bear in mind that our recent strides on taxation are not enough to change the long-held perceptions abroad of our uncompetitive tax environment that have built up over decades.

Pipeline for E-Business Talent Widening

The Canadian education sector is beginning to incorporate e-business into its curricula and operations. The Roundtable's Talent Pool E-Team conducted an audit of Canadian universities and found that e-business is being studied and taught in many faculties, and that there are several degree programs and research institutes dedicated to e-commerce. However, in most post-secondary institutions across the country, e-commerce studies are an enhancement to existing programs rather than a core discipline. (See Exhibit 9)

In July 2000, the Council of Ministers of Education and Industry Canada announced the formation of the Advisory Committee for Online Learning, an expert committee comprised of educators, business and government leaders to advise governments, universities and colleges on online post-secondary learning. The need for an 'Internet curriculum' is important at all levels of the education system. A report produced for Industry Canada by the Collegium of Work and Learning has recognized the need to focus on K-12 education, and not limit e-business training to the post-secondary system.

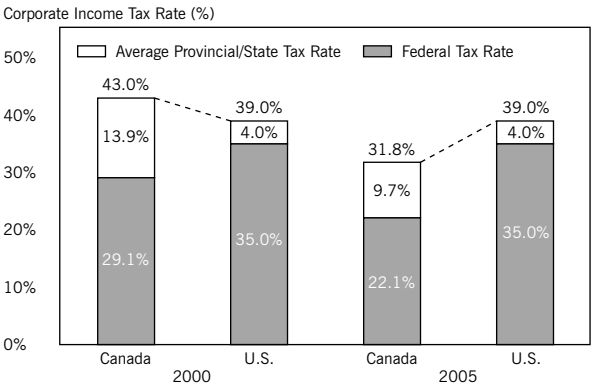
Recent changes to Canadian immigration policy have made it easier for Internet talent to enter Canada from other jurisdictions. Since May of 1997, roughly 3,000 workers have been admitted through the Pilot Project for Software Development Professionals. Canada recently permitted the spouses of certain highly-skilled workers to obtain Canadian work authorization. In April of 2000, Canada also improved its computerized information exchange to reduce the processing time for skilled temporary foreign workers. In addition, Bill C-31, which will be reintroduced in the upcoming session of Parliament, includes provisions to modernize the selection system for skilled workers and business immigrants, and to facilitate the entry of highly-skilled temporary foreign workers.[3]

Exhibit 7: Top Marginal Tax Rates on Capital Gains for Individuals in Canada and the U.S. (as of January 1, 2001)

	Capital Gains Tax Rate Federal Only		Capital Gains Tax Rate, Federal Plus Provincial/State[1]	
	Canada (%)	U.S. (%)	Canada (%)	U.S. (%)
Assets held 1 year or less	14.5	39.6[2]	23.2	44.6[2]
Assets held for more than 1 year	14.5	20.0	23.2	25.0
Assets held for more than 5 years	14.5	18.0[3]	23.2	23.03[3]
Small business shares	0/14.5[4]	14.0[5]	0/23.2[4]	19.0[5]

Notes:
(1) Typical provincial/state rates. Under a 50% inclusion rate, provincial tax rates on capital gains would range from 5.3% to 12.5%. State tax rates range from 0 to 12.0%
(2) Gains on property held for one year or less are taxed as ordinary income
(3) Applies to assets acquired after December 31, 2000 – will only be available for assets disposed of after 2005
(4) Eligible for $500,000 lifetime capital gains exemption and potentially the small business rollover
(5) Available on a maximum of the greater of $10 million or 10 times the cost base of the shares. Shares must be held for more than five years. Small business shares are also potentially eligible for a rollover
Source:
Department of Finance Canada, 2000

Exhibit 8: Current and Proposed Corporate Income Tax Rates



Notes:
The federal surtax remains at 1.12% (i.e., 4% of the 28% rate)
The Canadian federal tax rate will drop to 22.1% in 2004
Provincial tax rate is a weighted average
The state income tax rate is the effective rate after taking into account the deductibility of state taxes for federal purposes
Source:
Department of Finance Canada, 2000

[3] Citizenship and Immigration Canada, Human Resources Development Canada

Exhibit 9: E-Business in Canadian Universities

	# of Universities Surveyed	% of Universities Surveyed
Total	37	100%
Business programs in the management of IT	10	27%
Degree programs or specializations in e-commerce	6	16%
Research institutes dedicated to e-commerce	3	8%

Source:
"Electronic Commerce in Canadian Universities," Roundtable's Talent Pool Team and Industry Canada, November, 2000.

⏸ *Government Online Losing Momentum*

Although Ottawa has pledged to have all key government services online by 2004, and Canadian governments have launched many promising government online (GOL) initiatives, progress has been uneven. The status of many GOL projects is unclear: governments appear to be focussed mainly on information rather than transactions, no long-term funding has been identified, and a lack of interim targets makes it difficult to assess where we stand. Despite the early lead Canada established in GOL, other countries are moving ahead faster.

▷ *Trustmarks Evolving*

Online trustmarks and security mechanisms are continuing to evolve, but their number and diversity are causing confusion among consumers and SMEs. As well, consumer concerns about security, privacy, fraud and dispute resolution are inhibiting their willingness to purchase online. To increase consumer confidence, the Electronic Commerce and Consumers Working Group[4] has developed a code of best online business practices for merchants, and is providing input to national standards being developed by CSA International and the Bureau de normalisation de Québec. In line with the Roundtable's recommendations last year, the Working Group has explored the establishment of a Canadian Trustmark through a not-for-profit corporation that would formally accredit and license the use of a Canadian trustmark to consumer protection seals or other programs that meet the code's requirements.

The Roundtable has determined that there may be better ways or other organizations capable of achieving the same objectives, given the already crowded North American market for such trustmarks and the global nature of e-commerce. The Working Group is exploring additional options for encouraging the adoption of the code's business practices, including how the development of a national trustmark can be aligned with initiatives of the Global Business Dialogue on Electronic Commerce (GBDe) and other international organizations.

⏸ *Canada's Global E-Business Brand Stalled*

Though a distant second to the U.S. across many e-business metrics, Canada is nevertheless an international leader in its e-business capabilities and in overall economic growth. But perceptions of Canadian e-business capabilities do not match our performance.

Little has changed since a 1997 World Economic Forum study ranked Canada 4th globally in overall competitiveness, and 12th in CEO perceptions of our competitiveness.[5] Internationally, Canada is seldom viewed as a high-performance economy, or as a particularly fertile place to seed investments. Domestically, Canadians do not view themselves as highly entrepreneurial, and continue to look abroad for investment and employment opportunities. As 2000 drew to a close, Canadian demand for foreign securities had more than doubled over 1999 levels.[6]

(4) A multi-stakeholder group representing business, consumers and government
(5) "1997 Global Competitiveness Report," World Economic Forum, 1997
(6) "The Daily", Statistics Canada, Nov. 23, 2000

EMERGING ISSUES

THE INTERNET ECONOMY IS THE WHOLE ECONOMY

The stock market in 2000 saw a dramatic rise and fall in the valuation of technology companies, with the Nasdaq down 39% by year-end. The gyrations in dot-com valuations left some with the impression that e-business was a spent force, an over-hyped phenomenon that had reached its peak and was declining. But this market froth is obscuring a very fundamental and long-term shift in the economy. Despite the fluctuations of Internet stocks, technology is driving much of the wealth creation in Canada and worldwide, and will continue to do so. (See Exhibit 10)

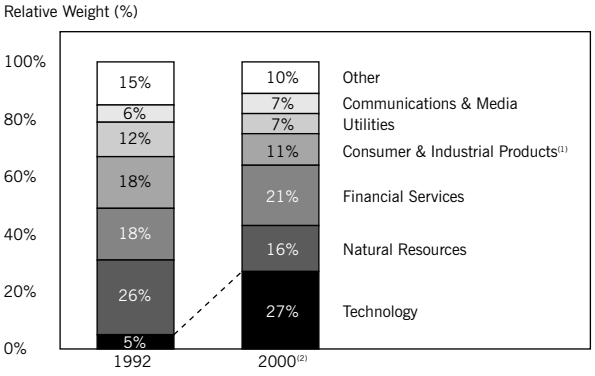
Among CEOs globally and across industries, there is a growing recognition that e-business has fundamentally altered the dynamics of doing business – from how companies attract and retain customers, to how they improve efficiencies and manage information. E-business has become a global priority for all businesses, not just for dot-coms.

THE QUEST FOR GLOBAL MARKET SHARE

In 1999, e-business continued its global advance, with annual worldwide e-commerce revenues growing by 118%, from $89 billion to $195 billion. Over this same period, the U.S. share of global e-commerce shrank from 74.3% to 61.3%, as it lost ground to countries in Europe and Asia that dramatically improved their e-business competitiveness.

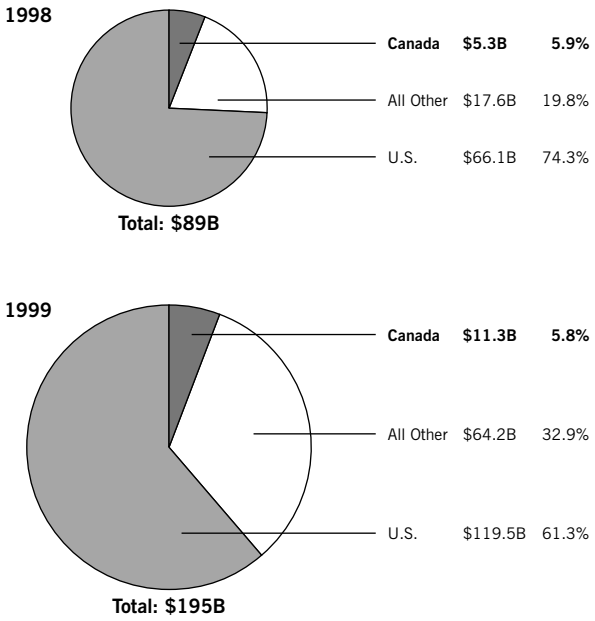
In contrast, Canada very nearly kept pace with global growth. Our share of e-commerce revenues was 5.9% in 1998 and 5.8% in 1999. (See Exhibit 11) Not only have we held our own in this growing global e-commerce market, but we have captured a disproportionate share, given the size of the Canadian economy. Canada should be aiming to gain an even greater share – an unfair share – of that growing market.

Exhibit 10: Technology Companies Make Large Contribution to TSE 300 Index



Notes:
(1) Consumer and Industrial Products, excluding technology companies
(2) 1992 data is at Dec. 31, 1992; 2000 data is at Nov. 30, 2000
Source:
Toronto Stock Exchange Review; BCG Analysis

Exhibit 11: Canada's Share of an Increasing Global Market



Source:
"The State of E-Business When Compared to the U.S.", IDC Canada, October 2000

Canada's ability to maintain its global share of the Internet economy is by no means assured. Countries are already locked in fierce competition for the economic activity generated by e-business, and this global competition is escalating. According to IDC forecasts, Canada's share of global e-commerce will shrink to 3.9% of a $4 trillion market by 2004. Canadian businesses, governments and educators will need to work hard to reach Canada's target of 5% of global e-commerce trade by 2003.

THE TRANSITION TO GLOBAL ENTERPRISES

Because the Internet is such a powerful communication and distribution channel, it enables companies across many sectors – regardless of size or location – to become global companies, placing many customers and markets within easy reach. In the Internet economy, regional businesses need not be confined to domestic markets. For instance, Clearwater Fine Foods, a Halifax-based seafood processor and distributor, is using the Internet to sell seafood products directly to restaurants and consumers throughout North America. In the age of free trade, there is little reason for national companies to remain rooted in protected home markets. E-business is enabling many regional enterprises, both in Canada and abroad, to become viable global competitors.

TD Financial Group: Transition to a Global Online Business

- In 1999, TD Financial Group had over 240,000 customers registered for Web Banking and became the first bank to offer cross-border Web Banking services, providing over 40,000 online accounts to Canadian customers travelling or residing in the U.S.
- TD Waterhouse went public in June 1999 with the largest Internet-related initial public offering, and the 14th largest IPO of any kind in the history of the New York Stock Exchange.
- In the first quarter of 2000, TD Waterhouse announced average daily online trades had risen to 72% of its daily trades.
- In the U.K. and Hong Kong, TD Waterhouse launched Mobile Broker, a wireless online investing service for customers with Web-enabled phones. In Canada, TD Financial Group launched an integrated banking and brokerage service for Canadian customers with Web-enabled phones.
- TD Waterhouse is now the world's second-largest discount broker with approximately 13.3% of global market share of online trades (as of January 31, 2000).

A NEW BREED OF MID-CAP COMPANIES

The Canadian technology sector has traditionally consisted of one e-business multinational, Nortel Networks, a few 'large cap' companies and a myriad of 'micro caps,' the most promising of which were often acquired by American firms. In recent years, Canada has seen the emergence of a dynamic group of mid-cap high-tech companies that are increasingly driving wealth creation.[7] Companies such as Sierra Wireless, Pivotal, BCE Emergis, ATI Technologies, CGI Group, Cognos, C-MAC Industries, Descartes, Creo, CAE, Certicom and Hummingbird are part of this promising new breed of mid-caps.

The importance of these companies should not be underestimated. They are the companies most likely to mature into the next generation of Canadian multinationals. They are fueling the growth of other companies, helping to build regional clusters, attracting capital and talent to Canada, and boosting Canada's image as an e-business success story. We have a strong interest in ensuring that these companies continue to find Canada a hospitable place to grow.

[7] The selected mid-cap companies had market capitalizations between $750 million and $6 billion as of January 2001

THE EVOLUTION OF ONLINE MARKETPLACES

In late 1999 and early 2000, businesses worldwide raced to launch or join online B2B marketplaces.

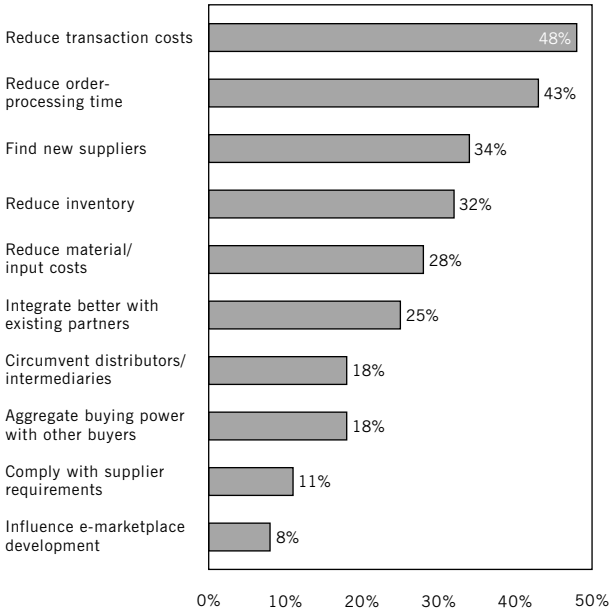
A recent survey by The Boston Consulting Group shows that 66% of buyers and 75% of sellers in the U.S. are engaged in or planning to start online collaboration projects within the next two years.

While many of these new marketplaces may fail as the industry consolidates, some will succeed in linking buyers and sellers, creating large markets with real supply chain efficiencies.

Many Canadian businesses have already joined the growing number of online marketplaces for many of the reasons cited by U.S. buyers, including pooled inventory, netting of logistics and collaborative design.[8] (See Exhibit 12) While the rise of these global marketplaces will allow Canadian companies to extend their reach, it is online collaboration that will deliver sustainable efficiency gains. For Canadian companies to capture these advantages, their core business processes must be Internet-enabled.

Exhibit 12: Why U.S. Buyers are Joining e-Marketplaces

Percent of Respondents Who Ranked the Following Drivers as One of Their Top Four Reasons for Buying Online



Source:
"The B2B Opportunity: Creating Advantage Through E-Marketplaces," The Boston Consulting Group, October 2000

Online Marketplaces

Procuron was formed by five major Canadian corporations: Bell Canada, CIBC, Scotiabank, Mouvement des caisses Desjardins and BCE Emergis. Functioning as an entirely independent company, Procuron is expected to be one of the largest business-to-business e-marketplaces in the country, enabling Canadian organizations to purchase a wide array of business services and products. Initial products and services are currently in development, and will be launched later in 2001.

Oilsphere, **Utilisphere** and **BuildersHarbor** are three vertical markets being established by IBM Canada, VerticalBuilder.com and RightWorks to drive greater efficiency and productivity. Each e-marketplace will serve a specific industry: Oilsphere will serve the petroleum industry, Utilisphere, the energy utility community, and BuildersHarbor, the building and construction industry.

Covisint is an automotive e-business trading exchange formed by DaimlerChrysler, Ford, General Motors, and Renault/Nissan to create an integrated network that allows real-time information processing among participants throughout the auto industry. It will facilitate worldwide procurement, supply chain management and collaborative product development. Covisint is expected to help the auto industry improve operating efficiencies, reduce transaction costs and simplify logistics.

[8] Netting of logistics refers to the practice, in commodity industries, of major producers with geographic proximity to competitors' customers producing and delivering goods on each other's behalf

FROM E-BUSINESS AWARENESS TO ADOPTION

Many small and medium-sized enterprises (SMEs) have still not moved online – not because they are unaware of the importance of doing e-business, but because they are ill-equipped to make the transition. At present, the number of Canadian medium-sized organizations able to accept online payment is half that in the U.S.[9]

In the last year, the Roundtable's E-Business Acceleration Team and Industry Canada staged a series of e-business seminars attended by over 1,500 SMEs across Canada. Four impediments to e-business adoption among SMEs were identified during those sessions:[10]

1. **Implementation** – Many SMEs have moved beyond the awareness phase and are now struggling with implementation, which requires more sophisticated use of e-business tools, viable business models and a stronger understanding of the potential impact of e-business. SMEs would benefit from more information and workshops on e-business implementation.

2. **Access to E-Business Resources** – SMEs have inadequate access to Canadian e-business resources, management, technology and business solutions. Canada needs to develop channels to source skilled e-business talent and solution providers.

3. **Uncertainty about ROI and Risks** – SMEs need a better understanding of the advantages and disadvantages of conducting e-business. They currently lack the tools to evaluate e-business investments, both in terms of return on investment (ROI) and the competitive threats. The latter includes the long-term risks of not pursuing e-business, such as customer dissatisfaction and the entry of global competitors in their local market.

4. **Security Issues** – Some SMEs are holding back because of concerns about security. SMEs could benefit from the learnings that existing e-businesses can share about security risks, real and perceived.

Now that SMEs have overcome the awareness barrier, they are confronting the more difficult task of implementation. To appreciate the need for e-business is important, but to operationalize an e-business is even more important. One of the key issues facing Canada is facilitating the transition of existing smaller businesses into successful e-businesses.

ADDRESSING THE DIGITAL DIVIDE

Internet access has grown unevenly across regions and communities in Canada. Because Internet access is more readily available in urban centres than in rural communities, and among the more affluent and educated, it has raised legitimate concerns about the ability of many Canadians to participate in and reap the benefits of the Internet economy.

The growing digital divide among Canadians goes beyond connectivity and bandwidth. The issue is also access to hardware – computers and other Web devices, for instance – and the technical wherewithal to navigate the Internet. A high-speed Internet connection gives Canadians access to education and improved health care. It lets them participate in e-commerce and build communities of interest with others who share personal and public concerns. It gives Canadian businesses, particularly those in small towns and remote communities, access to new markets and long-distance partnerships. For the not-for-profit sector, it makes it easier for people to donate, and can potentially offer a lifeline between disadvantaged populations and the organizations that serve them.

[9] "The State of the Canadian E-Commerce Nation," IDC Canada, 2000

[10] Canadian E-Business Opportunities Roundtable Regional Events Report, October 12, 2000

Canada, through the SchoolNet partnership, was the first country in the world to connect all of its schools to the Internet. Now, the federal government's commitment to connect all Canadian communities to broadband Internet access by 2004 will enable Canada to be one of the first countries to make high-speed Internet connectivity available to all citizens. While this will go a long way towards allowing all segments of Canadian society to share in the benefits of the Internet economy, the magnitude of this problem has yet to be fully explored and understood.

Bridging the Digital Divide in Canada

- The Canadian government created a Task Force to facilitate the provision of broadband Internet access to all Canadian communities by 2004.
- The Community Access Program will establish up to 10,000 public Internet access sites in rural, remote and urban communities by March 31, 2001.
- The Canadian government has established the Voluntary Sector Network Support Program (VolNet) to provide Internet connectivity as well as computer equipment and Internet skills development to 10,000 voluntary organizations by March 31, 2001.
- Other programs to encourage broad-based Internet adoption include Canada's SchoolNet, First Nations SchoolNet, Student Connection Program, Computers for Schools, CanConnect, and Generations CanConnect.
- In November of 2000, the Alberta government announced the creation of Alberta SUPERNET – a broadband network to connect every hospital, school, library and government facility in the province within three years.
- Quebec has launched the Connecting Families to the Internet program for low-income families receiving a family allowance from the provincial government. Through this program, families can receive financial assistance to connect to the Internet, and to rent or buy a computer.

TAKING CANADA TO THE NEXT LEVEL

It is not enough to position Canada as open for e-business; that is too passive. Canada should be aspiring to be a global leader in e-business, not just one more player in the pack. It is critical that the country be united in its determination to be the global platform for e-business creation and growth.

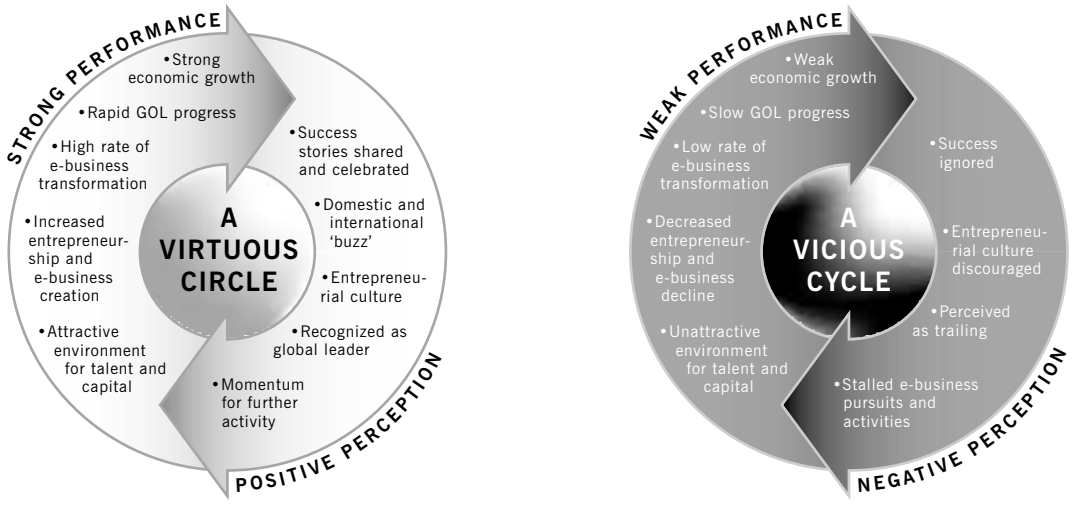
BUILD CANADA'S INTERNATIONAL BRAND

Match Perception with Performance

Perception and performance are inextricably linked. If Canada is perceived to be an e-business leader, then it will attract investment and resources, and generate the entrepreneurial activity needed to increase e-business performance. The increased performance will then further enhance perceptions domestically and internationally, creating a virtuous circle of success.

On the other hand, if perception continues to lag performance, Canada will be unable to fuel e-business. Investment and other resources will flow to other countries, and our performance will suffer. The drop in performance will reinforce any negative perceptions, completing a vicious cycle that leads to further drops in performance and perception. (See Exhibit 13)

Exhibit 13: Virtuous Circle or Vicious Cycle?



The perception/performance gap is especially important in the e-business environment, where the cross-border flow of investment and talent is more fluid than in many other parts of the economy. Countries from around the world are already competing for these valuable resources, and perception will increasingly drive performance as this competition intensifies.

Put Canada at the Vanguard of Internet Policy Development

Canada established an early lead in developing a favourable legal and policy environment for e-business growth and investment. This was solidified in the last year by legislation providing for online privacy protection and for the use of digital signatures and records (Bill C-6). Changes to federal tax policies have also greatly improved the fiscal environment for e-business.

Governments, like businesses, must be innovators. Leadership in government includes refreshing and rethinking regulatory and fiscal policy to keep economies growing, citizens thriving and businesses competitive. A country's leadership in the Internet economy depends not just on how industries fare against other industries, but how nations are regarded by other nations. Canada has been at the vanguard of Internet public policy development and should work to maintain its reputation for progressive policy leadership.

Make Canada the Investment Location of Choice

Canada's lacklustre reputation as a place to invest is undermining our growth prospects. Despite Canada's overall competitiveness, its share of North American foreign direct-investment continues to decline.[11] At home, Canadian companies are capturing a diminishing share of domestic investment, as Canadian citizens invest more and more in U.S. markets. A 1998 study by Deloitte & Touche concluded that Canadian technology companies performing at equal or greater levels than their U.S. counterparts were nevertheless undervalued by comparison.[12]

To close the gap between perception and performance, Canada needs to re-build its profile among both domestic and international audiences. Well-executed, this promotional campaign would help increase investment in Canadian businesses by domestic and international investors, and encourage the development of a more entrepreneurial culture at home. Canadian business needs to celebrate and promote its many successful start-ups, technologies, entrepreneurs and senior executives to raise awareness at home and abroad of Canada's strong e-business capabilities. The message we should be sending to media and U.S. institutional investors is that e-business is Canada's business.

Celebrating E-Business

- The Leaf Initiative championed Canadian involvement and success in e-business by founding the Leafy Awards to celebrate Canadians who have put Canada on the map in the new economy.
- The Province of Québec, CEFRIO and the Institute du commerce électronique sponsored Interdoc's First Annual E-Commerce Gala Awards to recognize outstanding Quebec companies and government ministries.

ACCELERATE E-BUSINESS ADOPTION BY SMES

Address the Barriers to SME Adoption

With Canada's SMEs accounting for 88% of national employment, they are the collective core of a healthy economy.[13] To keep these smaller companies thriving in an Internet economy, they need help in overcoming some basic hurdles. SMEs need more ready access to resources and information about developing and implementing e-business strategies throughout their business processes. A core focus over the coming months must be to offer "how-to" guides, workshops and examples of peer leadership.

As traditional businesses develop their e-business strategies, uncertainty about cost (and ROI) is inhibiting investment. Many Canadian SMEs view their markets too locally and narrowly, making it difficult to justify the needed investments in e-business. Those regional enterprises that have used e-business to sell their products globally have been able to capitalize on their investments.

Smaller companies' concerns about Internet security provisions and site integrity are beginning to be mitigated by credit cards specifically developed for Internet transactions, security guarantees, consumer Internet watchdogs, and

Tapping New Markets

Sanitherm Engineering Ltd. of North Vancouver was facing declining demand for its products locally, but using the Internet to extend its reach beyond Western Canada, the company is now selling waste-water treatment equipment in Asia and South America.

(11) Canada's share of North American FDI, Trade and Investment Monitor, 2000
(12) Buchok, James; "D&T Fast 50 Demand Respect," Computing Canada
(13) Statistics Canada, 1999

best practices in Web security. Over time, and as word of these advances spreads, SMEs will gain more trust and confidence in electronic platforms. Guidance on security and legal issues could be conveyed by the many SME associations that provide members with sector-relevant information and education.

Governments also have a role to play. Pilot programs like the federal/provincial/industry E-Business Service Centre in Winnipeg and the public/private Atlantic Canada SmallBizInfoCentre.com should be rolled out nationally. Government should also address the needs of small and micro businesses that lack the internal resources to implement e-business.

A cohesive strategy aimed at providing industry sector 'how to', ROI and best practices information, reducing the cost burden, and offering hands-on support for Canada's smallest businesses should be developed to foster SME e-business adoption in Canada.

Leverage Large Organizations' Online Pull

Large organizations, both governments and businesses, can act as catalysts for pulling smaller companies and suppliers online. Given their extensive interaction with small organizations, their role as centres for supply chains, and their considerable purchasing power as major customers, large organizations can help smaller ones make the e-business transition.

Large companies can accelerate SME adoption by mandating online transaction with suppliers. Unlike traditional EDI systems, which are often too complex and expensive for smaller suppliers to adopt, the Internet provides a universal platform for suppliers to network. As online collaborations become more attractive and pervasive, SMEs will be pulled online more willingly and easily.

Governments can also be catalysts of e-business growth. Because government purchasing influences economic activity so strongly, and because government programs touch every individual and business, the public sector can have an enormous impact on the economy. In 1999, government purchases were $181 billion (net of wages, debt service and transfers) and accounted for 18% of Canada's GDP. The majority of this spending was by provincial governments (67%), while the federal government accounted for 21% and municipal governments for 12%.[14]

Providing government services online can, in turn, pull suppliers and users of government services online. GOL can improve the efficiency and availability of service delivery to households and businesses. Underlying all of these benefits is the government's responsibility to take a credible co-leadership role with the private sector in building the Internet economy.

BECOME A MAGNET FOR TALENT

The talent required to run e-businesses is scarce across North America. Senior executives at Canadian technology companies have cited the recruitment of talent to fuel growth as their biggest hurdle, with 60% of respondents describing this as "very challenging."[15]

There are three primary types of e-business talent that Canada needs to cultivate. The first is Internet-savvy executives who have the skills needed to run existing businesses, but who also understand the new economy and its implications for their organizations. The second group is technologists such as computer scientists and engineers, who have acquired high-level specialized skills in network and IT applications. The third group is the next generation of e-business talent – the students currently in the school system who must be equipped with the skills needed to function effectively in the Internet economy.

[14] BCG analysis of federal, provincial and municipal purchasing of goods and services not converted for resale as indicated by Statistics Canada data, 1999
[15] Deloitte and Touche, *2000 Canadian Technology Fast 50*

Equip Executives to Transform Their Organizations

Although e-business talent is typically associated with technologists, an organization's leaders are often more important to plotting and steering the growth of e-businesses. It is these managers who must understand the importance of e-business and maneuver their organizations through a period of transformation. Their leadership not only drives e-business adoption, but also allows for the re-tooling of employees and creates the jobs for which e-business talent is needed.

Recognizing the importance of executive talent, Ireland has developed three e-business skills training programs for managers: a Web foundation course; a Web manager course focused on commercial and business aspects of Web site management; and a Web master course that emphasizes the client server side of Web site management.

Attract and Retain Technologists

Computer scientists and engineers are the operational braintrust of e-businesses. They are also the targets of companies' and countries' attraction and retention efforts.

Recent changes to Canadian tax policies should help our e-businesses attract and retain technologists. Overcrowding and high housing costs in Silicon Valley are also making Canada, by comparison, a more attractive place to live and work.

Canada has accelerated entry procedures for foreign workers with high-tech skills. Meanwhile, other countries have taken aggressive steps to increase their attraction and retention of high-tech talent:

- In October of 2000, the U.S. Congress authorized increasing the number of H-1B visas granted annually in each of the next three years to 195,000 from 115,000. These visas, valid for six years, are awarded predominantly to non-U.S. citizens in computer-related fields.[16]
- Israel offers special treatment for recent immigrant inventors, providing support from government-funded technology incubators to immigrants and citizens on an equal footing.

Canada needs to do its own e-business skills inventory to find ways of addressing the shortage of talent. By regularly taking stock of our e-business talent supply, Canada can better anticipate and create the conditions that enable these sought-after workers to enter and remain in the country. Creating a friendlier and more streamlined process for admitting skilled foreign workers to Canada could give us a much-needed edge over the U.S. in the war for scarce talent.

Embed Internet Use at All Levels of Education

Much of our attention today is focused on attracting and retaining the existing pool of e-talent, while not enough is focused on cultivating the next generation of e-talent. Internet literacy – the foundation skill for e-business acumen – must be laid in elementary, secondary and post-secondary institutions across Canada.

Canadian universities, colleges and schools are not equipping graduates with the skills they will require in the modern economy. Part of the problem is uncertainty about exactly the right type and mix of e-business skills, which go well beyond technical literacy. Canada's education sector needs to arrive at a consensus on what constitutes Internet skills and how to develop them in today's students and tomorrow's workforce.

The need to develop curricula that respond to current and future labour market needs is one challenge confronting the education sector. Canadian colleges and universities will also be facing increased offshore competition for students as distance education and online learning expands. Canadian institutions could quickly face obsolescence if they fail to keep up with new economic and social realities.

[16] American Immigration Network

About half the student population will not complete college or university. We cannot rely exclusively on the post-secondary system to provide our young people with an Internet education. Building Internet literacy and e-business learning into our elementary and secondary school curricula is a necessary but difficult goal to achieve. The main stumbling block is our highly decentralized education system, which makes development and adoption of Internet-related curricula a haphazard exercise at best. Once such programs are developed, we will also need Internet-savvy teaching staff to deliver them.

The European Union is aiming to have all pupils digitally literate by 2002. Canada should be setting its own high standards for Internet education and working aggressively to put that system in place to prepare the next generation of Internet-enabled citizens, consumers, businesses and innovators.

Leverage Investments in Research to Build e-Talent

Some of the best e-talent comes out of advanced research programs. Countries with strong, coordinated and well-funded research programs are in the best position to attract, retain and develop their pool of e-business talent. Canada needs a national research strategy for e-business to engage the education, government and business sectors in the effort to build our e-business talent pool.

Promoting E-Business Related Research in Canada

The Social Sciences and Humanities Research Council (SSHRC) will invest $100 million over five years to support research on the knowledge economy.

Several Canadian universities have established research centres, including the Concordia Electronic Commerce Institute, the University of British Columbia's Bureau for e-Business Research and the University of New Brunswick at Saint John's Electronic Commerce Centre.

CLOSE THE VENTURE CAPITAL GAP

Access to early-stage, Internet-savvy and participative venture capital is critical for the survival of nascent e-businesses. The availability of these funds in Canada is limited by the small number of Internet-savvy firms and the size of the capital pools that these firms manage. To grow the venture capital pool in Canada, we must concentrate on three core drivers: increasing investment by institutional investors, attracting foreign investment, and creating more favourable capital markets.

Increase Investment by Institutional Investors

Institutional investors in Canada continue to under-invest in venture capital relative to their American counterparts. Historically, many of these institutional investors – corporate, labour and government-sponsored funds, treasury portfolios, banks, endowments and trusts – avoided venture capital. They viewed the risks as relatively high and the returns as frequently uncertain.

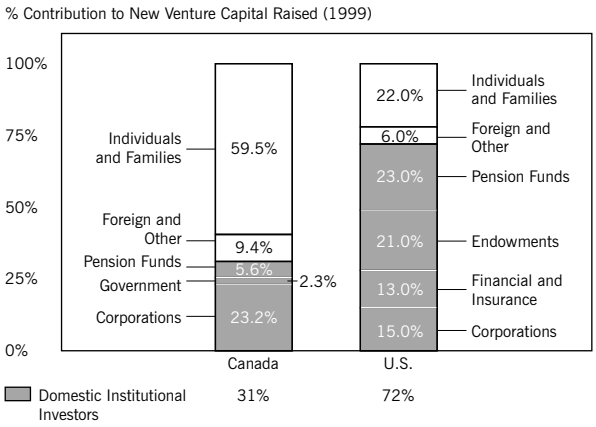
Canadian institutional investors are now gaining more expertise and comfort with venture capital, but most still allocate a relatively low percentage of their investment portfolios to new ventures compared to their international peers. In 1999, U.S. pension funds contributed approximately $15.8 billion in new venture capital, representing 23% of new funds raised; meanwhile, Canadian pension funds contributed $134 million, representing only 5.6% of new funds raised. On average, Canadian pension funds have allocated only 0.23% of their total assets to new venture capital investment per year, which is considerably less than the 1.4% allocated by their American counterparts.[17] (See Exhibit 14)

[17] National Venture Capital Association, Macdonald and Associates

If Canadian pension funds' venture capital asset allocations were at the same level as those in the U.S., Canada's venture capital pool would more than double in size. If the proportion of new annual venture capital investment from pension funds matched that of the U.S., yearly contributions in Canada would rise from $134 million to over $600 million.

Institutional participation in venture capital will not increase unless investment barriers are addressed. Canadian institutional investors still remember their experiences in the late 1980s, when poor communication, overpricing, and bad timing all contributed to meagre returns and led ultimately to substantial reductions in funds' venture capital holdings.[18] Building investment expertise and more consistent reporting practices could restore fund managers' interest in riskier investments. Venture capital investment would also be stimulated if foreign content definitions and regulations were revised to accommodate Canadian venture capital financing structures. There is a need to better understand and address the needs of institutional investors looking to invest in venture capital.

Exhibit 14: Canadian Institutions Under-invest in Venture Capital



Source:
Macdonald and Associates, 1999

Attract More Foreign Investment

Institutional investors abroad frequently consider Canada a difficult place to invest. Their perception is based on historically higher tax rates and an unfamiliar set of complex regulations surrounding the tax treatment of foreign investment in Canadian venture capital funds. Reversing those perceptions would encourage major institutional investors representing vast pools of risk capital in Europe, Asia and especially the U.S. to invest more heavily in Canada.

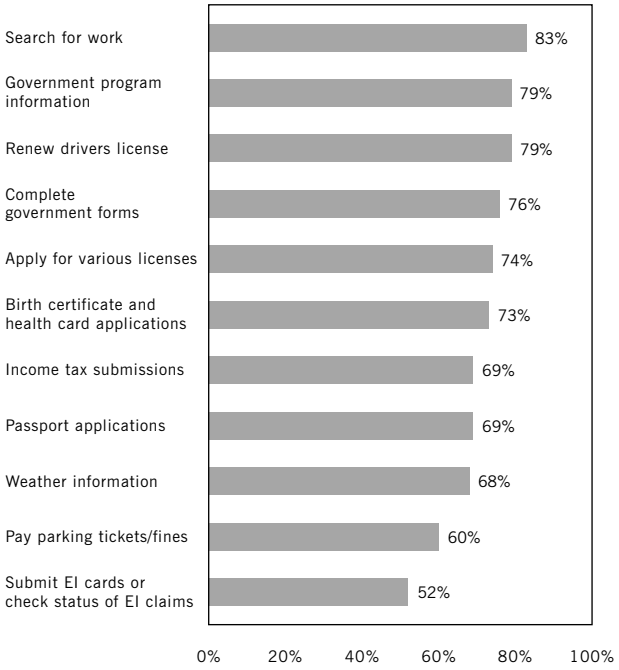
Many of these potential investors are pension funds and similar trusts, which are non-taxable in their own countries, just as Canadian pension funds are non-taxable in Canada. Before they consider making an investment in Canada, many of these foreign investors require certainty that their gains will be free from Canadian taxes. Legal opinions and other traditional protections can be very expensive, and therefore a deterrent to such an investment. Professional opinions are often insufficient in any case where such investors are governed by trustees with fiduciary obligations to avoid taxes, since an opinion always carries uncertainty about the risk of future interpretations and changes to tax law. Some countries (Israel is an often cited example) have attracted significant amounts of foreign risk capital through policies which provide local venture capital funds with advanced rulings certifying to foreign investors who are non-taxable in their home countries that their investments will be exempt from local taxes. This confirmation prior to the identification of the specific participating investors permits local venture capital funds to market themselves to foreign investors on the same basis as domestic venture capital funds in those countries.

It is always a challenge for any venture capital fund to attract risk capital from new foreign investors; it is nearly impossible where these investors perceive an inappropriate, and perhaps prohibitive, tax risk should such investments prove successful. It is entirely reasonable for potential foreign investors to insist on guarantees of tax neutrality, and inappropriate to retain impediments that discourage such new investment.

[18] "Prudence, Patience and Jobs: Pension Investment in a Changing Canadian Economy," Pension Investment Association of Canada and the Canadian Labour Market and Productivity Centre, 1998

Exhibit 15: Strong Demand for Government Services Online

Percentage of Respondents Indicating They Would Use a Given Service



Source:
"Canadian Consumer Technology Study Executive Summary," PricewaterhouseCoopers, January 2000

It should be noted that this proposal would not amount to any reduction in the receipts of Canadian tax authorities. These investors do not currently invest in Canada and therefore do not pay any Canadian taxes. By attracting their funds with tax neutrality guarantees, Canadians would benefit from the increased economic activity generated by such investments, including the creation of new jobs and, ultimately, taxable gains for Canadians who participate along with these non-taxable foreign institutions.

"Red Carpet" treatment to protect foreign non-taxable investors in Canadian venture capital funds would significantly boost these funds' efforts to position Canada as an investment location of choice. Our investment story is a good one that should be told.

Create More Efficient Capital Markets

If Canada is to be a global centre of e-business creation and growth, its public markets must become more effective financing vehicles for such businesses. As it now stands, U.S. markets are proving to be the financing vehicles of choice for Internet-related companies. Canada hosted only six Internet-related IPOs in 2000 as compared to 128 on the Nasdaq.[19]

The Nasdaq continues to offer better liquidity and more new capital than Canadian exchanges, making it more attractive for companies considering an IPO. While turnover velocity[20] on the Toronto Stock Exchange (TSE) declined by 3% in 1999 to 57%, Nasdaq's increased 18% to 303%. In 1999, the total capital raised on the TSE increased by 24% to $19.2 billion from $15.5 billion in 1998; the total capital raised on Nasdaq increased 211% to $154.4 billion from $49.6 billion in 1998.[21]

Canada's financial markets have started to address these concerns. The Ontario Securities Commission is in the process of revamping its regulation of the exempt market, and has released recommendations to make current practices more competitive with the U.S. Proposed amendments to escrow regulations are also forthcoming, and will need to be at least as accommodating as those in the U.S.

The formation of new stock exchanges in Canada promises to revive Canadian public markets. Nasdaq's entry into Canada could, at least in the short-term, substantially improve Canadian issuers' ability to raise capital by providing easier access to American investors and by introducing a viable competitive threat to which the TSE must respond. Meanwhile, the Canadian Venture Exchange (CDNX), formed in November of 1999, is targeting the technology sector and positioning itself as a niche market for early-stage companies.

[19] Securities Data Corporation
[20] Turnover velocity is defined as the percentage of total market capitalization traded in a given year
[21] International Federation of Stock Exchanges

Exhibit 16: World's Governments Set Aggressive Electronic Service Delivery Targets

Target	Country	Target Date	Specific Target
Fully online	Australia	2001	All appropriate federal services delivered online
	Canada	2004	All key government services fully online
	Ireland	2001	All except most complex integrated services available online
	United Kingdom	2005	100% of government services available electronically
	United States	2003	All feasible government services available electronically
Partially online	Finland	2001	Significant portion of forms/requests processed electronically
	France	2000	All agencies to provide access to services/documents
	Japan	2003	All administration procedures between public and government online
	The Netherlands	2002	25% of public services delivered electronically
	Singapore	2001	All feasible counter services available electronically
No target	Germany	None	No high level targets, departmental targets only
	Italy	None	No high level targets, departmental targets only
	Sweden	None	No high level targets, departmental targets only

Source:
BCG Analysis; U.K. Central IT Unit

MAKE GOVERNMENT ONLINE A DRIVER OF E-BUSINESS

Canadians are demanding increasing amounts of information and service transaction capabilities from their governments. A recent PricewaterhouseCoopers study reveals that 32% of Canadians online identify access to government services as one of the top six reasons for using the Internet – almost as many as those who value banking and investing online.[22] (See Exhibit 15)

In 1999, 68% of Internet users accessed federal sites, while 66% used provincial online services. Municipalities trailed in Web usage, capturing only 20% of online users.[23] A rise in access is inevitable if city services, such as fine payments and recreation bookings, come online.

GOL is valuable for several reasons. It increases efficiencies within government and it reduces service costs for consumers. GOL also improves the speed and ease of basic business processes. As noted earlier, GOL programs can also pull other organizations online. GOL can spur the development of domestic infrastructure to provide online services – infrastructure that can then be used in other parts of the Canadian economy and exported to other markets.

Canada's GOL projects lack sufficient transparency and accountability. At present, it is very difficult to assess the progress that the provincial and federal governments have made over the past year. Governments need to establish goals within clear timeframes. For example, all Canadian governments should be setting target dates for moving all procurement online by the end of 2002, and ensuring all transactions with business are Internet-enabled by 2003. Governments should reinforce existing policy on privacy, security, and authentication to raise citizens' confidence in electronic transactions. They should also adopt cooperative approaches to ensure cross-jurisdictional compatibility and inter-operability, thus easing transactions across borders within the country. Finally, governments would be well-advised to establish advisory or consultative mechanisms to ensure that their online strategies meet Canadians' expectations and drive the Internet-economy.

[22] PricewaterhouseCoopers, Canadian Consumer Technology Study, January 2000
[23] Ibid.

Successful GOL programs in other countries are often anchored in four factors that drive pace and performance:

1. **High-level leadership** – In many countries, including Canada, GOL is a commitment backed by the highest levels of government. In June of 2000, former President Clinton completed the first-ever Webcast Address to the Nation, in which he announced a series of major new e-government initiatives. In September of 2000, British Prime Minister Tony Blair launched UKOnline, the nation's Internet economy strategy that includes ambitious e-government targets.

2. **Aggressive Targets and Goal Setting** – Although the federal government is aiming to have all key services fully online by 2004, Canada risks being leapfrogged by other countries unless it accelerates this timeframe. The U.K., for example, has set and published various intermediate targets in addition to its high-level targets. The country is aiming to have 70% of government services available online by 2002 and 100% by 2005. Similarly, the goal of the U.K. government is to have 50% of tenders submitted electronically by December 2001, and 100% by December 2002. (See Exhibit 16)

3. **Measuring and Reporting** – The U.K. and Australia have both adopted GOL monitoring mechanisms. The U.K. has published a study benchmarking its GOL progress against 13 leading countries. Australia requires all government departments and agencies to report regularly on their progress towards meeting the Prime Minister's 1997 commitment that all appropriate government services be provided online by 2001.

4. **Strategic Investment** – Many countries are investing aggressively in GOL. The Canadian federal government has allocated $160 million over two years to GOL initiatives. Meanwhile, the U.K. recently committed to allocating £1 billion to GOL initiatives over the next three years. U.S. GOL investment is expected to grow 313% over the next five years, which would increase total GOL investment at the federal, state and municipal levels from US$1.5 billion in 2000 to US$6.2 billion in 2005.[24]

Some Canadian GOL Success Stories

- Quebec's provincial government has made its calls-for-tender available electronically. By summer 2001, all tenderers will be required to submit their tender documents electronically.
- The NETFILE project, a joint effort between the Assessment and Collections Branch and the Information Technology Branch of the Canada Customs and Revenue Agency, is using the Internet to improve turn-around times for tax return processing.
- In early 2001, Canada launched a revamped central government portal that includes three sub-portals: one targeting citizens, one targeting business, and one targeting foreign visitors.
- The Workers Compensation Board of Nova Scotia's Assessment Payment Plan, introduced in January 2000, will enable registered firms to report their assessable payroll and remit payments electronically.
- The Integrated Justice Program (IJP) in Ontario, which will be completed in 2001/2002, will establish a new common inquiry system linking the information systems maintained by police, Crown attorneys, courts and corrections.

Moving At Internet Speed

The need to move quickly to be a leader in the new economy is just as urgent for governments as it is for businesses, particularly given governments' ability to catalyze e-business adoption in other parts of the economy. Canada owed its early GOL leadership to its mature technical infrastructure and high per capita Internet adoption. However, Canada's governments are currently more focused on providing information than fully capitalizing on interaction or transaction capabilities.

Canada could forfeit its leadership position in GOL if progress remains as uneven and sluggish as it has been recently. Other countries have launched major initiatives that could catapult them ahead of us. Unless all levels of government in Canada make GOL an urgent priority, we will go from leader to laggard. Speed, commitment and investment are needed to put us back on track.

[24] The Gartner Group, April 11, 2000

ROUNDTABLE AGENDA FOR 2001

The Roundtable's agenda for 2001 focuses on five 'high-yield' opportunities for moving Canada to the next level of e-business leadership:

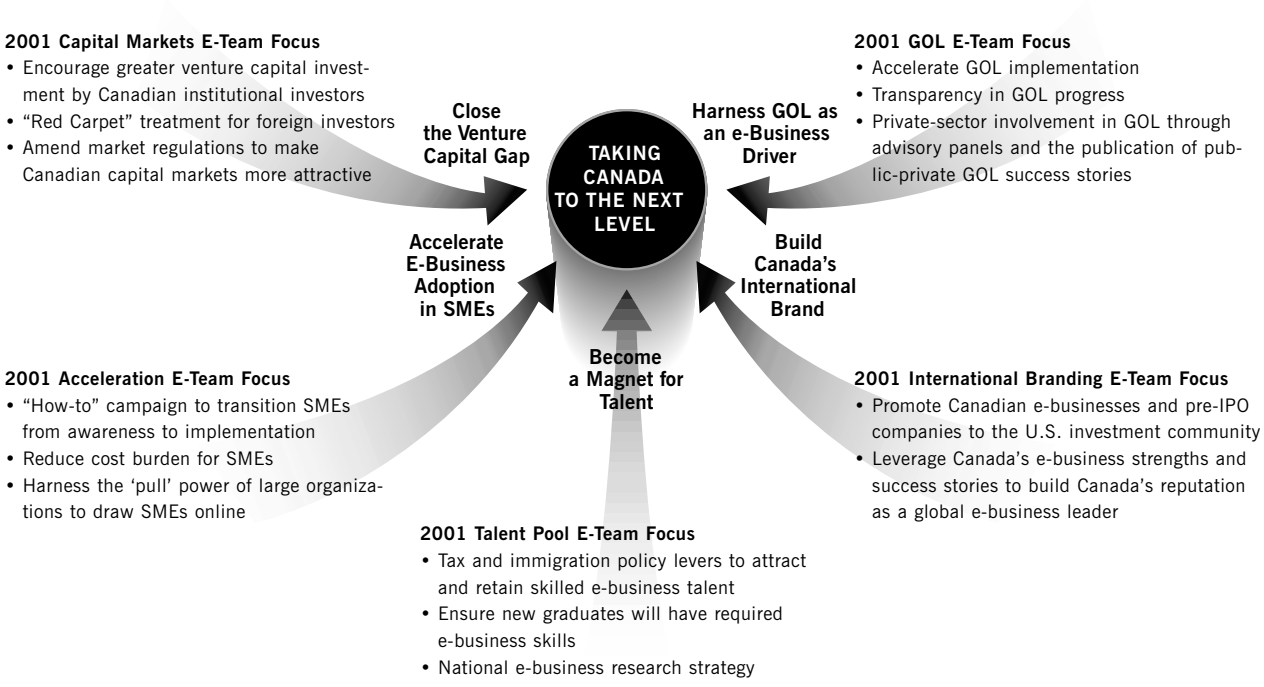
- Build Canada's international brand
- Accelerate e-business adoption in SMEs
- Make Canada a magnet for talent
- Close the venture capital gap
- Harness GOL as an e-business driver

The Roundtable's e-teams will pursue these opportunities with partner organizations.

Over the coming year, the Roundtable will continue to monitor Canada's e-business progress, establishing and tracking e-business performance indicators across the business, government and educational sectors.

The Roundtable's success to date has been due in large part to the participation of a wide range of partners. These private and public-sector organizations share the view that Canada must build leadership in e-business to ensure our success in the global economy. This agenda is a rallying cry to all Canadians to help take Canada to the next level.

Exhibit 17: Roundtable 2001 Action Plan



TEN YEARS LATER

If we are successful during the next year, our chances of being successful ten years down the road will be that much greater. What might our success look like in ten years?

In ten years, there will be no "new economy" businesses. The "new economy" will be an antiquated term that once referred to a handful of companies that were riding the Internet wave to success. But by 2010, the whole economy will be riding that wave. All parts of our economy will be making e-business their business.

Canada will lead the world in prosperity. Canada will have emerged as a global e-business leader, having maintained 5% of global Internet economy revenue, and confirmed its reputation as the most e-business-friendly environment in the world. Our high-tech sector will have enabled us to sustain GDP growth of 4%, having exceeded forecasts and surpassed the OECD average of 2.5%. Unemployment will have been reduced to 5% versus the OECD average of 7%. This prosperity will have translated into a substantially improved Canadian standard of living.

Within Canada, a start-up culture akin to Silicon Valley's heyday (before the overcrowding, overpricing and over-hyping) will have emerged. Clusters in Ottawa-Montreal, Toronto-Waterloo, Vancouver-Seattle and Calgary-Edmonton have become hotbeds of innovation.

A number of present-day Canadian mid-cap high-tech companies have graduated to global status, and a multitude of new mid-caps have formed in high growth sub-sectors such as bio-informatics, digital CRM and health care data services. Canada will also have become a major exporter of digital content, building on its strong film and multimedia presence.

Several of our largest high-tech companies will have become major multinationals that keep most of their jobs in Canada because of what has become known around the world as the "Canadian Advantage" – a combination of factors that includes our high quality of life, superior education, health care services and cultural amenities. Canada will be, and be seen as, one of the most competitive and attractive business environments in the world.

Traditional Canadian industries will have become global leaders in the adoption of new technologies. Canada's mining industry will lead its global peers in the digitization of global geological surveys into searchable databases that can be easily updated. Canadian banks will collaborate to develop the world's leading online payments system and now facilitate 80% of global online transactions. The health care industry has become a centre for patient population research and database management, leveraging Canada's leadership as home to the world's largest continuous databases of health care information. Finally, Canada will have become a global leader in Internet-based distance learning, spawning a new industry in which we dominate the market.

The 'brain drain' will have been reversed so that there is more talent flowing into Canada than there is seeping out. Many Americans will be migrating to Canada to take advantage of the favourable high-tech climate and excellent quality of life. Personal income taxes will be comparable to those in the U.S., and capital gains taxes will have been eliminated altogether. Canada will be a magnet for talent from around the world, and many foreign multinationals from countries like India and China will have established their North American headquarters or major development labs in Canada. Our Centres of Excellence and advanced education institutions will have helped draw these minds, ideas and innovation centres into Canada.

Canada's venture capital industry will have blossomed to include several players equal in size to their major American counterparts, and numerous global venture capital firms will have established operations in Canada. Canadian pension funds have dramatically increased their allocation to venture capital, helping to drive dramatic growth in our venture capital pool. Many Canadian ex-patriot entrepreneurs have returned from the U.S. to become angel investors, venture capitalists and mentors to budding enterprises.

Canadian governments at all levels will have become models of how to implement new technologies to improve services and reduce costs. In the process, Canada's procurement efforts will have helped create Canadian companies that export these new products and services globally.

The rollout of broadband network infrastructure will have put the Internet at the fingertips of every community, business and individual in Canada, allowing them to participate in and contribute to the Internet economy. Canada's not-for-profit sector will have also become an e-business leader, as online charitable giving will have dramatically reduced costs and increased giving.

Canadian schools will have become totally interconnected, and Internet use will have become ingrained in curricula at all levels of the education system. Young people across Canada will be excited to be part of a country that leads the world in technology and opportunity. They will be more comfortable with technology than their international counterparts, and see entrepreneurship as an exciting career choice.

Canada will be widely watched by others, with the EU and Japan having dispatched missions to study the much-acclaimed 'Canadian model'. Our leadership in the Internet economy will be recognized worldwide and be a source of pride among Canadians at home and abroad.

APPENDIX A: E-TEAM 2000 UPDATE

E-Team	2000 Objectives	2000 Activities
E-Business Acceleration	Identify barriers to adoption of e-business by SMEs and possible solutions, create awareness, and provide contacts/support Disseminate findings from initial regional events, including key SME issues Monitor e-business adoption and progress of Canada Engage student workforce to help SMEs implement basic e-business Provide financial incentives for SMEs to move online more quickly	Conducted (together with CCC, CME, ITAC, and Industry Canada) regional SME e-business events in seven cities: Halifax, Montreal, Toronto, Winnipeg, Edmonton, Vancouver, and Kitchener-Waterloo Released "Canadian E-Business Opportunities Roundtable Regional Events Report" Published, with IDC Canada, an Acceleration Scorecard of comparative U.S./Canada statistics Proposed having Student Connections create e-Corps Proposed e-business tax incentives to Finance Canada officials, federal and provincial ministers
Capital Markets	Solicit external comment on Roundtable's tax recommendations Offer tax recommendations to government to create more favourable Canadian e-business climate	Hosted meeting of executives from Canadian banks, pension funds, venture capital firms and government Drafted submission to House of Commons Standing Committee on Finance
Talent Pool	Improve Canadian Internet literacy Improve public awareness of opportunities for Internet education Identify opportunities to improve Internet education for K-12 Develop coordinated approach to online post-secondary learning	Evaluated Internet skills certification programs Created online inventory of post-secondary e-business and e-commerce programs in Canada Reviewed K-12 Internet education and released report Participated in Online Learning Initiative with Council of Ministers of Education
Government Online	Raise awareness and encourage action on GOL at all levels of government Encourage integration of information and services across jurisdictions	Encouraged publication of detailed GOL plans, projects and implementation activities Published success stories Met with key associations and senior officials
Trustmark	Establish a single, widely recognized Canadian trustmark for online sales to help consumers identify sites they can trust	Developed a code of best online business practices and provided input to national standard being jointly developed by CSA International and the Bureau de normalisation de Québec (BNQ)
International Branding	Build Canada's brand with foreign investors	Worked with Investment Partnerships Canada to develop events showcasing Canadian companies to U.S. investors Developed a preliminary strategy aimed at aligning perceptions of Canada's e-business capabilities with demonstrated performance

E-TEAM MEMBERS

e-Business Acceleration:

John Wetmore, IBM Canada Ltd. (Team Captain)
Larry Achtemichuk, CANARIE
Nancy Hughes Anthony, CCC
Greg Barratt, Communitech
Kathryn Beaton, Hydro One Inc.
Perrin Beatty, CME
Lucien Bradet, Industry Canada
Diane Brisebois, RCC
Gaylen Duncan, ITAC
Shirley-Ann George, IBM Canada Ltd.
Joe Greene, IDC Canada
Brian Guthrie, Conf. Board of Canada
David Kennedy, Gov't of Ontario
Pierre Laferrière, Telesystem Ltd.
Michael McCabe, CAB
Michael McTaggart, AMS Inc.
Gerry Pond, Aliant Inc.
Andrew Sage, CISCO Canada
Brian Segal, Rogers Media Inc.
Richard Simpson, Industry Canada
Larry Stevenson, Chapters Online Inc.
Anne Wettlaufer, CBA
Garth Whyte, CFIB
Janet Yale, CCTA

Talent Pool:

Kelvin Ogilvie, Acadia University (Team Captain)
Christopher Booth, Hydro One Inc.
Paul Brennan, ACCC
Bob Crow, ITAC
Doug Hull, Industry Canada
David Johnston, University of Waterloo
Claude Lajeunesse, Ryerson Polytechnic University
Gerry Pond, Aliant Inc.

Capital Markets:

John F. Eckert, McLean Watson Capital Inc. (Team Captain)
David Betts, ITAC
John Bradlow, Penfund Mgmt. Ltd.
Paul Cataford, BCE Capital Inc.
Paul LaBarge, LaBarge, Weinstein
Pierre Laferriere, Telesystems Ltd.
Vernon Lobo, Mosaic Venture Partners
Richard Nathan, The Brightspark Group of Companies
Paul Orlander, The Boston Consulting Group
Keith Parsonage, Industry Canada
Gordon Sharwood, Sharwood & Associates
Paul Tsaparis, Hewlett-Packard Ltd.
Scott Wilkie, Osler, Hoskin, Harcourt

International Branding:

Matt Holland, The Boston Consulting Group (Canada) (Team Captain)
Leonard J. Brody, Onvia.com Inc.
Ian Burchett, Canadian Consulate General, New York
Helen Burstyn, Advance Planning/MS&L
Rocco Delvecchio, Industry Canada
Robert Greenhill, Bombardier International
Dean Hopkins, CYBERplex Inc.
Dave Kennett, Worldbid.com
Richard Nathan, The Brightspark Group of Companies
Loudon Owen, McLean Watson Capital Inc.
Rocco Rossi, Beer.com

Trustmark:

Peter Nicholson, BCE Inc. (Team Captain)
Sara Allan, iFormation Group
Members of the Electronic Commerce and Consumers Working Group
Michael Jenkin, Industry Canada
Bill Munson, ITAC
Robert Tritt, Bell Canada Inc.

Governments Online:

Jean-Pierre Soublière, Anderson Soublière Inc. (Team Captain)
Michael Connolly, Ontario Ministry of Health
Stuart Culbertson, Province of B.C.
Jack Davis, Calgary Regional Health Authority
V. Peter Harder, Industry Canada
Dr. Arminee Kazanjian, U.B.C.
Lori MacMullen, Government of New Brunswick
Helen McDonald, Gov't of Canada
Ken Meech, Halifax Regional Municipality
Bob Morine, IBM Canada Ltd.
David O'Brien, City of Mississauga
Linda Oliver, ITAC
Hal Ryckman, EDS Canada Inc.
Jean-Marie Toulouse, École des HEC du Montréal
Jill Velenosi, Gov't of Canada
Vinita Watson, Industry Canada