A Call for Action

REPORT OF TASK FORCE YEAR 2000

FEBRUARY 1998

countdown has started...

deadline is firm



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A Call for Action

REPORT OF TASK FORCE YEAR 2000

FEBRUARY 1998



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Recommendations

Recommendation 1:

A formal action plan for Year 2000 preparedness, if not already in place, should be immediately implemented by every business leader, chief executive officer, president and business owner. This plan should include, at a minimum:

- inventory of all systems
- assessment of systems
- conversion or replacement
- testing
- contingency plans
- key partners' preparedness

Recommendation 2:

Formal action plans and progress reports should be made available by all trade partners associated with the Canadian national supply chain, with due consideration to the particular commercial and legal circumstances of each business.

Recommendation 3:

All lending institutions, whether federally or provincially regulated, should immediately require the availability of a formal Year 2000 action plan from corporate borrowers as a prerequisite for loans, with a target implementation date of April 1, 1998.

Recommendation 4:

- The insurance community should provide its corporate clients with early notification of the importance of the Year 2000 issue and of the requirement for the availability of a formal Year 2000 action plan.
- 2) The insurance community should make the issuance/renewal of an insurance policy contingent on the availability of a formal action plan.

Recommendation 5:

The Canadian Institute of Chartered Accountants should finalize and publicly distribute its two guidelines regarding financial statement disclosure of Year 2000 issues on an urgent basis.

Recommendation 6:

- All securities commissions, during 1998 and 1999, should review at a minimum a 20 percent representative sample of annual reports of the companies they regulate to determine if, in fact, companies reported on Year 2000 issues in their management discussion and analysis (MD&A), and to assess the appropriateness of the disclosure.
- 2) All securities commissions, either as a matter of regulatory mandate or administrative policy, should promote Year 2000 preparedness as a consideration in the due diligence process associated with mergers and acquisitions.

Recommendation 7:

National, provincial and regional associations should immediately take a more proactive awareness and support role on Year 2000 preparedness and publicly report on initiatives taken, if they have not yet done so.

Recommendation 8:

The Business Council on National Issues should address the Year 2000 challenge, and particularly its effect on strategic Canada/US business linkages. The focus of such a bilateral initiative would be on mission-critical economic sectors and issues.

Recommendation 9:

1) All businesses, in their public communications and marketing campaigns should:

- a) promote the implementation of the recommendations formulated by the Task Force to both private- and public-sector authorities;
- b) aggressively reach out to the various components in the supply chain, demonstrating that they are preparing for the Year 2000 challenge and are expecting the same involvement from their trading partners.
- 2) All national media should continue to address and communicate issues that are related to Year 2000 preparedness in Canada.

Recommendation 10:

- 1) The House of Commons Standing Committee on Public Accounts should continue to scrutinize the evolution of the state of preparedness of federal government systems.
- 2) Provincial legislative bodies, where applicable, should initiate a similar transparent process through which provincial institutions would report regularly on progress achieved.

- **3)** Provincial authorities should ensure that municipal authorities put in place transparent reporting mechanisms.
- 4) Municipal authorities should take the initiative to immediately implement transparent reporting mechanisms.

Recommendation 11:

All levels of government should require their lending bodies/programs to make the existence of a formal Year 2000 action plan a condition for securing grants, contributions, loans and loan guarantees, where applicable.

Recommendation 12:

Before introducing legislation or regulatory changes, all levels of government should consider the impact they may have in terms of reprogramming information systems and diverting resources away from Year 2000 preparedness efforts.

Recommendation 13:

Regulators at all levels of government should:

- 1) complete, by April 1, 1998, an assessment of the impacts that Year 2000 computer failures in their regulated industries would have on their regulatory objectives;
- 2) revise, where appropriate, their compliance assessment procedures; and
- 3) exert, wherever possible, moral suasion on the importance of Year 2000 preparedness.

Recommendation 14:

The governments of Canada and Quebec should adopt immigration laws, regulations and policies to create a specific category of temporary employment authorization permitting persons with specialized Year 2000 skills and experience to work in Canada exempt from the employment validation process, thereby permitting foreign workers to secure such temporary employment authorization directly at a port of entry.

Recommendation 15:

The federal government should consider introducing revenue-neutral tax encouragement measures with a primary focus on small and medium-sized enterprises (SMEs) as early as possible.

Recommendation 16:

In all jurisdictions, government departments and agencies that are in a position to influence businesses should disseminate and facilitate access to Year 2000 information and support services, including Task Force material.

Recommendation 17:

- Canadian and provincial legislative bodies should hold public hearings, inviting national or regional associations, relevant government authorities and others able to exert influence on the private sector, to report on their efforts to encourage their constituencies to meet the Year 2000 challenge with formal action plans.
- 2) The Task Force report and recommendations should be brought to the attention of the Prime Minister and the provincial premiers.

Recommendation 18:

Statistics Canada should be requested to repeat its survey of preparedness in April 1998, in order to provide the Task Force with an opportunity in May 1998 to assess the progress achieved, both on the state of preparedness of Canadian businesses and on the timely implementation of its recommendations to that point.

Foreword

Like most Canadians, the business community looks forward to the beginning of a new century and a new millennium with pride and optimism. The hope that we are heading towards a better world owes much to the rapid and spectacular growth of information technology applications which have revolutionized our lives.

But as we draw closer to this historic milestone, the anticipation of a growing number of business owners and managers, here and around the world, is rapidly turning into apprehension. They are confronted by the possibility that their computer systems and global networks, the very infrastructure on which so much recent economic progress has been founded, may fail because of an inability to interpret dates beyond 1999. The implications of the Year 2000 computer problem—or the millennium bug—are extremely serious and may occur in every aspect of business operations. As they better understand the nature of the problem, executives are coming to grips with the scope of the challenge and realizing that every day counts. The countdown has started—and the deadline cannot be postponed.

No business is immune, every firm is affected—either directly in its own operations, or indirectly, by the action or inaction of others. The supply chain of Canada's economy is vulnerable. Something had to be done to convince all business executives to focus on this problem and to address it. It is a matter of grave national importance.

Last September, we accepted Minister John Manley's invitation to form the Task Force Year 2000, to add our voices, as Chief Executive Officers, to his leadership and to urge the Canadian business community, at the highest level, to take immediate action. The mandate of the Task Force is to assess the nature and scope of the electronic challenge in Canada, the state of industry preparedness to deal with issues related to Year 2000 computer risks, and to provide leadership and advice on how these risks could be reduced. Task Force Year 2000 is chaired by Mr. Jean C. Monty, President and Chief Operating Officer, BCE Inc., and includes representatives from a number of key economic sectors—banking, insurance, transportation, manufacturing, telecommunications, information technology, resource-based, retail and service—and small and medium-sized business.

This report makes key recommendations to give impetus to the actions that must be taken to prepare Canadian business and industry for the Year 2000. They all are intended to promote both the sharing of relevant information and public-private sector cooperation, as well as to prompt remedial action.

There is a fundamental difference between the leadership that governments and privatesector authorities can exert and the ownership of the challenge at the firm level. This report is a message from Chief Executive Officers who have worked on the Year 2000 challenge and are very familiar with its complexity. It is addressed to all Canadian business leaders, whether chief executive or operating officers, directors or business owners—collectively referred to in the report as business executives—striving to enter the new millennium competitively positioned against the Year 2000 computer challenge.

The Task Force will make additional information it has produced available on Industry Canada's Strategis site which already offers Year 2000 information, and through a toll-free line. This information will include, CEO perspectives on the Year 2000 challenge, advice on contingency planning, a check list for small and medium-sized enterprises and guidance for directors. It will also include links to related sites. This material is primarily addressed to business executives and business owners. It does not delve into detailed technical material, a task best left to experts or available from specialized firms and the vending community.

The Year 2000 Challenge

1. Our Approach to the Challenge

T he cause of the problem appears deceptively simple: because computers are programmed to store dates using only the last two digits of the year, many computer systems will interpret

January 1, 2000 as January 1, 1900. Also, not all computers may recognize that the Year 2000 is a leap year. As a result, when the millennium arrives, many applications may miscalculate or simply cease to function, thereby impacting on normal operations in Canada and abroad.

1

Computing errors will also occur before Year 2000. Values such as 99 are sometimes used for special purposes not related to the date. The number 99 is used in some systems as an expiration date for data to be archived permanently—so some computers may lose the data when 1999 is reached.

The millennium bug affects almost all entities. It is not limited to large companies that use mainframe computers. It affects organizations of any size that use any kind of computer or any kind of data-activated device, or have key suppliers or customers that do. Even if an organization can deal with its own in-house Year 2000 problems, it may still be affected by its suppliers and customers.

Example of	the Year 20	000 Problem			
With Current Date Format (mm/dd/yy):					
Current Date 06/19/99 06/19/00	Birth Date 06/19/59 06/19/59	Calculated Age 40 -59,59, or Error			
Corrected to 8-Digit Date Format (mm/dd/yyyy):					
Current Date 06/19/2000	Birth Date 06/19/1959	Calculated Age 41			
NB: This requires that two dates be changed (current date and birth date).					

The Year 2000 problem may affect not only financial systems, but all business systems and computer processes. The failure of a small microprocessor, whose processing logic depends on

Some Sources of Year 2000 Date Code Problems

Computer central processing unit

- hardware clock
- BIOS (Basic Input Output System)
- network server

Other Hardware

- modem
- · added printed circuit card
- telephone answering machine
- video equipment

Software

- operating system
- packaged software
- in-house code, databases, spreadsheets, etc.

Embedded chips

- process control systems
- fax machine
- video cassette recorder
- heating, ventilating and air conditioning control
- internal combustion engine
- automatic camera
- security system
- fire detection system
- medical equipment
- timekeeping and attendance systems
- barcode reader systems

dates, can have significant consequences. For example, when an entity operates in a distributed processing environment, a communications failure could have a significant impact on its entire information technology structure.

We are confronted by this serious and urgent situation and we are only 23 months away from the Year 2000. It has to be solved. *Now*.

The Task Force tailored its approach to deal with the scope of our national problem. It wanted a quantitative assessment of the state of preparedness of Canadian businesses and asked Statistics Canada to "fast track" its survey on the state of preparedness of the private sector, and to provide preliminary results by November 1997.

The Conference Board of Canada also agreed to examine how the Year 2000 problem could affect the Canadian economy and in particular, our ability to compete successfully worldwide.

In order to help us understand how our international partners and competitors were dealing with this

issue, the Information Technology Association of Canada (ITAC) analysed the international response to the Year 2000 challenge, in both the private and public sectors.

While Statistics Canada conducted its survey, the Task Force members, with the assistance of their chief information officers, compared their corporate experiences in addressing the Year 2000 challenge. The objective of this exercise was to prepare an overall CEO perspective that could be shared with the larger community of business leaders—to help them contain costs, avoid some mistakes and enhance their own preparedness.

The Task Force invited approximately 400 national associations to contribute to its work. They were asked to help raise the awareness of their members concerning the importance of Year 2000 preparedness; to inform the Task Force about what they had done to encourage their members to prepare and to help ensure that their associates and suppliers were prepared for the Year 2000; and to make recommendations which should be brought to the attention of the business community and governments.

When the Task Force met on November 18, 1997 to review the preliminary results of the Statistics Canada survey, it became clear that a large number of Canadian business leaders do not fully appreciate the seriousness of the challenge that they face, and are far from giving the Year 2000 problem the attention it deserves. It was also obvious that many companies in many sectors of the economy will find it very difficult to be ready on time—and that their unpreparedness may affect others.

Given the seriousness of the situation, the Task Force advanced the date of the submission of its report to the Minister of Industry by four months, from the end of May to



We are confronted by this serious and urgent problem and we are only 23 months away from Year 2000. It has to be solved. *Now.* early February 1998. We made this decision trusting that our recommendations, designed to focus business attention and bring about action on this critical issue, will be implemented with similar urgency.

2. Are Canadian Businesses Prepared?

The Statistics Canada survey, carried out in the fall of 1997, involved the participation of 2,000 Canadian businesses with more than five employees and covered all the economic sectors, with the exception of government operations, education and health.

	PERCENTAGE OF BUSINESSES			
	Have formal plans	Taking informal steps	Aware of problem but not taking action	Not aware of problem
All businesses	9	36	46	9
Small firms	6	33	51	10
Medium firms	20	50	29	1
Large firms	48	45	7	0
Primary industries	3	30	59	8
Manufacturing	10	40	43	7
Transportation,				
communications and utilities	6	42	45	7
Finance and insurance	16	50	33	1
Trade and other services	8	34	48	10

Source: Statistics Canada, The Preparedness of Canadian Businesses for the Year 2000 Computer Problem, February, 1998.

The survey results are clear. The scope of the problem and its likely impact appear to be underestimated by a majority of business people in Canada. Although more than 90 percent of businesses were aware of Year 2000 challenges, only about 50 percent appear to have taken actions to address these challenges. Only one firm in ten had a formal action plan to deal with the issue.

The lack of appropriate planning is evident not only in small and medium-sized enterprises (SMEs). One large firm out of two had not addressed the problem in a formal way and probably had yet to come to grips with the order of magnitude of the problem it faces and the limited time available to prepare.

The fact that only 18 percent of Canadian businesses expressed concern about the potential legal implications for not being prepared for Year 2000 is an indication that businesses are underestimating the scope of the challenge.

Finally, only 13 percent of the executives aware of the Year 2000 problem had endeavoured to find out what state of preparedness their business partners had achieved. This is cause for concern. Businesses do not operate in isolation from the rest of the world.

The Statistics Canada survey provides further evidence of inadequate sectoral preparedness for Year 2000. The survey indicates, for example, that:

• In the key transportation, communications and utilities sector, half of the large firms surveyed had not taken formal action to address the Year 2000 challenge. Yet these firms are often mission critical to the national or local economy.

The scope of the problem and its likely impact appear to be underestimated by a majority of business people in Canada.

by Industry and Si	ze (as of O	(as of October 1997)			
			OF BUSINESSES		
	FIRMS NOT	TAKING ACTION	Firms taki	NG ACTION	
	Firms not aware	Aware but taking no steps	Informal steps	Formal plans	
Primary Industries	8	59	30	3	
Small firms	8	64	26	2	
Medium firms	12	33	48	7	
Large firms	0	8	69	23	
Manufacturing	7	43	40	10	
Small firms	10	50	36	4	
Medium firms	0	24	55	21	
Large firms	0	11	36	53	
Transportation, communications and utilities		45	42	6	
Small firms	8	51	37	4	
Medium firms	3	30	62	5	
Large firms	0	3	47	50	
Finance and insurance	1	33	50	16	
Small firms	1	39	52	8	
Medium firms	1	18	51	30	
Large firms	0	3	21	76	
Trade and other services	10	48	34	8	
Small firms	11	52	31	6	
Medium firms	1	31	48	20	
Large firms	0	8	52	40	

How Businesses Are Approaching the Year 2000 Problem – by Industry and Size (as of October 1997)

Source: Statistics Canada, *The Preparedness of Canadian Businesses for the Year 2000 Computer Problem*, February 1998.

- Only one in three firms in the primary industries sector, which impacts directly on the whole supply chain, had taken any action; only three percent had a formal action plan.
- Although the finance and insurance sector fared better in comparison, only two thirds of the firms surveyed had taken action to prepare for Year 2000; only 16 percent had a formal action plan. Nevertheless, this is the sector which registered the highest percentage of large firms taking action: 97 percent of large firms had started to get ready, and more than three quarters had a formal action plan.
- The situation is also disappointing in the trade and services enterprises where only 42 percent of companies had taken action.

Overall, half of the small and medium-sized firms had taken action; the overwhelming majority, however, had no formal plan. These statistics indicate a possible high degree of vulnerability for these firms on which large firms depend for their ongoing operations. The complexity of the Year 2000 challenge for these firms is not as elaborate as that of the large firms; however, they often do not have the in-house expertise required and they depend on outside skills to a great extent. Their financial resources are usually more limited and they have less latitude to face their challenge.

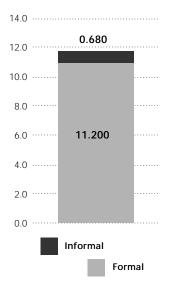
Currently, the available supply of information technology specialists barely meets the demand in this country. With so many Canadian firms yet to take action, it is reasonable to expect a growing scarcity of the required skills and consequent cost increases for firms which have not yet begun to prepare.

7

Identified Direct

Costs (\$ billions)

By 60% of Businesses Taking Action



Source: Statistics Canada, The Preparedness of Canadian Businesses for the Year 2000 Computer Problem, February 1998.

The Year 2000 challenge may divert resources away from other more productive investments but these expenditures must be incurred. As well, growing international competition for these specialists will very quickly exacerbate this situation.

The Year 2000 challenge can therefore be expected to cost considerably more than the \$12 billion that Statistics Canada, based on the limited information it gathered, estimates as the minimum expenditure that Canada will incur. The Task Force recognizes that the Year 2000 challenge may divert resources away from other more productive investments but these expenditures must be incurred.

Statistics Canada's findings provide more insight into the preparedness of the national economy. Large firms providing essential services and products to the national supply chain have to be prepared in time. SMEs also have no choice: the longer they wait, the more difficulty they will have in finding specialized resources, and the more expensive it will be. The Task Force hopes that this report will cause many more business executives—including those in small enterprises—to realize that it is in their best interests and those of their business partners to act *now. Awareness must be transformed into immediate action.*

3. What Is at Stake for the Canadian Economy?

At the request of the Task Force Year 2000, the Conference Board of Canada is examining the economic advantages that Canada could derive from a leadership position on the Year 2000 challenge. The Board's assessment will explore the direct and indirect impacts on Canadian businesses, examine Canada's business transactions with its trading partners, and alert Canadian business leaders to the risks of further delays. (The Conference Board's detailed findings, *January 1, 2000: Crisis or Opportunity*, will be available at the end of February 1998.)

The Conference Board of Canada shared with the Task Force the interim results of its work. It reports as follows:

While much of the focus has been on technical issues, the millennium bug is also a serious economic issue which could cost the economy significant losses in output and employment, if not addressed now. Information technology pervades all areas of business activity around the world: sales tracking, production control through advanced manufacturing technologies (AMT), financial management, just-in-time delivery systems for inputs, inventory control, and international trade transactions processing.

Just-in-time inventory control systems, fully exploited after the 1991-92 recession, are now central to most manufacturing distribution and retail. Unacceptably high levels of inventories are a thing of the past and new orders are placed only when needed. In manufacturing, wholesaling and retailing, it is clear that highly efficient inventory control and production systems dominate business transactions. These systems are central to profitable business operations and their failure, because of computer malfunctions starting January 1, 2000, will jeopardize production, employment and profitability. A firm with inventory which cannot be sold or critical shortages of inputs needed for production will lose customers and profits to competitors.

Fixing the millennium bug is thus a competitiveness issue for every firm. But this competitive advantage will be gained only by Fixing the millennium bug is a competitiveness issue for every firm. spending money now, in 1998, to assess and convert, and in 1999, to test.

The current economic outlook for Canada in Year 2000 is now at risk because too many businesses have failed to start the repair and replacement of technology that will not function properly in the Year 2000. At the moment, however, concerted actions starting immediately will minimize the down side, and the three percent growth outlook for the Year 2000 can be still be attained. In the Year 2000, the unemployment rate should fall to just under eight percent and Canada should finally be at full employment.

A Costly	Global	Problem
Event		Estimated co

Event	Estimated cost
	(US \$ billions)
World War II	\$4200
Millennium challenge	\$600
Vietnam conflict	\$500
Kobe earthquake	\$100
Los Angeles earthquake	\$60

Source: Gartner Group and U.S. Congressional Research Service.

Over the next two years, considerable expenditures must be made by firms to ensure that the millennium bug does not threaten their survival. This spending will affect machinery and equipment investment as embedded chips must be replaced, new equipment is put in place, and software is purchased. Year 2000 preparedness of "home-grown" applications poses the greatest risk to firms and there is little hard data to indicate that the situation is adequately in hand.

Unfortunately, much of this spending in 1998 and 1999 will have little effect on productivity—it will, in fact, be the price of remaining in business. Expenditures will be made as part of the normal investment and maintenance of production capabilities. In the case of retailers, the updating of point-of-sale technology will ensure a smooth transition in sales and inventory control in the Year 2000. Reallocation of effort must be made in order to gain the efficiencies promised from new and updated software. As 1999 comes to an end, the timing of production and inventory accumulation will be affected, and these changes in behaviour will have little impact on the overall economy. Statistics Canada data suggest that many firms have not started their preparations. They could well not be ready and the economic consequences for them will be adverse. There is little doubt that some firms will go out of business because they will have waited too long to start the repair work or because they will have been unable to allocate sufficient funds. As time passes, the cost of human resources that can fix the programming will rise sharply as their availability is taxed to the limit. The number of firms that will find themselves in this position is impossible to estimate at this time but it is clear that firms that are prepared will be able to capture market share. The negative effects of some business failures will be partially offset by those firms that are ready. This conclusion is not meant to minimize the disruptions that will occur in the micro-economy or the misery inflicted on individuals who lose their jobs or their businesses.

At the same time, inter-industry linkages guarantee that the pain suffered by firms that are not prepared for the Year 2000 will be inflicted on their upstream and downstream business partners. In this regard, Canada's state of preparedness is very dependent on the United States, given its extensive linkages with large US-based corporations.

As demonstrated in Performance and Potential 1996, Canada is highly dependent on international markets and our trade linkages with the United States are expanding as a result of the integration of the North American economy. Hence, intra-firm trade through the subsidiaries of US-based multinationals is increasing in importance. About 40 percent of Canada's output is exported, with the majority of this being done through intracompany links, especially in the manufacturing business. Approximately 70 percent of merchandise trade by US subsidiaries in Canada is conducted on an intra-firm basis. Intracompany trade accounts for 45 percent of Canada-US trade. Automobiles and auto parts constitutes about half this trade. The state of preparedness of this sector of the economy will, therefore, be crucial for Canada.

Much of the Canadian supply chain relies on international linkages and this is particularly true with the United States. It is thus important to ensure that critical trade linkages with our key US partners, both upstream and downstream, are not affected by the Year 2000 problem. It is important for Canadian firms to enquire into the state of preparedness of their trade partners not only within Canada but abroad, particularly in the US.

The Year 2000 date code problem poses a real threat to the profitability of Canadian firms and their overall industrial competitiveness. In some cases, it will even mean business failure. A modern economy is heavily dependent on electronic communication of business information, transactions, production and record keeping—this dependence will become all-to-obvious in the Year 2000 for those who fail to act now.

The initial contribution by the Conference Board of Canada reinforces the conclusion that the Year 2000 challenge can become the source of additional competitiveness for well prepared Canadian firms. The degree of this additional competitive advantage could be adversely affected by ill-prepared firms, whether in Canada or abroad. Close attention should, therefore, be paid to our major trade partners, especially the United States.

The pain suffered by firms not prepared for the Year 2000 will be inflicted on their upstream and downstream business partners.

4. The International Response

To understand our trading partners' and competitors' reactions to the Year 2000 challenge, and to learn from their experience, the Information Technology Association of Canada (ITAC) was asked to undertake a comprehensive survey of Year 2000 national initiatives in several industrialized economies.

This review demonstrated that many nations are taking similar approaches to the problem, although circumstances, specific governmental and societal cultures and traditions, as well as ways of doing business differ from country to country. The following are selected highlights.

ITAC WEB SITE http://www.itac.ca

Task Forces / National Committees

By the time the Task Force Year 2000 was created, Canada was already ranked among the world leaders in preparedness by the Gartner Group, an internationally recognized research organization in the area of information technology—despite the large number of Canadian organizations reporting that they had no action plan. In fact, the creation of a national task force, composed of the chief executive officers of leading Canadian firms, was unprecedented. While other countries had created a variety of consultative groups to provide public policy input, none had sought the direct counsel of organizations most likely to be affected by the problem.

The United Kingdom has since formed an action committee to complement its two-year-old Year 2000 task force responsible for raising awareness of the issue. In Australia, a national strategy based on a strong public-private sector partnership is yielding good results. In the United States, a number of industry associations and quasi-public bodies have formed to provide advice to Congress and other branches of government. The Philippines government has emulated the Canadian model and created a CEO task force.

Legislation, Regulation and Moral Suasion

Several countries are in the process of addressing Year 2000 readiness through moral suasion, regulatory intervention and legislation, particularly in areas where the risk of systems breaking down is perceived as too great to tolerate.

In the United States, for example, the Federal Reserve System and the Securities and Exchange Commission have introduced requirements for the disclosure of Year 2000 risk. In the Netherlands, the central bank has announced that future bank credit approvals will be linked to Year 2000 readiness. In the United Kingdom, the National Health Service has actively undertaken a program to inform hospital and health-service managers of their exposure to Year 2000 risks and to provide them with a variety of guides and other resources to assist them in developing and implementing their Year 2000 programs. The British insurance industry has reviewed the issues associated with providing coverage for losses associated with Year 2000 systems failures and concluded that they are foreseeable events for which risk schedules cannot be determined. As a result, the industry has widely publicized its intention to revise all policy clauses to exclude coverage of Year 2000-related risks.

Financial Incentives

Few countries have resorted to tax or financial incentives to encourage activities for Year 2000 readiness. The US Internal Revenue Service recently announced a revenue-neutral initiative — special amortization rules for Year 2000 preparedness expenses, providing greater financial flexibility for affected firms.

Coalitions / Alliances

An extension of the task force concept is the creation of multi-industry Year 2000 coalitions. The objective of such coalitions is to enhance the reach and provide credibility to communications programs. Firms are more often receptive to the advice of their own industry associations than to the general warnings issued by their governments.

The United Kingdom, Denmark, and Australia are building such coalitions, while in the United States, information linkages between industry associations are achieving the same end.

Business Information and Support Systems

Around the world, most national programs recognize the need for well identified, authoritative sources of information. Extensive Year 2000 background and technical information directories are found on the Internet or are available through more traditional distribution channels. Good examples of such support activities are found at the Information Technology Association of America and governmental General Services Administration Web sites, the Government of Australia's OGIT Web site, and the Computing Services and Software Association Web site. In Canada, ITAC's Web site, the Canadian Information Processing Society Web site and Industry Canada's site serve a similar purpose. These Web site addresses are listed in the Appendices of this report.

In summary, although efforts in most countries are accelerating, the Task Force has not found any example of a comprehensive national strategy on the Year 2000 challenge anywhere in the world. As a result, there is no benchmark against which we can either compare the overall approach we are taking or determine how effective it will be. The best prepared countries will clearly have in place a strong partnership between private industry and public authorities which uses all possible leverage available to turn awareness into action. The Task Force has learned from this international review of the activities of other countries that communications raises awareness but does not necessarily lead to action. The provision of support services, while essential, can only help firms that have decided to take action. If Canada is to derive any competitive advantages from Year 2000 preparedness, it must move faster, with the support of strong private- and public-sector synergies.

The Task Force has encouraged the involvement of a privatesector partnership in the financing and delivery of a communications strategy. It has already invited large national associations to advance the Canadian state of preparedness of their respective constituencies. It has sought the involvement of the influential Conference Board of Canada, of the Canadian Bar Association and of the Information Technology Association of Canada. It is recommending that the Business Council on National Issues advance our bilateral trade interests with the United States. It has supported the proactive approach taken by the Canadian Federation of Independent Business with small and mediumsized enterprises.

Hopefully the multisectoral composition of the Task Force has created the initial momentum and the environment that Canada needs to witness the emergence of a genuinely Canadian coalition.

The Call for Action

1. Putting Formal Action Plans in Place

It is a critical business challenge. When first confronted with the Year 2000 problem, the reaction of most business executives is to rely on their information specialists to come up with a relatively short process leading to a reasonably simple solution. But as they begin to look into the problem, it becomes apparent that this is a much more complicated, serious and expensive problem than they had originally thought. They also soon realize that the solution requires the involvement of every facet of a corporate operation. It is a critical business challenge.

> When asked for an inventory of the potential computer errors that could arise in the Year 2000, the division responsible for corporate support services, including internal computer systems, first focuses on its own service function across all computer platforms. If that occurs, corporate executives may initially receive a false sense of security on the extent of the challenge. However, the millennium bug may be found in almost every place information technology is used—including embedded technology used in production, maintenance, field operations and other systems.

> Although business units depend heavily on their computer and embedded systems, it is difficult for line managers with focused responsibilities and quantifiable objectives to incorporate the Year 2000 challenge into their priorities and to make the necessary adjustments in their timelines and expertise.

2

These examples, and there are many, demonstrate why the senior management of any corporation has to take charge from the outset. Without a formal assessment and action plan, senior management may not comprehend the extent of the problem facing their company or the key executive decisions to be made. Without a formal action plan, senior management may not monitor progress toward Year 2000 readiness and may not have a basis to decide whether to make the necessary trade-offs in priorities that will inevitably arise. In some instances, an action plan might lead a business executive to postpone an acquisition or divert a large part or perhaps all of the information technology budget and related human resources to the Year 2000 program. In other cases, fixing the problems could imply borrowing or postponing research and development expenditures. Each situation is obviously unique but all require executive attention.

Consequently, senior management cannot simply delegate preparation for the Year 2000 to an information specialist. It is a major business issue and it needs to be addressed with the full support of the senior management of the organization.

To assist executives interested in benefiting from the collective experience of CEOs on the Year 2000 Task Force, we have compared our respective approaches to the challenge and have compiled a number of lessons we have learned. We wish to share these lessons with other executives to perhaps help them reduce costs, save time, avoid some mistakes we might have made, and accelerate preparedness. Senior management has to take charge from the outset.

CEO Perspectives

Once they fully appreciate the size, complexity and expense of a Year 2000 program, most senior executives will realize that the solution to the problem requires a systematic approach that is unique to each business and that a multifunctional action plan is necessary. This may include:

Formal Action • the leader of every business taking an active role;

Plan

- Inventory
- Assessment
- Conversion or replacement
- Testing
- Contingency plans
- Key partners' preparedness

- empowering a Year 2000 program with leadership from a strong senior executive leader and communicator, the executive committee and the board;
- creating a Year 2000 Executive Steering Committee and Program Management Office, with the firm's most competent managers who understand both the technological and business issues involved;
- involving all key business units and corporate services in the Year 2000 Executive Steering Committee and Program Management Office. The trade-offs associated with remediation efforts require the co-operation of the whole corporation: finance, sales, production, maintenance, corporate support, legal and information technology, etc.;
- formally approving a corporate Year 2000 action plan and an adequate budget which is periodically reviewed;
- seeking the advice of experienced external professionals to address Year 2000 preparedness issues—especially in the case of small and medium-sized businesses;

- seeking specialized legal Year 2000 expertise and support in order to understand the Year 2000 duties and obligations of a firm and its directors and officers, including prudent actions to maximize the Year 2000 performance of customers and suppliers;
- conducting a legal due diligence review and an assessment of legal rights, obligations and liabilities;
- conducting a systematic review and assessment of risk management issues, including assessment of insurance coverage and contractual indemnities;
- liaising with governmental regulators and relevant publicsector agencies;
- assessing whether the business has sufficient in-house technology capacity and technical expertise;
- managing the human resources necessary for the Year 2000 program, whether staff or contractors, to maximize commitment and retention, and to effectively deal with the worldwide shortage of specialized skills that is rapidly developing;
- conducting due diligence investigation with respect to internal resources and external circumstances;
- recognizing the potential impact of embedded chips in production, process control, transportation, security, and communications system equipment on costs, and the difficulty of correcting this problem;

STRATEGIS http://strategis.ic.gc.ca/sos2000

- converting or replacing the highest business value systems, but not overlooking non-computer systems, such as business forms, information technology outsourcing strategies, etc.;
- testing extensively converted, replaced or existing systems considered Year 2000-ready—on the understanding that testing may constitute 50 percent or more of the overall effort and that it must be adequately resourced and monitored;
- communicating with and paying close attention to all business links with customers, suppliers and intermediaries to monitor their Year 2000 progress, to offer assistance where needed, and to be able to terminate unsatisfactory relationships. Business links requiring particular attention are:
 - customer systems upon which both a business and its customers depend;
 - supplier systems, such as electronic data interchange systems, and the use of electronic commerce (e.g. on-line financial services);
 - public-sector systems and resources such as electronic filing or information systems; and
 - information technology services that are not under a firm's direct control or supervision;
 - managing the external technology and service providers that are necessary to create and implement practical and remedial Year 2000 solutions;

• developing contingency plans to help ensure that interruptions of key business activities resulting from systems failures are minimized or eliminated, whether they are internal systems or the systems of key customers or suppliers.

Important Steps

The implementation of a formal action plan may include the following steps:

- Compiling a thorough inventory of all systems used, with identification of the most critical systems.
- Carrying out an assessment of the amount of computer code conversion or systems replacement necessary.
- Designing and implementing remedial strategies, whether conversion or replacement.
- Testing converted or replaced systems and their interfaces.
- Developing contingency plans.
- Monitoring preparedness of partners.

Legal Duties and Obligations

Canadian firms should be cognizant of the legal duties, obligations and potential liabilities that may arise in connection with a lack of Year 2000 preparedness. As a matter of corporate governance, firms should determine the nature and extent to which their business is subject to specific commercial, professional, industry and regulatory obligations before a comprehensive remediation plan can be designed and implemented. The Year 2000 management team must work closely with its professional advisors and consultants to ensure that the foregoing obligations are satisfied and legal liabilities are minimized to facilitate the practical commercial resolution of Year 2000 disputes and conflicts that may arise.

The legal obligations and potential liabilities of businesses in Canada concerning Year 2000 preparedness are both complex and multifaceted. The following are examples of some of the obligations that should be considered. A business may:

- under particular statutes that govern commercial and legal affairs3 have specific technology, reporting or compliance obligations;
- be particularly affected by certain statutes that prescribe maintenance and reliability standards for electronic records that may be compromised in the event of a Year 2000 problem. Examples include the *Customs Act*, the *Income Tax Act*, or even employee information retention which is statutorily mandated, and information that is related to workers' compensation or employee health tax;
 - be regulated by a governmental organization that has mandated specific compliance obligations, such as the Office of the Superintendent of Financial Institutions Canada or the Transportation Safety Board of Canada; and

The legal obligations and potential liabilities of businesses are both complex and multifaceted. be required to comply with trade and professional associations' directions for Year 2000 preparedness obligations, to remain in good standing. Even policies issued by private member organizations, such as stock exchanges, may contain obligations for members to undertake specific Year 2000 preparedness.

Whether they arise in connection with regulatory obligations, contractual obligations or otherwise, the legal issues associated with Year 2000 preparedness must be carefully considered by all participants in Canadian business—including the public and private sector. In order to avoid the possibility of unwel-come legal action, the Task Force urges business leaders and owners to promptly seek legal advice to help assess the legal implications of Year 2000 problems for their businesses.

At the invitation of the Task Force, the Canadian Bar Association is currently preparing a discussion paper reviewing some of the legal issues associated with the Year 2000 problem. *Countdown to Year 2000: Risks and Rewards—The Legal Issues* will delineate, among other things:

- statutory, regulatory, common law and contractual obligations for electronic information maintenance and protection, and the corresponding liability associated with Year 2000 failures;
- corporate governance obligations and associated duties of care and liabilities;
- legal due diligence issues associated with intellectual property rights, technology acquisition, outsourcing arrangements, contractual rights, and commercial obligations;

- Year 2000 disclosure obligations, including those associated with auditors, regulators and trading partners/customers; and
- proactive legal structures and processes to facilitate and promote risk management and remediation, including the use of alternative dispute resolution mechanisms such as mediation and arbitration.

In order to help foster public discussion and understanding of these issues, the Canadian Bar Association has posted a framework for Year 2000 legal issues on its Web site (www.cba.org/abc).

Allow as much time as possible to finalize testing and, as early as possible in 1999, the development of contingency plans. In light of the above, we urge every business executive to adopt a formal action plan—a systematic approach towards preparedness in a time frame that would allow as much time as possible to finalize testing and, as early as possible in 1999, the development of contingency plans. Businesses should be prepared to formulate strategies for the disclosure of relevant information to auditors, shareholders, government agencies, applicable industry regulators, trade associations, insurers, affiliated businesses, suppliers, customers, commercial intermediaries, and information technology product and service providers. The Task Force believes that all interested parties must promptly co-operate to achieve and implement Year 2000 preparedness in practical commercial ways that deliver remedial results and that both mitigate and minimize the commercial and economic impact of any Year 2000 problem that may arise.

	1996	1997	1998	1999
Inventory				
Assessment				
Conversion or Replacement				
Testing				• ••
Contingency Plans				
Key Partners' Preparedness				

RECOMMENDATION 1:

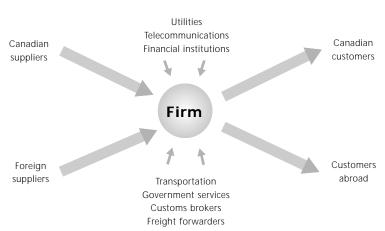
A formal action plan for Year 2000 preparedness, if not already in place, should be immediately implemented by every business leader, chief executive officer, president and business owner. This plan should include, at a minimum:

- inventory of all systems
- assessment of systems
- conversion or replacement
- testing
- contingency plans
- key partners' preparedness

2. Sharing Formal Action Plans

The Year 2000 challenge is not limited to a corporation's internal preparedness. As this report has pointed out, the problem could spread along the production and supply chain

that joins business partners, intermediaries, customers and suppliers. The Task Force recognizes that even a few critical links that are not Year 2000-prepared could have a detrimental impact on the entire supply chain, and could jeopardize the timely delivery of a product or service.



The Supply Chain

The Conference Board's analysis provides ample evidence of the importance of the vertical integration and linkages among businesses, their customers and suppliers in our economy. It also emphasizes the importance for Canadian firms to enquire into the state of preparedness of their partners, not only in Canada but abroad, particularly in the United States.

The appropriateness and benefit of openness will be contested by those who believe that this type of information is sensitive. Companies who are well on their way to preparedness may resist sharing their formal action plans in case their competitors would gain access to them. Because of the potential economic consequences of unpreparedness on the national economy as well as on individual firms, Task Force members have strongly opted in favour of transparency with due regard for particular legal and commercial circumstances. Firms that are well on their way to preparedness, because of strong management leadership and a sound work plan, have little to fear. Companies should be relied upon for the smooth functioning of operations into the new millennium. This assurance should be a fundamental consideration in all dealings at every link of the supply chain.

Transparency may have an impact on long-established supply arrangements. Some companies may decide not to do business with suppliers who cannot demonstrate that they have a formal action plan to address the Year 2000 problem. Businesses may have to look elsewhere in the world for alternative markets.

In many cases, changing established business relationships is not easy and may even be disruptive in the short term. But by requiring more openness in the preparedness plans of others and by making it clear that their firms will only deal with partners who are seriously addressing the Year 2000 challenge, businesses will protect themselves and will likely gain a competitive edge. They will also exert constructive leverage throughout their business environments and sensitize firms that may underestimate the extent of their problem to the need to act immediately.

The working assumption of the Task Force is that business executives will do whatever is necessary to remain in business. Once an executive is fully aware of the challenge, he or she will rise to meet it. Consequently, the Task Force does not believe that compulsory annual disclosure of financial expenditures associated with this challenge is required in order to monitor progress. Many corporations do not have specific Year 2000 budgets. They consider this expenditure to be part of their ongoing information technology expenditures. Many had already planned to change or upgrade their systems. For others, this is an opportunity to accelerate the process. In the opinion of the Task Force, the availability of a formal action plan that a firm is prepared to share with trade partners provides an adequate method to measure and monitor progress on preparedness within the business community.

RECOMMENDATION 2:

Formal action plans and progress reports should be made available by all trade partners associated with the Canadian national supply chain, with due consideration to the particular commercial and legal circumstances of each business.

Monitoring Year 2000 Progress

T he Task Force anticipates that many firms will respond positively and immediately to its call for action. However, because of the potential economic consequences that unpreparedness could bring to the supply chain and the significant number of companies that still need to take a formal approach, the Task Force had to look at possible sources of leverage for fostering faster action.

In keeping with the practices of other countries, the Task Force concluded that those countries which manage to have strong synergies between private and public initiatives appear to be more successful.

This review also helped to focus attention on public and private authorities, or business interfaces, which appear to be most effective in accelerating Year 2000 preparedness.

- In the private sector, bankers, insurers, auditors and security commissions, as well as national business associations appear to have been the most active.
- In the public sector, regulators, legislators and political leaders were found to be the major contributors to Year 2000 preparedness.

Because of the potential economic consequences that unpreparedness could bring to the supply chain... the Task Force had to look at possible sources of leverage for fostering faster action.

1. Private Sector

Lending Institutions

Because many companies borrow money, lending institutions may exert considerable leverage to communicate the significance of the Year 2000 challenge and its potential impact on profitability.

The Task Force is encouraged that some Canadian financial institutions have already shown leadership in promoting Year 2000 preparedness. The Canadian Bankers' Association, for instance, has informed the Task Force that Canadian chartered banks are incorporating Year 2000 criteria into standard risk assessments for loans. This may promote the development of formal Year 2000 action plans and encourage companies to take the Year 2000 preparedness seriously at the management level. This practice facilitates the assessment of exposure to potential bad loans and provides financial institutions with enhanced confidence that exposure is minimized. Potential borrowers will not always be expected to table their action plans; confirmation that one is available may suffice. The determining factors may include the dollar amount of the loan sought, the extent of the borrower's potential Year 2000 exposures and plans to deal with them.

RECOMMENDATION 3:

All lending institutions, whether federally or provincially regulated, should immediately require the availability of a formal Year 2000 action plan from corporate borrowers as a prerequisite for loans, with a target implementation date of April 1, 1998.

Insurance

The Insurance Bureau of Canada (IBC) has undertaken a number of initiatives to assist its members to prepare for the Year 2000 problem. A user group has been established to allow members to share and exchange information on, for example, practices, tools, and testing approaches. An IBC committee is preparing a questionnaire to obtain basic information that will provide an insurer with a reasonable basis for assessing whether a policyholder or applicant has adopted a formal action plan, or whether the policyholder or applicant will face serious Year 2000 problems. This committee is also working on endorsement wordings that will be used to exclude coverage under certain types of policies; it would then emulate the practices followed by foreign insurance associations.

The IBC should pursue these two initiatives and implement them as soon as possible.

RECOMMENDATION 4:

- The insurance community should provide its corporate clients with early notification of the importance of the Year 2000 issue and of the requirement for the availability of a formal Year 2000 action plan.
- The insurance community should make the issuance/ renewal of an insurance policy contingent on the availability of a formal action plan.

Auditors

The Canadian Institute of Chartered Accountants (CICA) has demonstrated leadership in the area of Year 2000 preparedness disclosure.

CICA has already provided its members with an information guide developed jointly with the American Institute of Certified Public Accountants (AICPA) to assist chartered accountants dealing with their clients on Year 2000 issues. A brief discussion of the Year 2000 responsibilities of management and auditors was included in the December 1997 issue of *Risk Alert*. a non-authoritative overview of current issues provided to members in public practice. This was followed by a special edition of *Risk Alert* devoted to audit planning and practice management considerations which was distributed to members in January 1998. The first Assurance Guideline on Audit Planning, based on an AICPA publication, has been delivered to members. It deals with possible data processing errors related to Year 2000 systems problems and an auditor's responsibility to communicate control weaknesses identified during an audit. In late January 1998, CICA also released *Guidance for Directors—The Millennium Bug.*

CICA is presently preparing two additional guidelines related to the Year 2000 issue. The first outlines the required disclosure in financial statements of pertinent Year 2000 issues, while the second will outline additional audit considerations, including guidance on addressing the fair presentation of such disclosures. The Task Force urges that these two guidelines be completed and issued as soon as possible.

RECOMMENDATION 5:

The Canadian Institute of Chartered Accountants should finalize and publicly distribute its two guidelines regarding financial statement disclosure of Year 2000 issues on an urgent basis.

Securities Commissions

The Canadian Securities Administrators (CSA), which represents all securities commissions in Canada, has taken steps to exercise significant leadership in terms of disclosure of Year 2000 preparedness. Concerned that all securities commissions may not fully address risks associated with the Year 2000, in November 1997 the CSA issued a notice on the Year 2000 challenge, including a statement by the International Organization of Securities Commissions. Recognizing the importance of Year 2000 disclosure by publicly held companies, the CSA issued another notice providing Year 2000 disclosure guidance for lawyers and accountants in January 1998. It indicates that the risks and uncertainties section of the management discussion and analysis (MD&A) in annual reports would be expected to include discussion on how a company is addressing the Year 2000 challenge. This discussion would provide a clear indication that the directors of a corporation have made Year 2000 preparedness a priority.

While auditors normally carry out procedures designed to ensure consistency between the MD&A and a company's financial statements, securities commissions should assure themselves that companies under their jurisdictions are, in fact, reporting on Year 2000 issues in their MD&A and that these disclosures are adequate. The fact that the corporate world is not static adds another dimension to the disclosure of Year 2000 preparedness. The Year 2000 challenge could also impact on mergers and acquisitions. An ill-prepared company obviously may constitute a liability for any potential purchaser. Prudence would dictate that Year 2000 preparedness should be an integral component of the due diligence process practised by management before closure.

RECOMMENDATION 6:

- All securities commissions, during 1998 and 1999, should review at a minimum a 20 percent representative sample of annual reports of the companies they regulate to determine if, in fact, companies reported on Year 2000 issues in their management discussion and analysis (MD&A), and to assess the appropriateness of the disclosure.
- All securities commissions, either as a matter of regulatory mandate or administrative policy, should promote Year 2000 preparedness as a consideration in the due diligence process associated with mergers and acquisitions.

National Associations

The Task Force contacted nearly 400 national associations seeking their support: to help raise the awareness of their members about the importance of Year 2000 preparedness; to share information about what they had done to encourage their members to prepare and to ensure that their associates and suppliers were prepared for Year 2000; and to transmit recommendations they believed should be brought to the attention of the business community and governments. Some national associations have already implemented activities to raise the awareness of their members to the Year 2000 problem. The Canadian Bankers' Association, as mentioned earlier, responded to the Task Force's call for action.

The Retail Council of Canada has created its own Year 2000 task force, communicated with its membership through letters, questionnaires, offers of assistance, a scorecard for suppliers to determine their readiness, and articles in the industry magazine *Canadian Retailer*. It has also added Year 2000 information to the Council Web site and held a conference on the issue.

The Canadian Federation of Independent Business (CFIB) has demonstrated exemplary leadership. CFIB has circulated a bulletin to over 100,000 individuals, initiated a survey of 88,000 members and is featuring the Year 2000 preparedness plan prominently on its Web site.

L'Order des comptables agréés du Québec has organized a successful series of seminars in co-operation with the Quebec Ministry of Industry, Commerce, Science and Technology, and the Canadian Bankers' Association.

The Information Technology Association of Canada and the Canadian Information Processing Society, as Canada's key information technology industry and professional associations, have also demonstrated significant leadership in making a concerted effort to raise public- and private-sector awareness of the problem.

As well, other associations have responded to the Task Force's call for action by inviting members of the Task Force to address their executive members and by mailing the *Countdown*



letters

- questionnaires
- industry magazines
- conferences
- scorecards
- Web sites
- seminars

document to their members. This document, produced by the Task Force, emphasizes the urgency of immediate action and can be found on the Internet at (strategis.ic.gc.ca/sos2000).

These are only a few examples of a wide range of activities undertaken by associations. In general, however, the actions taken by associations fell short of Task Force expectations. The mandate of most associations is primarily to support their members, promote their interests and respond to their needs. In this instance, however, because of the urgency and seriousness of the Year 2000 issue, associations are invited to play a leadership role—a role their members are entitled to expect. National associations, which cover whole sectors of the Canadian economy, can sensitize their membership to the problem, disseminate tailored information on key resources and share best practices. They can foster partnership among firms in the same region and with similar systems to cut costs and help them enter the 21st century with a competitive edge. The Task Force urges them all to act immediately.

RECOMMENDATION 7:

National, provincial and regional associations should immediately take a more proactive awareness and support role on Year 2000 preparedness and publicly report on initiatives taken, if they have not yet done so.

Our Largest Trading Partner

Nearly 40 percent of Canada's income derives from exports of goods and services and it provides employment for one in three Canadians. In 1996, Canada-US trade alone accounted

for over 75 percent of our exports and in the same year, US goods and services made up over 70 percent of our imports. Because we are each other's largest trading partner, it is vital to the health of our economy and key to our future prosperity that the linkages with the US not be disrupted as we enter the 21st century. The fact that close to half of the Canada-US trade is intra-firm may provide confidence, but businesses should not be complacent. Much is at stake.

The Minister of Industry has already raised the importance of the Year 2000 issue with his US counterpart and there is strong interest in a bilateral initiative on the question. It is now up to the private sector to rise to the challenge and take advantage of this opportunity.

The Task Force suggests that the Business Council on National Issues (BCNI), with its influential membership of Canadian business leaders, promote collaboration among key Canadian and American chief executive officers to build strategic linkages and examine Year 2000 challenge priorities. Clearly, their focus should be the mission-critical economic sectors upon which our flourishing cross-border trade depends.

RECOMMENDATION 8:

The Business Council on National Issues should address the Year 2000 challenge, and particularly its effect on strategic Canada/US business linkages. The focus of such a bilateral initiative would be on mission-critical economic sectors and issues.





Media and Communications

To encourage the private sector to transform awareness into formal action, the Task Force has already begun implementing a \$4-million communications campaign. The campaign consists of three key elements: public relations, direct marketing and advertising. In the public relations component, the chief executive officers of the Task Force will communicate the call for action to key sectors of the business community across Canada. The direct marketing approach, led by the Stentor Alliance and the chartered banks, will target presidents or decision makers of all small and medium-sized enterprises by using regional telephone companies mail distribution as well as branch bank customer services. The advertising strategy will focus on the urgent nature of the Year 2000 problem and urge businesses to act, *now*.

Eighty percent of the Task Force budget is directed to the communications strategy which focuses attention on the challenge. We invite stakeholders to join forces in support of the Task Force's efforts to turn awareness into action.

Every business in Canada, including the media, has a role to play in convincing others that it is in their best interests to act now. Businesses can support the Task Force recommendations and encourage financial institutions, insurers, securities commissions and auditors that will require or support the availability of formal action plans as part of doing business. They can press national associations to become more proactive in challenging their constituencies to take formal action. They can urge federal, provincial and municipal governments to be

Every business in Canada, including the media, has a role to play in convincing others that it is in their best interests to act now. transparent about their state of preparedness. They may also wish to indicate that they have little tolerance for those elements of the supply chain that are not ready.

The media is also involved in the Year 2000 challenge. Not only do electronic and print media rely on sophisticated timesensitive digital technology in their day-to-day operations, but they are key instruments of support for this national priority. The media should continue to report on the efforts of all parties in meeting this challenge and monitor the effective implementation of Task Force recommendations. In addition, the electronic and print media could develop and distribute regular messages of public interest to increase awareness and encourage action.

RECOMMENDATION 9:

- All businesses, in their public communications and marketing campaigns should:
 - a) promote the implementation of the recommendations formulated by the Task Force to both private- and publicsector authorities;
 - b) aggressively reach out to the various components in the supply chain, demonstrating that they are preparing for the Year 2000 challenge and are expecting the same involvement from their trading partners.
- All national media should continue to address and communicate issues that are related to Year 2000 preparedness in Canada.

2. Governments

State of Preparedness

The Task Force's mandate does not include assessing the preparedness strategies of governments. But the central role that governments play in our economy and the influence they can have on the business climate must be taken into account when addressing the Year 2000 issue.

Many government systems and services affect private-sector Many governsupply and production chains. Electronic tax filing, financial transactions, custom controls, water and sewers are examples of services and interactions that must continue to be available to businesses without interruption as we move into the next millennium. Preparedness of many government services is key as it represents the backdrop for business preparedness. At the federal level, over \$1 billion will be spent on computer systems to ensure continuity into the 21st century.

> A strong accountability framework has recently been put in place at the federal level. The Auditor General was instrumental in highlighting the federal government's preparedness efforts and tabled a comprehensive report, Information Technology: Preparedness for Year 2000, in Parliament in October 1997. This report urged aggressive action on the part of government, engaging ministers and possibly striking a parliamentary committee to champion Year 2000 projects.

> The House of Commons Standing Committee on Public Accounts recognized the importance of the Auditor General's report and immediately put in place a powerful accountability

ment systems and services affect privatesector supply and production chains.

framework. It invited the Treasury Board Secretariat, the coordinator of the federal government Year 2000 efforts, to report regularly and systematically on progress—focusing particularly on systems critical to the delivery of essential federal services to the general population and to the business community. The Task Force applauds these efforts to inject more transparency into preparedness efforts and to subject progress reports to public scrutiny.

The Task Force believes that the examples set by the Auditor General and the Public Accounts Committee constitute best practices. Where applicable, these could be used as prototypes by legislative committees at the provincial level, since provincial governments provide equally extensive and critical services to the business community.

Municipalities should also join the effort and adopt a transparent process that allows local businesses to monitor the evolution of municipal preparedness. That preparedness, too, should be based on a solid work plan with a focus on missioncritical operations.

RECOMMENDATION 10:

- The House of Commons Standing Committee on Public Accounts should continue to scrutinize the evolution of the state of preparedness of federal government systems.
- Provincial legislative bodies, where applicable, should initiate a similar transparent process through which provincial institutions would report regularly on progress achieved

(cont'd)

The Task Force applauds efforts to inject more transparency into preparedness efforts

- Provincial authorities should ensure that municipal authorities put in place transparent reporting mechanisms.
- Municipal authorities should take the initiative to immediately implement transparent reporting mechanisms.

Lending Bodies

The federal and provincial governments manage programs that resemble those offered by certain financial lending institutions. If the private sector were to require the availability of a formal Year 2000 plan as a prerequisite for loans, then similar government programs could institute a similar practice.

Indeed, in our view, all levels of government should make their grants and contributions, loans and loan-guarantee programs conditional upon the availability of a formal Year 2000 plan. Institutions such as the Business Development Bank of Canada, and federal programs such as the Technology Partnerships Canada program or the Industrial Research Assistance Program could become important partners in support of Year 2000 preparedness.

Governments, like financial institutions in the private sector, would not be expected to endorse or reject such plans. But the message would be clearly heard by the private sector: *A Year 2000 preparedness plan is a national priority and you are expected to be ready.*

RECOMMENDATION 11:

All levels of government should require their lending bodies/ programs to make the existence of a formal Year 2000 action plan a condition for securing grants, contributions, loans and loan guarantees, where applicable.

Technology-intensive Initiatives

Technical resources and financial resources are becoming scarcer as efforts to address the Year 2000 computer issue intensify. An increasing number of companies are delaying or postponing major system changes or acquisitions to fund their Year 2000 repairs.

Businesses have many information interfaces with government, such as payroll taxes and harmonized sales taxes. Major changes to interfaces that require reprogramming could adversely affect a firm's ability to meet the Year 2000 challenge. For this reason, governments are invited to assist and take whatever precautions they consider necessary to limit the impact that government initiatives could have on electronic interface systems. The Task Force is not asking governments to withhold the introduction of worthwhile changes; however, an impact analysis prior to a final decision on an initiative should be undertaken.

RECOMMENDATION 12:

Before introducing legislation or regulatory changes, all levels of government should consider the impact they may have in terms of reprogramming information systems and diverting resources away from Year 2000 preparedness efforts.

Statutory and Regulatory Powers

Canadians will expect every possible effort to ensure that they have ongoing access to the protection, information and services to which they are entitled.

Governments have a number of statutory and regulatory requirements that could be contravened if companies' operations are impaired by Year 2000 problems. For example, at the federal level, regulations require that both drugs and perishable food products display an appropriate expiry or "best before" date on packaging. They also require that safety performance criteria for aircraft, which rely heavily on computer systems to monitor and control operations, must be met before a licence is granted.

Both businesses and regulators have an interest in ensuring that Year 2000 problems will not negatively impact on compliance with the law. It is the responsibility of businesses to abide by laws and regulations, but if some businesses fail to meet their requirements because of the Year 2000 problem, then the ultimate objectives of the law and regulations are defeated. Canadians will expect every possible effort to ensure that they have ongoing access to the protection, information and services to which they are entitled, and that laws and regulations are met. Regardless of whether or not regulatory agencies have the power to require their regulated industries to act toward Year 2000 preparedness, these agencies can play an important role by bringing the challenge to the attention of industry, and by indicating that they expect preparedness by the turn of the century.

The Task Force commends the early actions taken by the Office of the Superintendent of Financial Institutions (OSFI), the primary regulator of federal financial institutions. As early as 1996, the OSFI staff started reviewing Year 2000 plans as part of their examination process. In October of the same year, the Office wrote to all the financial institutions it regulated to report on its findings. In September 1997, the Office again wrote to all financial institutions to update them on developments since October 1996, to provide them with a compendium of best practices and to inform them of the OSFI's plans for proceeding with a continued assessment of the Year 2000 preparedness of individual institutions.

In addition to these ongoing initiatives, the OSFI recently distributed to banks, trust and loan companies, and insurance firms documents issued by the Basle Committee on Banking Supervision and the International Association of Insurance Supervisors. This material outlined the need for financial institutions to ensure that their systems are ready for the millennium.

The OSFI should be congratulated for the very proactive and forceful approach it has adopted to focus the senior management of financial institutions on Year 2000 issues. The Office has created and maintained a strong momentum and its approach could serve as a model, where applicable, for other federal regulators. The Task Force also urges provincial regulators, who may not yet have done so, to adopt a similar approach, particularly because inadequate preparation by many of the industries they regulate could have a very negative impact on local economies.

RECOMMENDATION 13:

Regulators at all levels of government should:

- complete, by April 1, 1998, an assessment of the impacts that Year 2000 computer failures in their regulated industries would have on their regulatory objectives;
- revise, where appropriate, their compliance assessment procedures; and
- exert, wherever possible, moral suasion on the importance of Year 2000 preparedness.

Human Resources-Immigration

The Task Force recognizes the human resource challenges and skills shortages that face the Canadian economy in addressing Year 2000 preparedness. In order to meet industry demand for labour in this highly specialized and competitive market, public policy initiatives should be considered that will aggressively promote the availability of such skills in the Canadian labour market. Such initiatives should include increasing Canada's access to workers with the necessary skills outside of Canada.

RECOMMENDATION 14:

The governments of Canada and Quebec should adopt immigration laws, regulations and policies to create a specific category of temporary employment authorization permitting persons with specialized Year 2000 skills and experience to work in Canada exempt from the employment validation process, thereby permitting foreign workers to secure such temporary employment authorization directly at a port of entry.

Revenue-neutral Tax Initiatives

Governments are already incurring significant costs to prepare their own systems for the Year 2000. Canadian taxpayers should not be expected to also bear the burden of the private sector's efforts to address the Year 2000 problem, which is fundamentally a business issue. Clearly, these preparations are an expense that all businesses, worldwide, must incur to remain competitive.

The Task Force notes, however, that because of the urgent need to turn the current high state of awareness into immediate formal action, all possible levers must be explored. The federal tax system is such a lever as long as any tax initiative is revenue neutral. In order to be timely, any tax measure would have to be introduced at the earliest possible date. Initiatives might include an accelerated write-off for Year 2000 preparedness expenditures. The Task Force notes that it may be appropriate to target these incentives primarily toward small and mediumsized businesses.

RECOMMENDATION 15:

The federal government should consider introducing revenueneutral tax encouragement measures with a primary focus on small and medium-sized enterprises (SMEs) as early as possible.

Communications

Sharing relevant Year 2000 management and technical information is one of the most powerful instruments. Sharing relevant Year 2000 management and technical information is one of the most powerful instruments at the disposal of governments and businesses in preparing for the Year 2000. The Task Force review of approaches used by other countries provided useful examples of information-sharing initiatives. Using the Australian government's remarkable Year 2000 Web site as a model, the Task Force supplemented Industry Canada's Strategis Web site—which already contained relevant Year 2000 material. This site has now become one of the most important Year 2000 information gateways in Canada for business people.

Because of their vast infrastructure of offices across the country, governments can be extremely helpful in reaching out to the business community. The Government of Canada has already established for the Task Force a toll-free telephone service (1-800-270-8220). Other governments' departments could assist by helping reach their constituencies in every jurisdiction. The Task Force will share its documentation with government authorities who will want to add their support to the Year 2000 challenge.

RECOMMENDATION 16:

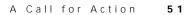
In all jurisdictions, government departments and agencies that are in a position to influence businesses should disseminate and facilitate access to Year 2000 information and support services, including Task Force material.

Legislative Bodies

Although the Task Force considers that Year 2000 preparedness is fundamentally a private-sector matter, public authorities should also assume their share of leadership in implementing recommendations.

The Task Force has observed that by implementing transparent parliamentary accountability structures, the parliamentary process can become a powerful instrument in focusing public attention on those who act and on those whose efforts are inadequate. This was effectively demonstrated by the thorough examination by the House of Commons Standing Committee on Public Accounts of the Auditor General's report on the federal government's preparedness.

Through televised proceedings and regional or local public hearings, federal and provincial legislative bodies can put preparedness under useful public scrutiny. They can invite business associations, municipalities, utilities, and crown corporations to report on their Year 2000 preparedness status. Federal and provincial regulators could also report on their actions to encourage industries under their jurisdiction to



prepare for the Year 2000 or to communicate possible consequences that could arise if they are not ready.

The Year 2000 challenge transcends management-labour boundaries. Employees, either through their unions or on their own, should have ample opportunity to express views on these issues. They have a legitimate interest in their employer's state of preparedness and plans to solve the problem.

Consumers can exert considerable influence on businesses that have not adjusted to the Year 2000 imperative.

Consumer groups, as key stakeholders outside the mandate of the Task Force, have a great deal of economic influence. They could also be invited to provide their views about ways to persuade businesses to prepare and to develop products that are Year 2000-ready. Consumers can exert considerable influence on businesses that have not adjusted to the Year 2000 imperative. Consumer allegiance takes a long time to build; by not acting immediately, businesses could lose that allegiance very quickly.

RECOMMENDATION 17:

- Canadian and provincial legislative bodies should hold public hearings, inviting national or regional associations, relevant government authorities and others able to exert influence on the private sector, to report on their efforts to encourage their constituencies to meet the Year 2000 challenge with formal action plans.
- The Task Force report and recommendations should be brought to the attention of the Prime Minister and the provincial premiers.

3. The Next Steps

On December 8, 1997, when the preliminary results of the Statistics Canada survey of private-sector preparedness were first made public, Canadian businesses received a loud wakeup call. They were told that urgent and sweeping formal actions were required and that our national competitiveness was at stake. The Task Force hopes that the wake-up call, together with the implementation of the recommendations contained in this report, will create enough momentum to encourage businesses to launch formal actions immediately.

With the production of this report, the ongoing communications strategy that the Task Force is implementing, the release of the final Conference Board of Canada analysis in February, and the contribution of the Canadian Bar Association in April, the Task Force considers that it has met much of its mandate. However, it remains to be seen how Canadian businesses will respond to our challenge to accelerate their preparedness. A major factor will be the extent to which our various recommendations will have been implemented. It is imperative that we meet one more time in May 1998 to look at the situation at that point. Statistics Canada could contribute significantly during this last stage by repeating its survey of preparedness in April.

RECOMMENDATION 18:

Statistics Canada should be requested to repeat its survey of preparedness in April 1998, in order to provide the Task Force with an opportunity in May 1998 to assess the progress achieved, both on the state of preparedness of Canadian businesses and on the timely implementation of its recommendations to that point.

Conclusion: The Way Ahead

T he publication of this report marks the high point of the Year 2000 Task Force's mandate to assess the nature and scope of the Year 2000 electronic challenge and the state of business preparedness to meet this challenge. The members of the Task Force are satisfied that they have also provided leadership and advice on how the risks associated with the Year 2000 problem can be avoided, reduced or responded to in commercially constructive ways.

Because of the urgency and the magnitude of the task, this report is presented four months earlier than originally planned. By accelerating its work, the Task Force has also tried to impress upon all concerned the urgency of the situation and the scarcity of time available to ensure that the majority of Canadian private companies and institutions are ready. Our aims in reporting earlier than planned were essentially to move the recommended accountability framework into motion as quickly as possible and to share our information with Canadian business people to help them minimize their costs and speed up their preparedness.

But this report from the Task Force should not be interpreted as either the solution or the end of efforts to tackle the problem. Much remains to be done before Canadian business will be ready to enter the new millennium. Indeed, the number of companies that have yet to take appropriate action far exceeds the number of companies that have put in place the necessary formal action plans and structures. The greatest effort and the largest outlays of money and deployment of resources still lie in the future. Difficult decisions still need to be made. The longer firms and institutions delay before acting decisively, the more difficult and uncertain will be the result for all of us. Canadian businesses must act now. There is simply no alternative to being ready. And in today's highly competitive global economy, unprepared companies can expect no reprieve and no mercy.

Canada has been one of the great success stories of the 20th century, in part because of generations of entrepreneurs and managers with foresight and wisdom—who used technological innovation to enhance the competitiveness of their businesses. Today's business leaders must exercise the same foresight and the same wisdom to help Canada enter both a new century and a new millennium.

As members of the Year 2000 Task Force, as business executives, but above all as concerned Canadian citizens, we strongly urge Canadian business people to turn this report into an instrument for immediate and determined action.

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Appendices

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Mandate

The mandate of the Minister's Task Force is to provide an assessment of the nature and scope of the challenge in key sectors of the Canadian economy and the state of industry preparedness to deal with issues related to Year 2000 computer risks, and to provide leadership advice on how these risks could be reduced. The purpose of the Task Force is to foster industry ownership of the issue and action to ensure business preparedness and public confidence.

Deliverables

The Task Force will address the following questions and report back to the Minister of Industry no later than May 1998:

- What is the state of industry preparedness to deal with issues related to the Year 2000 computer challenge by key sectors of the economy? For the economy as a whole?
- What economic advantages would Canada derive from a leadership position on Year 2000 preparedness? Where are the greatest risks of an inadequate state of preparedness in the economy? What actions are being taken to mitigate these risks by those involved and what more needs to be done and by whom?
- What are the key economic sectors where Canada is taking a leadership position and what are those where steps must be taken to minimize the potential for economic disruption? What measures to address Year 2000 problems are being implemented in these sectors now? Are these measure adequate and if not, what more needs to be done and by whom?
- Are there any cross-border issues involved and if so, what are they? Are measures being implemented to address these issues? Are these measures adequate and if not, what more needs to be done by whom?

• How do we accelerate a commitment by senior executives to be personally committed to the resolution of this issue?

The Task Force will also be asked to provide input into the design of a Statistics Canada survey which will provide a confidential quantitative assessment of business readiness by key economic sectors. The results of the survey will, in turn, assist the Task Force in answering some of the questions listed above.

Membership

The Task Force will be made up of a small group of the senior executives of firms in Canada's key economic sectors. The Government of Canada's Chief Information Officer will serve as an ex-officio member to facilitate the exchange of information between the private and public sectors.

Secretariat

The Secretariat will be responsible for organizing the formation of the Minister's Task Force and providing secretariat support to the Task Force throughout its tenure. It will act as the departmental spokesperson for Industry Canada with respect to the Year 2000 issue; carry on outreach activities; engage key government stakeholders, both federal and provincial, who are responsible for economic sectors likely to be impacted by the Year 2000 issue; represent Canada in international fora; and assess appropriate next steps once the final report is delivered.

Web Sites Referenced in This Report

Canadian Bar Association (CBA) http://www.cba.org/abc

Canadian Information Processing Society (CIPS) http://www.cips.ca

Canadian Federation of Independent Business (CFIB) http://www.cfib.ca

Canadian Institute of Chartered Accountants (CICA) http://www.cica.ca

Computing Services and Software Association (CSSA) http://www.cssa.co.uk/cssa/index.htm

The Conference Board of Canada http://www.conferenceboard.ca

General Services Administration (GSA) http://x500gsa.gsa.gov

Information Technology Association of America (ITAA) http://www.itaa.org

Information Technology Association of Canada (ITAC) http://www.itac.ca

Office of Government Information Technology (OGIT) Australia http://www.ogit.gov.au

Strategis http://strategis.ic.gc.ca/sos2000 http://strategis.ic.gc.ca/year2000