

**Case for Action
For an Information Management Strategy
For the Government of Canada**

Prepared for

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This Case for Action discusses the importance of information management in the Government of Canada and proposes that a strategy be developed to improve the government's information management infrastructure.

**Final
May 10, 2002**

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A 'Case for action' for an Information Management strategy for the Government of Canada

Executive Summary

The Government of Canada's (GoC) ability to meet its public policy and management goals is at risk due to current Information Management (IM) practices. Experts agree that the GoC's IM needs to be addressed on an urgent and comprehensive basis in order to support important goals such as Canada's international competitiveness, and key programs such as Government On-Line (GOL).

Citizens want the government to respond to their needs and provide one-window, integrated access to information and information-based services via Internet (GOL), telephone, mail, or in person. While an improved IM infrastructure is needed to deliver excellent service to Canadians in a cost-effective way, GoC employees at all levels will also accrue significant benefits related to their job satisfaction and quality of life.

A number of key concepts underpin this important issue, including:

- Government information is a crucial and valuable asset that needs to be managed.
- The government's *capacity* to effectively manage its information resources requires urgent strengthening.
- There is a growing dependency on electronic information within the GoC.
- The private sector and other governments have already taken action.
- The GoC must take action now.

This document explores the issues surrounding this urgent need for action, and reveals the role that a strong unilateral action can play in mitigating risk of incident or failure and contributing to the achievement of the GoC's major policy goals.

1. The Government's Goals Are At Risk

1.1 The Government of Canada (GoC) is in the information business. Its ability to respond to the needs of Canadians depends on how well it can **create, use and preserve information** to make decisions and take action to achieve its operational and strategic goals.

1.2 Those goals **are at serious risk**, however, as a result of weak information management (IM):

- Deputy Ministers and other managers face the risk that **major restructuring and program delivery initiatives may fail** due to poor quality information.
- Public servants are worried about **how to cope with an overwhelming volume and variety** of e-mails, documents, records and files – and how to know what is important and what is not.

- Technology specialists know that costly **systems and applications often fail** because the information and data are unreliable.
- Citizens and users are concerned that information to which they have a right is often **unavailable, inaccessible, inaccurate, incomplete or out-of-date**.

1.3 **Poor information management threatens all business processes and public programs** including Government On-Line (GOL) and other service delivery activities, economic development initiatives, health care programs, environmental projects, citizenship development and heritage programs and efforts to protect the safety and security of Canadians in a post-September 11 world.

1.4 The GoC is developing an advanced *technology infrastructure* to support its policy and program priorities. **The Internet and other technologies are useless**, however, if the needed information has not been created, cannot be found or is untrustworthy. It is the *information infrastructure* on which the achievement of GoC priorities ultimately depends. Information technology authority Paul Strassmann said that investment in computer systems should take place only after "information management has been made more effective".¹

1.5 **The sections that follow outline the key reasons** why the Government must improve the management of its information resources to achieve its strategic and operational goals. Simply stated they are:

- Current IM practices put at risk the GoC's ability to meet its public policy and management goals.
- The information the GoC has is a valuable asset which is not being well managed.
- The GoC is wasting over \$800 Million annually because of inadequate IM.
- The GoC's current IM practices are and will continue to undermine and erode citizens' trust in their government.
- Numerous respected authorities have indicated that the GoC's IM is poor and needs to be addressed on an urgent and comprehensive basis.
- The GoC is not keeping up with other governments' IM initiatives and this will impact Canada's international competitiveness.
- The private sector is ahead of the GoC in its IM practices and is waiting for the GoC to catch up.

1.6 The Government of Canada must, as a high priority, **develop an effective strategy** to deal with these issues and improve the management and value of its information resources.

¹ Paul A. Strassmann, "The Value of Computers, Information and Knowledge", 1996;
<http://files.strassmann.com/pubs/cik/cik-value.shtml>

2. The Government's Policy and Management Goals Depend on Good IM

2.1 The government's **major policy goals**² depend on the availability of high quality information:

- **Building a world-leading, competitive economy** must be based on innovation, partnerships and advanced literacy skills; a "smart" workforce is one that is able to create, use and preserve information and knowledge with technology as a major enabler; trade agreements depend on accurate and persuasive information (e.g. defending Canadian practice in NAFTA disputes³)
- **Making quality health care services available** requires the development, integration and dissemination of timely and relevant health-related data, maintained in well-managed information systems; (e.g. health records, health care information⁴);
- **Ensuring a clean, healthy environment** for Canadians requires comprehensive documentation and the sharing of information among governments and other bodies to protect the quality of air and water and ensure the sustainable management of our natural resources (e.g. the Canadian Environmental Assessment Agency's Federal Environmental Assessment Index⁵);
- **Maintaining the safety and security of Canadians** depends on gathering, sharing, analyzing and acting on reliable information about external and internal threats while protecting personal privacy and other rights (e.g. DNA Databank⁶); as well, plans to "ensure the continued availability of essential information" in the event of a disaster are absolutely essential in order to maintain key internal functions and public services (e.g. guidelines produced by the Office of Critical Infrastructure Protection and Emergency Preparedness⁷)
- **Enhancing a shared sense of citizenship** means increasing the access by Canadians to information about their country and about Canadian values, traditions and heritage (e.g. Canada Place⁸) it also requires enhanced opportunities for Canadians to participate in their own governance through two-way government-citizen communication and informed choices.

² As identified in the *Speech from the Throne*, January 30, 2001; http://www.ddt-sft.gc.ca/sft-ddt/sft-ddt2001_e.pdf

³ see under Foreign Affairs and International Development, http://www.dfait-maeci.gc.ca/nafta-alena/menu_e.asp

⁴ for an example of inter-jurisdictional information sharing see the Canadian Health Network, <http://www.canadian-health-network.ca/customtools/homee.html>

⁵ see under Canadian Environmental Assessment Agency, http://www.ceaa-acee.gc.ca/0009/index_e.htm

⁶ DNA Databank, RCMP, <http://www.rcmp-grc.gc.ca/dna/new-e.htm>

⁷ see Office of Critical Infrastructure Protection and Emergency Preparedness; http://www.ociepc-bpiepc.gc.ca/pub_communi/self_help_ad/booklets/book_thepres_e.html

⁸ see the Canada Place web site (sponsored by Heritage Canada and supported by other government departments and the private sector); <http://www.canadaplace.gc.ca/>

2.2 Canada's **management goals** (in ***Results for Canadians***⁹) are information-dependent, including:

- Ensuring a **citizen focus** – Citizens want the government to respond to their needs and provide one-window, integrated access to information and information-based services via Internet (Government On-Line¹⁰), telephone, mail, or in person. In serving the public, “knowledge partnerships” are needed based on the sharing of information across departmental boundaries, across government levels and with the private and not-for-profit sectors.
- Demonstrating strong **public service values**, including:
 - *Respect for democracy*: public servants must provide ministers, Parliament and the public “with full and accurate information on the results of [their] work.”;
 - *Professional values*: staff need to provide high quality, impartial information and advice to government leaders, using information and knowledge management skills to identify policy options and associated benefits and risks; good IM skills define a “world class information workforce”;
 - *Ethical values*: values such as openness, transparency and accountability depend on the expectation and ability of public servants to be **stewards** of information, providing full, accurate and understandable information within government and to the public, the media and others;
 - *People values*: a civil, caring and fair public service has to be supported by continual dialogue and learning, based on the sharing of information and knowledge.
- **Managing for results** – The foundation of results-based management is “accurate and timely performance information” that “measures, evaluates and reports on key aspects of programs and their performance in core areas”;
- **Responsible spending** – ensuring modern comptrollership and effective financial management depends on full and accurate documentation for expenditure accounting, audit and evaluation and the management of risks. Operational, financial, human resource and other data must be available, reliable and effectively linked to support future planning and decision-making.

⁹ *Results for Canadians: A Management Framework for the Government of Canada*, Treasury Board, 2000; http://www.tbs-sct.gc.ca/res_can/rc_e.html

¹⁰ Government On-line, Treasury Board Secretariat, http://www.gol-ged.gc.ca/index_e.asp

3. Information is a Valuable Asset That Must be Managed

3.1 The GoC has a huge investment in information and data, in intellectual property and in related information technology. Like other government resources – people, money, facilities and equipment – **government information is a crucial asset** that needs to be managed, protected and exploited. Although it is not easy to assign a dollar cost to information assets, it is estimated that **more than half** of the payroll dollars in government are expended on information-intensive activities.¹¹

3.2 **Information exists in many tangible forms** in the Government of Canada – in business records, documents and data maintained in electronic, paper and other forms stored in automated and manual systems using a variety of traditional and new technologies. It also exists in forms that need to be captured and shared (e.g. the knowledge and experience of GoC staff.)

3.3 Well managed information is a strategic resource that:

- supports the development, delivery and assessment of all government **programs, policies and services**;
- enables the government to make **decisions** and take **action** to achieve its objectives;
- documents and protects the government's, public's and others' **legal rights and obligations**;
- provides the basis for demonstrating government **openness** and **accountability** and earning **public trust**;
- represents the government's **corporate memory**;
- enables the successful **deployment of information technology**;
- represents investment in **intellectual capital** with substantial financial value.

3.4 Examples of the many uses of information include:

- developing and implementing inter-governmental **agreements**;
- determining pension and other **entitlements** for Canadians,
- supporting land claims and other **litigation**,
- enabling grant program **reporting and assessment**,
- providing **public access** to government services,
- planning new economic **development strategies**,
- verifying Canadians' right to vote in federal **elections**,
- documenting the government's **accomplishments**,
- describing Canada's **history and development**,

and in countless other ways in which government constantly creates, uses and preserves information to perform its many functions.

¹¹ Paul A. Strassmann, "The Value of Computers, Information and Knowledge", 1996;
<http://files.strassmann.com/pubs/cik/cik-value.shtml>

3.5 *Managing information* means taking an effective, efficient and systematic approach to creating, using and preserving information, including how the government:

- **determines** its information needs and creates, captures and acquires information;
- **distributes** and **exchanges** information;
- **analyzes, evaluates and uses** information;
- **documents** its business activities and decisions;
- **identifies, organizes, stores, accesses and disposes** of information;
- **protects** confidential information and personal privacy; and
- **preserves** information with long-term value to government and society.

3.6 *Managing information* means **integrating IM into all business processes** as well as into the design and operation of information technology systems.

3.7 Good information management requires **a strong infrastructure of policies, standards, practices, tools and people.**

4. The Government's Information Assets are at Risk

4.1 There is strong evidence that **the government's capacity to manage its information resources effectively requires urgent strengthening.** Departments are concerned that:

- needed information is **not always acquired, cannot be found or is unreliable;**
- key activities and decisions are **not properly documented;**
- information is **not shared** when needed;
- privacy and security are **not adequately protected;** and
- valuable information is **not preserved.**

4.2 The concerns about IM are being exacerbated because of the **growing dependency of the Government on information in electronic form.** Electronic information is fragile and its integrity is dependent upon a confusing and quickly changing array of hardware and software. Unless carefully managed and protected, the government will be unable to guarantee its availability, authenticity and usability across time and space.

4.3 The consequences of not having in place an effective means for managing information undermines the ability of government to deliver its programs and services and meet its accountability requirements. Poorly managed information heightens the **risk** to these programs and services, increases the **costs** of their management, and leads to **lost opportunities.**

4.4 Poorly managed information can increase the **risk** to programs and services because it undermines and erodes trust. **Citizens will be unable to trust in the decisions and choices they may be making** about securing entitlements, accessing services, and reacting to government policies and directions if they can't trust the information they are accessing or retrieving.

4.5 The lines between government, citizens and the various non-government sectors of society continue to blur with the advancement of the Government On-line agenda and increasing collaboration and partnerships. **The need to maintain trust and confidence has never been greater.** If the Canadian Government is unable to guarantee the effective management of the information that underpins a trustworthy environment, then the trust citizens and others have in their government will diminish and the very foundations of democratic governance will begin to crumble.

4.6 From an asset management perspective, poorly managed information incurs huge costs in the workplace. Based on industry estimates (2000), knowledge workers spend 20 percent or more of their working hours managing document-based information¹², e.g., creating records, searching for files, retrieving documents, filing reports, re-creating lost documents, using e-mail.¹³ As an example, business (and likely government) use of email has jumped six-fold since 1995.¹⁴ Employees receive an average of 30 emails daily and spend an average of 2 hours or more per day reading and responding to emails.¹⁵ Almost 50% of an e-mail user's time is spent dealing with "junk" email¹⁶ a "significant waste of an organization's valuable resources"¹⁷, with 86% of employees using business email for personal reasons¹⁸. When e-mail is introduced into an office, printing volumes increase by 40%¹⁹ (with the majority of printed e-mails kept in paper filing systems for "safekeeping"). E-mail is effective, one senior manager said, "if you're good at managing it"²⁰.

4.7. Mis-using or poorly managing e-mail and other documents can result in lost productivity, legal liability, confidentiality breaches, network congestion and increased stress.²¹ In a well-known study by Reuters, more than half of those surveyed felt unable to handle the amount of information they accumulated. Fifty five per cent worried about making poor decisions in spite of all the information at their disposal.²² More than one third of business professionals surveyed by Reuters suffered from stress-related health problems related to information overload.²³

4.8 Other examples of wasted time are:

¹² Gartner, Inc., Research Note (SPA-11-9200), September, 2000

¹³ Ibid.

¹⁴ Rogen International and Goldhaber Research Associates, "Balancing E-mail and Face-to-Face In Workplace Communication", April 2001; http://www.rogenint.com/impact_email.htm

¹⁵ Ibid. Another study found that 67% of workers spend at least 2 hours a day on email (Dianna Booher, *E-Writing: 21st Century Tools for Effective Communication*, 2001

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Email-policy.com; <http://www.email-policy.com/>

¹⁹ Andy Walker, "The Power of Paper", *The Toronto Star*, July 13, 2000

²⁰ Jon Chavez, "E-mail blamed for wasted work time", *Globe and Mail*, June 21, 2001

²¹ The Director of the FBI recently made the following comment about the state of information management in addressing the 'missing documents' incident connected with the Timothy McVeigh case: We simply have too little management attention focused on what has become, over time, a monumental task of managing 12 billion paper and automated records" (Louis J Freeh, Director, FBI, May 16, 2001)

²² Reuters, "Glued to the Screen: an investigation into information addiction worldwide, 1997; <http://about.reuters.com/rbb/research/addpr.htm>

²³ Reuters, "Dying for Information?", 1996; <http://www.cni.org/regconfs/1997/ukoln-content/repor-13.html>

- searching for hard to find documents wastes 1 hour per week per worker.
- manipulating poorly captured information and adapting to new uses (1.5 hours).
- updating information that is out-of-date (1 hour).
- trying to understand poorly created documents (30 minutes).
- attempting to share/publish documents (1.5 hours).
- unnecessarily storing, copying and printing documents (1 hour)²⁴

4.9 A Gartner report says that if enterprises do not bring their information under control,

“the amount of time wasted by the average knowledge worker on document-related non-value-added tasks will increase to between 30 percent and 40 percent of their time by 2003.”²⁵

4.10 Using conservative figures, **a current estimate of the annual direct cost to the Government of Canada of time wasted through poor information management is more than \$870 Million and it will increase.**²⁶

4.11 Poorly managed information also prevents the Government from pursuing the **opportunities** that well managed information would normally provide. At a time when the Government is attempting to turn the concepts of the knowledge worker and a knowledge based government into a reality, **the need to manage the information from which knowledge comes has never been greater.** Concerns have been raised, however, about the extent to which the government's IM infrastructure is capable of supporting effective knowledge management (KM).

4.12 Generally, the **heightened risk, increased costs, and lost opportunities** associated with poorly managed information will lead to the following outcomes:

- Fragmented, incomplete and unreliable information results in **poor decisions**;
- **Time wasted** finding information leads to increased overhead costs;
- Failure to produce information in response to ATIP requests has serious **legal implications**;
- Failure to preserve the authenticity and integrity of information for as long as required leads to **corporate amnesia**;
- Absence of complete, accurate, and relevant information leads to the inability to measure government **performance, transparency and accountability**; and
- Poorly managed and incomplete information leads to **lost opportunities** to exploit it to support strategic priorities, improved client relations, and migration to a knowledge-based government.

4.13 In government and business, workers are looking for help in managing information. Eighty four per cent of Reuters study respondents felt that information overload could be reduced if organizations invested in training courses specifically designed to help them

²⁴ Gartner, Inc., Research Note (SPA-11-9200), September, 2000

²⁵ Ibid.

²⁶ 240,000 public servants (per Statistics Canada) x 7.5 work hours per day x 220 work days per year = 396,000,000 hours x 10% of time wasted through poor information management (per Gartner, Inc., but using a more conservative estimate) = 39,600,000 lost hours. Based on Statistics Canada figures, the average wage of a public servant (non-military) is approximately \$22.00 per hour. As a result, the cost to the Government of the time wasted by its public servants is \$22 x 39,600,000 = \$871,200,000.

“gather, manage and use information”.²⁷ Ninety seven per cent believed their companies would benefit from information management training with better, more informed decision making, better productivity, higher levels of job satisfaction and reduced staff stress levels.²⁸

5. The Alarm Has Already Been Raised Within The GoC

5.1 A variety of authorities in the GoC have confirmed serious deficiencies in the government's capacity to manage its information:

5.2 The **Auditor General** has frequently expressed concerns about the lack of proper documentation about programs and decisions. In his final report to Parliament, then-Auditor General Denis Desautels criticized the “poor quality of records kept in departments”, the “reluctance of senior public servants to keep [certain types of] records”, the “disproportionate cuts in records management” and threats to the “institutional memory” of departments. He pointed to “a lack of key information needed to manage programs and services efficiently and effectively and report on the results.”²⁹ He noted that these and other information management problems are “eating away at the foundation of accountability in the federal government.”³⁰

5.3 **Information Commissioner** John Reid has repeatedly called attention to the “abysmal state of records management in the federal government,”³¹ and to its impact on the public's right to access government information. In his most recent *Annual Report* to Parliament, he said that a “decade or more of neglect of basic good information management has devastated the ability of departments to create, maintain and effectively use an institutional memory.” As a result, “wheels are reinvented.... the ability to audit decisions is compromised [and] the right of access to information is undermined.”³²

5.4 The concerns of the Auditor General, the Information Commissioner and others point to problems that involve **management practices** as well as the underlying **culture** of government. Serious cultural issues include a tendency to hoard information and a reticence to collaborate and share information, especially if it is negative.

5.5 The current **Access to Information Review**, to be finalized in the spring of 2002, is expected to emphasize the need to enhance information management in the GoC.

²⁷ Reuters, “Glued to the Screen: an investigation into information addiction worldwide, 1997; <http://about.reuters.com/rbb/research/addpr.htm>

²⁸ Ibid.

²⁹ Mark MacKinnon and Heather Scoffield, “Besieged HRDC gets more cash to offer loans,” *Globe and Mail*, February 28, 2001

³⁰ Denis Desautels, *Reflections on a Decade of Serving Parliament, Report of the Auditor General of Canada*, February 2001; http://www.oag-bvg.gc.ca/domino/reports.nsf/html/01menu_e.html

³¹ The Hon. John M. Reid, P.C., *Annual Report, Information Commissioner, 1998-1999*, July 1999; <http://www.infocom.gc.ca/reports>

³² The Hon. John M. Reid, P.C., *Annual Report, Information Commissioner, 2000-2001*, June 2001; <http://www.infocom.gc.ca/reports>

5.6 As well, highly publicized weak or questionable information management practices have exposed the government to substantial **financial, legal and political risk** and jeopardized the level of public trust. Examples include:

- concerns about the processing and approval of grants;
- investigations into the actions of Canadian forces in Somalia; and
- review of the safety of the country's blood supply (the Krever Commission).

5.7 In these situations, important documents were either unavailable, hidden from public view, altered or inappropriately destroyed. Although steps were subsequently taken to protect the integrity of the information in these situations, **the potential exists for similar risk or embarrassment** unless action is taken to improve the quality of information management across the federal public service.

5.8 **Treasury Board's** *IM Situation Analysis* report (2000)³³ pointed to the chief reasons that government-held information was not well managed, including:

- little **awareness** of the value of information and limited **understanding** of information management;
- the weak **alignment and integration** of departmental business, information management and technology requirements;
- **accountability and governance frameworks** for information management that are weak, inconsistent and fragmented across government;
- an infrastructure of **laws, policies, standards, practices, systems and people** to support IM that is insufficiently developed and implemented.

5.9 Other serious problems identified include the difficulty of preserving the integrity of electronic information over time and across complex and rapidly changing technology systems; and coping with a mountain of paper-based information that has *increased* with the spread of computers, printers, photocopy machines and faxes.

5.10 Federal departments and government staff are increasingly concerned and frustrated because **they do not have the resources, tools, expertise and leadership to deal with these issues**. They are looking for guidance and support.

6. Other Governments Have Already Taken Action

6.1 Nearly all of the major developed countries have recognized the issues raised in this paper and are taking concrete steps to address them. Good IM is fundamental to effective government and ultimately impacts the international economic competitiveness of countries. The GoC must ask itself if it has paid the same degree of attention to information management as have other countries. The inability to answer this question is a strong indication that **Canada is at risk of falling behind** and seriously jeopardizing its position in the highly competitive environment that characterizes on-line government at the international level.

³³ *Information Management in the Government of Canada – a Situation Analysis*, Treasury Board, June 2000; http://www.cio-dpi.gc.ca/ip-pi/policies/imreport/imreport-rapportgi00_e.asp

6.2 The Commonwealth Government of **Australia**, for instance, recognized the importance of information management as early as 1997 when it issued its report *Management of Government Information as a National Strategic Resource*³⁴. The report was the foundation for the concrete actions the Australian government is currently taking to integrate a comprehensive information management framework into its on-line agenda.

6.3 In the **United Kingdom**, the Government's white paper, *Modernising Government*³⁵, provided a vision for government modernization programs in which the effective management of information was recognized as an important cornerstone. It has planted the yard sticks further than any other developed country, including Canada, by boldly declaring that, "by 2004, all central government organizations must be able to store and retrieve their records electronically." The Public Record Office has already developed "route maps" and "toolkits" to help the UK government meet this important target date.

6.4 In the **United States**, the Office of Management and the Budget has recently issued the federal government's *E-Government Strategy*³⁶ in which it sets out an ambitious agenda that includes a range of high profile initiatives covering the life cycle management of information. Among the horizontal initiatives is the development of electronic record keeping requirements that can be included in the design of systems. In nearly all of the other initiatives described in the strategy, IM is inherently recognized as a critical design component.

6.5 In **Europe**, the European Commission is breaking down the barriers inhibiting the exploitation of information held within the individual states that form the European Union. Based on its recently released draft report, *Creating a EU Framework for the Exploitation of Public Sector Information*³⁷, the Commission is proposing strategies that will harmonize laws and policies for the re-use of such public sector information. Through this initiative the Commission is recognizing information as a rich resource the exploitation of which can promote the kind of prosperous knowledge-based society the European Community has envisioned.

6.6 At the broader **international** level, information is being recognized as the lifeblood of a global society and a global economy that transcends all countries rich or poor. Italy and Canada, respectively President of the G8 in 2001 and 2002, have been tasked to oversee initiatives focusing on the enhancement of the global information management infrastructure. Issues such as information access, knowledge creation and sharing, and content management (especially at the local level) are high on the list of issues to be addressed at the G8 Summit to be held at Kananaskis in June, 2002. There will be a serious risk to Canada's credibility if it is unable to demonstrate that its own information management 'house' is in order.

6.7 Information management is being brought to center stage in governments around the world. The GoC, however, has yet to demonstrate that it shares the same

³⁴ "Management of Government Information as a National Strategic Resource", 1997
<http://www.dca.gov.au/ogo/imsc/imscrypt.htm>

³⁵ "Modernising Government", <http://www.official-documents.co.uk/document/cm43/4310/4310-05.htm>

³⁶ "E-Government Strategy", February, 2002, <http://www.whitehouse.gov/omb/inforeg/egovstrategy.pdf>

³⁷ European Commission, "Creating a EU Framework for the Exploitation of Public Sector Information", 2001, ftp://ftp.cordis.lu/pub/econtent/docs/consultation_0102.pdf

level of urgency that its counterparts in other countries have displayed as they position themselves in an increasingly global, on-line environment.

7. The Private Sector Has Already Taken Action

7.1 Banks, insurance companies, and other private sector organizations recognize that a major element in improving business operations and stronger customer relations is the effective management of information, especially in an electronic environment. Paul Strassmann, former head of information systems at Xerox, said "It is through effective information management practices that [the managers of a firm] create all business value."³⁸ As business organizations have recognized this, so too must the Government of Canada.

7.2 The banking sector, for instance, has invested heavily in the information management infrastructure required to manage the highly critical, time-sensitive financial information that is the lifeblood of the Canadian economy. ATM machines and web-enabled banking services are testament to the dramatic shift that has taken place from paper-based transactions to transactions where the de facto record is in electronic form.

7.3 In the Health sector, **members of the Canadian Healthcare Association are advocating greater accountability through better information systems and higher quality data.** In recent reports³⁹ the Association and others have stressed the importance of information management as a critical part of the foundation required for a sustainable health care system across the country.

7.4 Still in the Health sector, the pharmaceutical industry generates significant volumes of highly sensitive research information that forms the basis for drug license applications. This predominantly electronic information is not only shared with multiple organizations around the world, it must also be retained in accordance with the life of a drug (often decades). **The pharmaceutical industry has recognized the importance of managing such information through time as well as across space** and has invested heavily in standards-based solutions that address both dimensions⁴⁰.

7.5 The Natural Resources sector also recognizes that effective resource administration and development depend on good information management. For energy-based companies, information is critical in investment decision-making, business negotiations, production management, forecasting, and financial planning. For regulators such as the National Energy Board,⁴¹ information underpins fair regulation, ensures

³⁸ Paul A. Strassmann, "The Value of Computers, Information and Knowledge", 1996; <http://files.strassmann.com/pubs/cik/cik-value.shtml>

³⁹ see, "Vision 2020 Workshop on Information and Communications Technologies in Health Care from the Perspective of Health Administrators", Canadian Healthcare Association, 2000, http://www.hc-sc.gc.ca/ohih-bis/available/documents/2020-admin_e.html and "Towards Improved Accountability in the Health System: Getting to There from Here", <http://www.canadian-healthcare.org/>

⁴⁰ see the work of the Collaborative of Collaborative for Electronic Notebook Systems Association (CENSA) <http://www.censa.org/>; see also the Therapeutic Drugs Directorate, Health Canada, <http://www.hc-sc.gc.ca/hpb-dgps/therapeut/htmleng/index.html/htmleng/index.html>

⁴¹ National Energy Board, http://www.neb.gc.ca/index_e.htm

public safety, and addresses conservation and environmental issues related to responsible, sustainable resource development. In partnership, they have developed innovative IM solutions that would be the envy of many federal government programs.

7.6 A Gartner study confirmed that **information management is a greater problem for government than for the business sector**. Among government respondents, 30% reported issues in four key "problem areas" ("siloes" information, information overload, unorganized information and ineffective/inefficient searching). This was more than double the percentage of any other sector. The rate of knowledge management adoption was also the lowest in the survey, with less than 3% of government respondents indicating successful KM implementation.⁴²

7.7 The substantial investments in information technology and information management have transformed the private sector. These investments are as much about establishing trustworthy environments as they are about achieving a competitive edge. Trust, based on good IM, forms the cornerstone of the partnerships the private sector establishes with others. The Government of Canada must ask itself if it has made the same level of investment in these significant resources as it seeks to transform the way it delivers its programs and services to Canadians. Failure to make these investments will erode public confidence, threaten the multi-sectoral partnerships the government needs to establish, and seriously impede progress towards effective electronic government

8. The Government of Canada Must Take Action Now

8.1 Important initiatives are already underway to enhance the management of information across the federal government:

- **Treasury Board Secretariat** has prepared a new *Management of Government Information* policy, is developing an IM framework and is identifying needed competencies for IM staff.
- The **National Archives** is expanding the resources devoted to information management based on its concern for the long-term integrity of the government record;
- The **National Library** is developing new approaches to managing and preserving published information.
- Senior level **consultative bodies** are increasing the focus given to information management issues (TIMS⁴³, GOL IM Sub-committee, IMAG⁴⁴, IM Champions Committee).
- Some **departments and agencies** are developing promising IM policies and electronic records/document management tools.

8.2 While these initiatives are welcome, **much more needs to be done and at a faster pace**. The implications for the Government of Canada of an inadequate IM infrastructure in a rapidly evolving electronic environment are profound. Never before has the

⁴² Gartner, Inc., Research Note (COM-15-0871), January, 2002

⁴³ Information Management Sub-Committee, Treasury Board Senior Advisory Committee

⁴⁴ Information Management Advisory Group, chaired by Treasury Board Secretariat

requirement for IM to be addressed at the highest levels of government been so great. And never before has the level of urgency now being attached to IM been so high.

8.3 The need for a high-level government-wide strategy for information management is critical. Deputy ministers, assistant deputy ministers and other senior executives must lead the way in formulating such a strategy - a strategy that recognizes the fundamental role information plays in government business and accountability, and the high degree of risk the Canadian government is experiencing as the result of inaction. The strategy should identify key priorities and the steps that must be taken to address these needs.

8.4 Development and implementation of the strategy will **require strong leadership, collaboration and coordination** at both the central and departmental levels. Working together, senior executives, policy-makers, program managers and information and technology specialists can respond to the challenges and opportunities discussed in this paper.

8.5 A strategy to improve the information management infrastructure **needs to be based on a shared vision** that reflects the importance of information in enhancing citizen-centric services, decision-making and accountability in the Government of Canada for a knowledge-based society.