

Natasha Zwarich, Ph. D. Student
Eun G. Park, Professor
Graduate School of Library and Information Studies,
McGill University, Montreal.

E-Mail Management in the Canadian Government: Overview of the Practices from a Records Management Perspective

Abstract: This study explores the current e-mail management practices from the records management perspective in the Canadian Government. The research specifically focuses on the implementation of the e-mail management principles in government agencies in order to create, receive, maintain, preserve and provide access to e-mail messages.

Résumé : Cette étude explore les pratiques habituelles de gestion de courriels à partir de la perspective archivistique dans le milieu gouvernemental canadien. Cette recherche s'articule spécifiquement sur l'implantation des principes de gestion des courriels dans les agences gouvernementales de manière à créer, recevoir, gérer, préserver et offrir un accès aux messages courriels.

1. Introduction

Electronic mails (e-mail) are defined as “communications, sent or received internally or externally on an electronic mail system, and include any attachments transmitted with the message as well as the associated transmission and receipt data” (Government of Canada, Library and Archives Canada, Information Management Division, 2006c). E-mail has revolutionized organizational and interpersonal communications and culture in several organizations, including the Canadian Government. In addition, it has certainly changed the way that official business processes are conducted. As a result, e-mail has become one of the most frequently used forms of communication in the Government of Canada due to the ease and speed of sending and receiving information electronically, as well as for its cost effectiveness. According to Osterman Research Survey on Messaging Issues, there were about 60 billion e-mails created each day in 2006 and 45% of those e-mails were business related (Osterman Research, 2005).

This study examines the e-mail management policy and practices of the Canadian Government to create, receive, maintain, preserve and provide access to e-mail messages for effective records management and long-term preservation. First, we will review literature on e-mail management. Next, we will examine the general guidelines of the e-mail management policies at the Government of Canada. Finally, we will take a look at how e-mail management policies are implemented in Canadian government agencies.

2. E-Mail Management Research

Over the last 25 years, e-mail has changed considerably from a limited use within one organization to global, inter-organizational use that has given rise to new policies on

the use of e-mail management and tools. Since the mid-1990s, organizations and government agencies have come to heavily conduct business by means of electronic messages.

The Association of Records Managers and Administrators (ARMA International) created in September of 1995 an E-mail Task Force to develop guidelines for managing e-mail. That document outlines the issues which must be addressed while such a policy is under development (ARMA, 2000). In 1997, Nicole Périat, a French archivist, addressed the importance of writing an e-mail management policy for organizations. She presents the advantages and disadvantages of e-mail and the main elements that need to be included into an e-mail management policy (Périat, 1997).

Enneking investigated the ways that private and public organizations implement e-mail records management principles from both technological and policy perspectives (Enneking, 1998). In 2003, Nancy Flynn and Randolph Kahn published a book that covers the following areas of concern: retention, disposition, classification, transmission, data protection, central management, technological solutions, user management and electronic time management. They assert that the only solution to e-mail management is electronic control via software (Flynn and Kahn, 2003). Cavanagh's 2003 book on e-mail management mainly addresses the appropriate ways to use e-mail as a communication tool and emphasizes the need for an e-mail policy (Cavanagh, 2003). However, she does not address the link between an e-mail management policy and an overall records management policy. Other researchers address the legal perspective related to e-mail management and discuss the legal discovery, admission and use of electronic mail as evidence (DiGilio, 2001; Montana, 2004).

Overall, the authors are unanimous on the fact that e-mail has to be managed and, in order to do so, all organizations should develop an e-mail management policy that addresses the processes of capture, management, disposition, and retention of e-mail messages.

Issues Facing E-mail Management

The growth of e-mail as a fundamental business tool has presented organizations with new challenges. In order to manage this specific type of electronic records effectively, ARMA introduced five key issues for which organizations must define general guidelines in order to manage e-mail messages (ARMA, 2000).

First, e-mail management policy should address the organization's legal and regulatory requirements. Most jurisdictions have laws that grant the public the right to request government information. In Canada, government agencies are governed by the *Access to Information Act* that, in accordance with the amendments of 2001, also covers electronic records. E-mail messages and e-mail backups are subject to discovery. Furthermore, information transmitted by e-mail is also subject to copyright restrictions (Government of Canada, Department of Justice, 2006). Finally, government agencies must adhere to specific laws and procedures regulating the retention and disposition of records created or received in the course of their business activities.

E-mail management policy also addresses business-related issues. E-mail is indisputably an important channel for increased productivity and rapid communication within an organization. ARMA explains in its *Guideline for Managing E-Mail* that "for

the organization's managers, the main issues are cost, storage space, ease of use, connectivity with other applications, and employee acceptance" (ARMA, 2000, p. 2). Also, in order to protect propriety business information, organizations must address problems related to the use and misuse of e-mail.

E-mail management policy must address user etiquette and responsibilities. Employees must be aware that within an electronic environment, the rules for conducting formal communication are similar to those of the paper environment. One of the challenges facing e-mail management is that messages are created, received and stored from a user's computer. The user must understand that he or she is responsible for managing e-mail as he or she would in any other recorded information system.

An effective e-mail management policy takes into account technical and security issues related to electronic systems. E-mail management systems should conduct recordkeeping functions for management and preservation. Considering the types of information and attachments that can be exchanged by e-mail, access to inboxes should be restricted by a password to preserve the integrity of the information.

Finally, e-mail management policy should address records management issues. Managing e-mail messages within an organization or government agency requires an understanding of the records, the records' functions within the organization and the content of the records in order to preserve the information that is contained in e-mail messages based on the administrative, archival, research, fiscal, legal or evidential value of the information. The policy must set forth guidelines concerning the maintenance of the integrity of electronic files containing e-mail. The policy must also anticipate the migration and preservation of corporate memory and the appropriate and complete disposition of e-mail messages in accordance with the established retention schedule.

ARMA emphasizes that e-mail management policy should address business, legal, user, system and records management issues. In the next section, we will examine the general e-mail management policy guidelines at the Government of Canada.

3. General Guidelines of the E-Mail Management Policies at the Government of Canada (GoC)

The e-mail management policies and guidelines were collected from five federal government agencies and departments, namely Library and Archives Canada, Natural Resources Canada, Treasury Board of Canada, Department of Justice Canada, and Public Works and Government Services Canada. As a pilot study for doctoral research, policy guidelines and supporting documents available online were collected. Content analysis was conducted to review and analyze the current e-mail management policies and practices at the Government of Canada.

The GoC declared e-mail messages to be official records in its *Management of Government Information Policy* (MGI). This policy confirms that the GoC is moving towards the e-record as the preferred record of business, and consequently, the use of e-systems as the preferred means of creating, using and managing information (Government of Canada, Library and Archives Canada, Information Management Division, 2006b). When transmitted through an organization's e-mail system, e-mail records must be managed as any other information. Accordingly, the GoC imposes

regulations and requirements on the management of records. This section will examine the general guidelines provided by Library and Archives Canada (LAC), whose main role is to develop records management policies as a central agency. Subsequently, we will look at how other government agencies developed their own e-mail management policies based on the guiding principles of LAC.

Library and Archives Canada

LAC has a mandate to facilitate the management of government information and thus provides leadership in collaboration with federal agencies, departments and ministries in order to develop standards, tools and best practices for government information management (Government of Canada, Library and Archives Canada, Information Management Division, 2006b). Since many of the government's important decisions are created and documented in an electronic format that are uniquely captured in e-mail systems, LAC has produced a guidance document, *E-Mail Guidance for the Government of Canada* (EGGC). This document aims to provide overarching guidelines for Canadian government agencies in implementing their own best practices for managing their e-mail records based on the Government's accepted policies and procedures (Government of Canada, Library and Archives Canada, Information Management Division, 2006b).

First, LAC provides guidance regarding e-mail management to all government agencies subject to the *Access to Information, Privacy or Library and Archives Canada Act*. LAC explains, in accordance with the *Management of Government Information Policy*, that e-mail messages created, transmitted or received in the course of government business are records. Therefore, e-mail records, and any accompanying attachments, must be kept to ensure the integrity of the corporate memory of the government and to retain their value as evidence of government business. Furthermore, e-mail messages must remain intact in terms of their structure (layout or format and links to attachments and related documents), content (the information contained in the message) and context (information pertaining to the sender and recipients as well as any header information and transmittal data such as time and date) (Government of Canada, Library and Archives Canada, Information Management Division, 2006c). Finally, LAC offers privacy and security guidelines regarding the protection of e-mail messages against unauthorized access, use, manipulation, destruction or loss. LAC recommends that, unless a department has implemented security features such as encryption or the embedding of a digital signature, users of electronic mail systems should not assume or expect the privacy or security of their e-mail.

LAC also provides government agencies with guiding principles regarding the filing of e-mail messages. E-mail messages should be captured into a recognized records system, either paper- or electronic-based. According to LAC, the management of e-mail must be supported by corporate policies, guidelines and procedures (Government of Canada, Library and Archives Canada, Information Management Division, 2006c). Government agencies must ensure that e-mail and attachments remain accessible, like any other electronic record, in the corporate records system for the life of the record through to its eventual disposition, by one of three options: transfer of records of archival value to LAC; destruction of non-archival records once their retention periods have elapsed; or removal from the control of the GoC. Although these guidelines do not describe the environmental and cultural issues surrounding the creation and use of e-mail, they help other government agencies develop new e-mail policies.

EGGC provides a list of roles and responsibilities for each protagonist involved in e-mail management. The Information/Records Management (IM/RM) staff is responsible for the management of corporate records throughout their life cycle, as well as ensuring the proper application of relevant policies, guidelines and procedures. IM/RM staff provide assistance and advice on records management, including e-mail, and related issues to the various units within the institution (Government of Canada, Library and Archives Canada, Information Management Division, 2006c). The GoC managers should ensure that staff/users are aware of their responsibilities regarding e-mail management. As far as individual users are concerned, all staff members are responsible for distinguishing electronic messages relating to the official business of the GoC from those relating to activities of a personal nature, retaining and filing those relevant e-mail messages.

4. E-mail Management Policy in Canadian Government Agencies

Several Canadian government agencies have created their own e-mail management policy. It is important for an organization to develop uniform practices for maintaining those e-mails as records to ensure their continued accessibility as a corporate resource.

Practical Management of E-mail Messages

When examining e-mail management policies published by different Canadian government agencies, we notice the recurring notion of the importance of records ownership. The policy of Natural Resources of Canada states that all the information to be collected or created in the conduct of business is the property of the Government of Canada and e-mail messages must be managed with consideration to legislative, business and accountability requirements (Government of Canada, Natural Resources Canada, 2006). As a result, employees must retain, organize and manage those e-mail messages identified as records so that they can be easily accessed and retrieved afterward. At Canadian government agencies, the management and appraisal of e-mail is a task performed by the user in a decentralized environment and tends to enhance the importance of e-mail management policies.

LAC provided guiding principles on the disposition of e-mail of a transitory nature, which should be deleted once they have served their purpose. Transitory e-mail records are defined as those records required only for a limited time to ensure the completion of a routine action or the preparation of a subsequent record. Unlike LAC, government agencies provide their users with a list of examples, such as messages that are copies of information used only for convenience of reference and not as the official record, miscellaneous notices of employee meetings, holidays, etc.

Since information can be easily transmitted by e-mail, e-mail management policy should designate who is responsible for retaining e-mail records. In the EGGC, LAC states that it is best practice for records management staff of government institutions to emphasize that it is the responsibility of originators to classify their e-mail documents at creation into the departmental classification system, if one exists (Government of Canada, Library and Archives Canada, Information Management Division, 2006c). This practice will ensure that documents are consistently classified and will therefore improve retrievability. While a few government agencies are silent on the subject, the Treasury

Board of Canada and Natural Resources Canada are unanimous: the originator should retain and file the official departmental e-mail records (Government of Canada, Treasury Board of Canada, Natural Resources of Canada, 2006). Where that information does not exist elsewhere in the Department, the recipient must retain and file an e-mail sent from an external source.

Classification and Filing of E-mail Messages

An important concern when filing e-mail messages and attachments is maintaining the ability to identify, retrieve and share this information, all mandatory functions. LAC recommends that e-mail messages be filed within an existing filing system. Canadian government agencies offer four methods to file e-mail messages.

The first method is to store e-mail in an electronic document management system. An Electronic Document Management System (EDMS) captures and stores electronic documents and e-mail messages in a central repository. It allows the users to assign various attributes, such as document title, subject and description, and grant other individuals access rights (Government of Canada, Natural Resources Canada, 2006). The system will also automatically assign such information as user name, name of the organization, document application type, etc. Based on these criteria, the user can then search and retrieve documents. An EDMS provides greater control for the management, identification and retention of an organization's electronic documents and e-mail messages, and allows for the life-cycle management of this information in electronic format. It also facilitates the sharing of this information with a broader audience.

The second method consists of filing e-mail messages within the user's inbox. Although most e-mail systems are not recordkeeping systems, e-mail systems provide the ability to create folders, allowing the user to organize and manage his or her e-mail messages in their original format. This includes transmission data, receipt data and any attachments. The Treasury Board of Canada warns its users that information stored on their local drive is not automatically backed up and that the user is responsible for ensuring adequate back-up (Government of Canada, Treasury Board of Canada, 2006).

The third option offered to users, which is the one of the most widely used, consists of managing e-mail messages in electronic work spaces through the use of shared directories and files on the network. This method enables the user to maintain a link between messages, attachments and any other related records. Several e-mail systems have options that allow users to save their messages into these shared directories. For example, according to Natural Resources Canada, by choosing "Save as" under the "File" pull down menu in MS Outlook, the user has the option of saving e-mail in .txt (text only), .rtf (Rich Text Format), .msg (message format), or .oft (Outlook template) format. When saving to shared directories, a recommended option is to save e-mail in its MS Outlook format (.msg) (Government of Canada, Treasury Board of Canada, 2006). This allows the user to reproduce the e-mail message in its original format and ensures the capture of its transmission data, receipt data and any attachments.

Finally, if no other option is available to ensure the retention and filing of e-mail records within an appropriate departmental classification system, the user may print e-mail records for filing within the applicable records office or in any other applicable filing area for hard copy records. The loss of transmission data and receipt data, including metadata, is a concern for the evidential value of printed copies of e-mail messages.

Overall, it is recommended that the user file and store his e-mail messages based on the organization's file classification structure in order to maintain a link between messages and any other related records.

Retention and Disposition of E-mail Messages

Records retention can often be difficult to manage, but it is particularly problematic in an e-mail system where individual users, instead of centralized records management staff, manage the documents in the system. As such, it is the responsibility of the originator or recipient of the e-mail messages to determine which messages are records and which are not. The user must then retain those e-mail messages categorized as records. As with other records, retention periods for e-mail records are based on their administrative, legal, fiscal and research value. Generally, e-mail records will have the same retention periods as records in other formats that are related to the same function or activity. Indeed, according to ARMA, “the fact that information contained in an e-mail message is electronic is not necessarily sufficient reason to apply a retention period different from the same information that may be resident on paper, film, or any other media” (ARMA, 2000, p. 10). The Treasury Board of Canada recommends to its employees that before they can identify the retention period of a particular set of e-mail messages, they must identify what type of record the e-mail is and which records series it falls under. Therefore, the user cannot apply a universal rule to delete all e-mail messages after a defined period of time. By law, employees of the GoC may not destroy government records without the consent of the National Archivist. This is to permit the identification and preservation of archival and historical records.

Government agencies’ e-mail policies recommend that users perform regular clean-ups of their e-mail “inbox” and “sent items” folder by filing e-mail records and by deleting those messages not deemed records. Regular clean-ups will prevent receipt of “mailbox full” messages and will allow users to find and share information faster. Deleted messages remain in the “deleted items” folder unless the user permanently deletes them. However, even after the user has deleted them, e-mail messages may still be stored on departmental file servers or back-up tapes. Back-ups are performed on the e-mail system on a regular basis. However, none of the e-mail management policies we have examined mention that system back-ups are intended to restore computer system operations and thus do not serve as a records management system.

Access to E-mail Messages

Most government agencies do not address the issue of access to e-mail messages by other employees or by administrators. Considering that e-mail messages are subject to the *Access to Information Act*, access is an important issue that must be dealt with appropriately. E-mail created, sent or received in the conduct of departmental business must be accessible as required for business-related purposes to meet legislative and departmental accountability requirements (Government of Canada, Treasury Board of Canada, 2006). Other employees or administrators within a government agency may access the business-related e-mail of an employee when that user is not available or away from the office. At Natural Resources Canada, administrators can access a user’s inbox, with the user’s or supervisor’s permission to access a specific business-related e-mail, when that user is away from the office or unavailable and the e-mail is required immediately (Government of Canada, Natural Resources Canada, 2006). Additionally, if the e-mail message is available only on a back-up tape, it should be retrieved from that source (Government of Canada, Natural Resources Canada, 2006).

5. Implementation of E-mail Management Policies in Canadian Government Agencies

The implementation of e-mail management policy requires the installation of information technology infrastructure and the support of top managers. To do so, records managers and IT experts must work in concert since records management can not be separate from computer systems (Périat, 1997, p. 35).

Software to Manage E-mail Messages

Essential to the implementation of e-mail management policy is the acquisition of an electronic records management system. Some authors strongly recommend implementing a total approach to records management that includes e-mail management (Shupe and Behling, 2006). At the GoC, a records and document management solution was designed to facilitate the sharing of information across the GoC by electronically enabling consistent document management and record keeping, thus improving the GoC's information management practices. This solution is called the *Records, Document and Information Management System* (RDIMS). The RDIMS is an integrated solution comprised of the following components: DM 5.1.0.5, Hummingbird Imaging 5.1.0.5, DM Workflow 5.1.0.5, Crystal Enterprise Pro 10, Crystal Enterprise Reporting 10, and with a choice of: Hummingbird RM 5.1.0.5, OpenText Livelink 9.1.0.0 or Documentum RM 4.1.1 (Government of Canada, Public Works and Government Services Canada, 2006).

RDIMS grew out of the mid-1990s Treasury Board Shared Systems Initiative (SSI), a joint undertaking of the Treasury Board Secretariat (TBS) and departments in collaboration with LAC, to streamline systems development and management, develop a common information technology and information management (IM/IT) infrastructure, and make effective use of IT in government administration and service delivery. In February 2004, upon the recommendations of the TBS (Chief Information Officer Branch - CIOB) and the RDIMS Information Management Policy Committee (IMPC), the Treasury Board endorsed strategy proposals to establish an RDIMS Shared-Service delivery services at Public Works and Government Services Canada (PWGSC) in Information Technology Services Branch (ITSB) and to approve \$8 million per year over three years to support RDIMS implementations (Government of Canada, Public Works and Government Services Canada, 2006). In 2004, PWGSC-ITSB took responsibility of implementing RDIMS with 250,000 RDIMS licences, commencing with a deployment of 100,000 licences by March 2007 (Government of Canada, Public Works and Government Services Canada, 2006).

The RDIMS program aimed to: 1) establish RDIMS as the critical information management foundation for integration tools throughout the GoC 2) position RDIMS as the platform for common business solutions 3) promote consistent RDIMS implementation and lower overall operational costs for GoC information management practices (Government of Canada, Public Works and Government Services Canada, 2006).

The Information Management (IM) Program outcomes are numerous. All federal employees have desktop access to the information required to do their jobs. The RDIMS provides an integrated software solution for document and records management. As a result, RDIMS will contribute to the development of the enterprise IM infrastructure required to improve the management and compatibility of information holdings across government and jurisdictions.

Long-term Preservation of E-mail Messages

After consulting several e-mail policy guidelines from different government agencies within the Canadian Government, it is clear that e-mail must be managed properly. However, in the digital age, records must also survive the ravages of time. The problem of preserving digital records lies in the speed of hardware and software obsolescence. Digital information can be easily lost or no longer readable or accessible. This could result in the loss of much important information. An official digital record, including e-mail, should be digitally preserved. The proper long-term preservation, retrieval and re-use of digital data are crucial because it directly affects government operations. The GoC has designed a records and document management solution. LAC has also explored several approaches to preserving e-mail messages.

Migration is used to solve technical obsolescence. Records created in an old file format are transferred to a new format that will run on updated computers. However, backward compatibility, interoperability or conversion to standards are not realistic options for tackling the digital obsolescence of e-mail messages in the long term. Emulation is a more technically complex strategy than migration for preserving digital records. According to the Dutch National Archives, just as with migration, there are various ways in which an emulation strategy can be implemented (Dutch National Archives, 2003, p. 40). However, emulation is not recommended in a situation where retaining the original behaviour and appearance of a digital record is necessary for the long-term preservation, such as e-mail messages.

Finally, XML seems to be a good choice for the long-term preservation of e-mail. XML is an open standard, interoperable and capable of reproducing the main characteristics of a digital document. Since e-mail and XML have a number of common characteristics, XML eminently lends itself to the long-term preservation of e-mail messages (Dutch National Archives, 2003, p. 39). E-mail messages must meet a technical standard, the MIME format, to be interoperable on different platforms. This message format defines the components of an e-mail transmission file. “The similarities between XML and MIME mean that conversion of e-mail into XML is relatively straightforward. XML is not only a good target format for converting e-mail messages at a later date, but is also suitable for generating new e-mail messages now” (Dutch National Archives, 2003, p. 39). Roger Winters mentions that using XML does not have limitations in creating new e-mail messages since XML is a non-binary file format so that it does not lend itself to the sustainable preservation of binary attachments or other attachments, unlike MS Word documents, Excel spreadsheets, and PowerPoint presentations (Winters, 2005, p. 58). These can be stored and encoded in XML only in a converted text format. LAC recommends, in its *Guidelines for Computer File Types, Interchange Formats and Information Standards*, that textual records be preserved in the XML standard and e-mail messages in the MIME format since MIME is very flexible and permits the inclusion of any type of file in an e-mail message (Government of Canada, Library and Archives Canada, 2006a).

Dissemination of E-mail Management Policy

Dissemination is an important step in implementing an e-mail management policy. At the GoC, agencies are responsible for distributing e-mail management policy. Members of top management must demonstrate support for the e-mail management policy and emphasize its importance within the agency. The policy should be available on-line in order to assure a broader diffusion (Périat, 1997, p. 36). Most government

agencies have already posted their e-mail management policies on their web sites. The records manager must ensure that every employee of the government agency understands the e-mail management policy, its implementation and the impact on the use of the electronic mail system. The training sessions will not only provide users with the basic knowledge regarding e-mail management but it will also familiarize them with the relationship between the electronic mail system and other software used in the agency.

6. Conclusion

This paper explores the current e-mail management principles and practices from the records management perspective in the Canadian government agencies in order to create, receive, maintain, preserve and provide access to e-mail messages. The study specifically examines available e-mail policy guidelines and supporting documentation from five government agencies. Based on the findings of this examination, we have determined that these e-mail policy guidelines mainly address issues related to declaring e-mails as records, filing, retention and disposition, and access to e-mails. To implement these guidelines, government agencies are likely to make efforts to install e-mail software applications, disseminate e-mail policy guidelines, and encourage long-term preservation of e-mails. This investigation provides an overview of current e-mail management policies and practices in the Government of Canada and identifies some concerns to be addressed in further research.

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