

Guide to the Review of Management of Government Information Holdings

Executive Summary

This Guide was prepared in 1992-1993 and first released as an exposure draft in January 1994. It was written to help managers and staff assess the management of government information holdings (MGIH) in their own institutions. The Guide will also help auditors and evaluators conduct formal reviews of the management of government information. Throughout the Review Guide, the emphasis is on good practices for managing information. Although the Guide excludes the main part of the Management of Information Technology policy, it promotes the need to establish linkages between information technology and information holdings.

The Review Guide was developed by the National Archives under the guidance of an interdepartmental work group. Nearly forty officials in central agencies, lead agencies and line departments commented on earlier drafts of the Review Guide. These officials represented corporate policy planning, information collection, records management, data management and library services functions, as well as audit and evaluation and information management programs.

The management of information involves many information-based functions, including corporate policy and planning, data management, telecommunications, office systems and computer support, records management, library services, information collection, forms management, access to information, and privacy. The management of information also involves such media as paper, maps, photos, films, plans, videos, microfilms, and tapes. Within an institution, therefore, a review could potentially cover a broad range of functions and media.

Chapters four through eight of the Review Guide are based on the information life cycle model: planning; collection, creation, and receipt; organization, transmission, use and retrieval; storage, protection and retention; and disposition through transfer or destruction. A review can cover any or all aspects of the information life cycle.

The Guide presents useful information to help institutions assess the effectiveness of their implementation of the MGIH policy.

Acknowledgments

The Guide was prepared by the National Archives of Canada under the direction of the Interdepartmental Work Group on the Evaluation of Information Management Policies. Work group participants were from Finance, Industry Science and Technology, National Archives, National Defence, National Library, Office of the Comptroller General, Revenue Canada, Taxation, Government Services Canada (formerly Supply and Services) and Treasury Board. The Treasury Board Secretariat has an overall interest in policy implementation and audit and evaluation. The National Library of Canada has an interest in published material, and the Public Opinion Research Group of Government Services Canada is concerned about information collection. Groups from line departments contributed to a number of areas, including corporate policy planning, information collection, records management, data administration, library services, and audit and program evaluation.

The Guide also draws on the experience and ideas of individuals in the following organizations:

- Communications Canada
- Energy, Mines and Resources Canada
- Environment Canada
- Finance Canada
- Health and Welfare Canada
- Industry, Science and Technology Canada
- National Archives of Canada
- National Defence
- National Library of Canada
- National Research Council Canada
- Office of the Comptroller General
- Public Service Commission of Canada
- Public Works Canada
- Revenue Canada, Taxation
- Secretary of State of Canada
- Statistics Canada
- Government Services Canada
- Transport Canada
- Treasury Board Secretariat
- Veterans Affairs Canada

Introduction

Background

Treasury Board Secretariat has consolidated the following policies under the concept of information management: Records Management, Government Information Collection and Public Opinion Research, Micrographics, EDP Records Management, and Forms Management. This focuses attention on the importance of information in supporting decision making and the delivery of programs and services. Information also permits institutions to hold themselves accountable pursuant to legislative and policy requirements. Information management is the coordinated management of both information holdings and investments in information technology.

Information is a valuable resource and a critical factor in the achievement of corporate objectives. Treasury Board Secretariat has recognized this in its publication *Enhancing Services: Through the Innovative Use of Information and Technology - Strategic Direction for the 90s*. Information management, including the planning, directing and controlling of information holdings and investments in information technology, is therefore important to help achieve corporate goals and to deliver programs and services. The review of this important area, through self-assessment, or audit and evaluation, is a good management practice.

Purpose and Scope of the Guide

As a concept, information management has many interpretations. For purposes of this Guide, we will use the description of information management as discussed in the Background section. The Treasury Board policies on the Management of Government Information Holdings (MGIH) and Management of Information Technology (MIT) are components of information management. The Treasury Board Foreword on Information Management states that linkages between information technology and information holdings should be established to the extent that they are useful and meaningful. In this context, the Review Guide addresses the MGIH component of information management, as well as the linkages to information technology. (See Appendix C for an explanation of linkages to technology.) However, the main part of the MIT policy is not addressed by the Guide.

The Guide was written to help government institutions review their management of information practices. Specifically, it is intended to assist institutions in self-assessment. Managers or staff may wish to review their own practices regarding the management of

information on a periodic basis. In addition, the Guide is intended to assist auditors, evaluators and reviewers by serving as a tool for the planning and conduct of reviews of the management of information.

The emphasis of the Guide is on good practices for the management of information. This is reflected by the structure of the review chapters of the Guide which are based on two key themes: management issues (chapter 3) and service to user issues (chapters 4 through 8). Although references are made in the review chapters to the MGIH policy, the Guide is not a compliance checklist. Reviewers will have to assess the substance of their findings in order to draw conclusions about policy compliance and performance (i.e., is the intent being achieved as well as the letter being adhered to?).

The word information can have many meanings. For purposes of the Guide, the terms "information" and "information holdings" are synonymous. (Appendix B provides a glossary of definitions used for purposes of this Guide.) The emphasis of this Guide is to promote the cost-effective and coordinated management of federal information holdings. Throughout the Guide, the appropriate term is used in the context of the particular law, policy or activity being discussed.

Note: This document is not intended to serve as a definitive guide to the review of the management of information. Rather, it presents a basis for the review of a broad area. Readers should supplement their review procedures according to the nature and extent of the review planned. Appendix A provides many additional references that a reviewer might use to supplement this Guide.

If readers have any questions regarding the content or use of this Guide, they should contact the Information Management Standards and Practices Division, Archives and Government Records Branch, National Archives.

Roles and Responsibilities

The information management policies refer to many stakeholders. A reviewer should be cognizant of the roles and responsibilities of these stakeholders in terms of their relationship to, and impact on, the institution. Stakeholders include the following:

The institution is responsible and accountable for implementation of the MGIH policy. Management must designate a senior official to represent the institution for purposes of the MGIH policy. The infrastructure of institutional policies and procedures for the management of information should establish operating requirements that reflect the MGIH policy. The operating requirements should give direction to program managers and functional specialists, and provide guidance concerning the organization,

description, use and retrieval, as well as the storage, protection, retention and disposal of the institution's information holdings. Everybody in the institution has some responsibility for the management of its information holdings.

Treasury Board Secretariat, Administrative Policy Branch, is accountable for the development and general interpretation of the MGIH policy, and for evaluating the policy to ensure its integrity and continued relevance, its effectiveness in achieving the stated objectives, and the policy's appropriateness in the context of overall government direction and changes in the management environment. The Branch is also responsible for leadership and support of federal internal audit and program evaluation groups. It provides advice and assistance to institutions, assesses audit and evaluation practices, fosters a professional community for auditors and evaluators, and oversees selected audits as well as central evaluations.

The Chief Informatics Officer for the federal government and the supporting Office of Information Management, Systems and Technology have the responsibility to provide a government-wide focus for the effective management of information technology. This mandate includes the responsibility for directing the re-engineering of government administrative processes and leading their cross-functional integration; establishing the framework and actively supporting the re-engineering of the government's program delivery mechanism; and developing policy and standards related to information management and technology and related telecommunications activities.

National Archives has specific evaluation responsibilities on behalf of Treasury Board Secretariat in regard to the MGIH policy. In addition, it may report on significant problems or issues in the state of management of information holdings relevant to their identification, organization, storage, conservation, retention and disposal. It also has authority, under the National Archives of Canada Act, to control the destruction and disposal of the information holdings of government institutions (excluding published material), and the transfer of information of historic or archival importance to the National Archives. Within the context of its mandate to facilitate the management of government records and its leadership role in the management of government information holdings, the National Archives leads the implementation of the framework for evaluating the management of government information holdings. The Archives performs this function in collaboration with Treasury Board Secretariat, National Library, Public Opinion Research Group of Government Services, Canadian Centre for Management Development, internal audit and program evaluation groups, and information management groups of government institutions.

National Library is responsible for identifying, acquiring, recording and making available Canada's published heritage, regardless of format. The major tool for this responsibility is the national bibliography, Canadiana. Federal government publications are an important part of Canada's heritage. The National Library also acts as the central point for facilitating resource sharing among Canadian libraries. The National Library fulfils this responsibility through union catalogues and lists used to identify and locate library holdings for interlibrary loan. A number of articles within the National Library Act refer directly to the coordination of federal library activities including the disposal of surplus published materials. In addition, the National Library has specific evaluation responsibilities related to published material.

Internal Audit Groups are responsible for including in their audit of information management an assessment of the degree of compliance with the MGIH Policy. This is in addition to the customary responsibility of internal audit to assess the effectiveness of the management framework in ensuring the achievement of operating objectives, the economical and efficient use and protection of resources, and the integrity of information.

Program Evaluation Groups are responsible for evaluating the continued relevance, success and cost-effectiveness of federal programs. Where institutions provide information to the public, or to groups outside the institution, program evaluation may look at the provision of this information in terms of its relevance, success and cost-effectiveness.

Public Opinion Research Group, Government Services Canada, is the central reporting agency to which all proposals regarding information collection and public opinion research must be sent. The POR Group is responsible for assessing the public opinion content of the proposal, determining if approval by the Cabinet Committee on Operations is required, and issuing authorization numbers allowing institutions to initiate contracting procedures for approved projects.

Canadian Centre for Management Development provides advice and guidance to institutions in developing institutional histories, case studies and profiles.

Chapter One

Management of Information

Overview Description

Government by its very nature is an information-intensive service provider. Good information management practices can enhance government productivity and service quality, and decrease the cost of administration. Information is increasingly recognized as an important primary resource - along with finance, personnel and assets - that needs to be effectively managed. Hence, awareness of the need for good practices in the management of information is rising.

The other primary resources, i.e. finance, personnel and assets, usually have a recognizable functional identity within an institution. If you have questions regarding the management of finance or personnel or assets, you can usually find someone - or some group - in the institution to deal with. In contrast, the management of information is much more multidisciplinary. Information-based functions within institutions include obvious groups such as records management, data management and library services, as well as perhaps less obvious functions such as public opinion research.

The multidisciplinary nature of the management of information leads to some challenging planning and scoping issues, which are elaborated on later in the Guide. For purposes of the Guide, information-based functions will be used as a generic term to include the information management disciplines or functions involved. Another perspective on the complex, multidisciplinary nature of the management of information is provided by the variety of laws and policies that affect information. Figure 1 lists many of them. In addition, some institutions have information-related legal and policy requirements that relate to their particular missions. Reviewers should note that some policies and regulations may take precedence over others, and they should look to the particular circumstances of their institution before deciding on the hierarchy of applicable authorities.

Figure 1 - Managing Information in Canadian Government Institutions:

Legislation and Policy

Legislation

Access to Information Act and Regulations

Acts specific to each institution

Canada Evidence Act

Copyright Act

Emergency Preparedness Act and the *Emergencies Act*

National Archives of Canada Act

National Library Act

Official Languages Act

Privacy Act and Regulations

Treasury Board Policy

Information Management volume of the Treasury Board Manual:

(a) Foreword

(b) Management of Government Information Holdings (MGIH) policy

(c) Management of Information Technology (MIT) policy

Government Security policy

Government Communications policy

Access to Information policy

Privacy policy

Information Life Cycle Model

Figure 2 provides a model to assist in the review of the management of information. The model shows the stages information holdings pass through during their life cycle.

Figure 2 - Information Life Cycle Model

1. Planning
2. Collection, creation, receipt
3. Organization, transmission, use and retrieval
4. Storage, protection and retention
5. Disposition through transfer or destruction

Each stage of the life cycle can be used as a basis to review an integral part of the management of information holdings (see Chapters 4 through 8). In addition, a review can look at the overall management framework, i.e. the management of the entire life cycle and the context in which it operates (see Chapter 3).

Whether at the corporate or program level, an organization uses the information life cycle as a framework within which to manage its information. Increasingly, organizations are considering their requirements for information along with their requirements for people, accommodation and financial resources.

1. Planning

The planning stage involves assessing how to meet the needs of the institution for operational, legislative and policy purposes. The MGIH policy states that institutions should identify their information needs as early as possible in the project or management cycle. In keeping with that concept, institutions should collect, create or generate only what information they require. They should also make sure the information does not already exist in the institution or that it is readily accessible to the institution. Information should be kept only as long as it is of value. In addition, when planning information systems, or making enhancements to existing information systems, institutions should identify and include all the important parameters related to MGIH.

In the planning stage, institutions should identify their own information needs for each of the stages in the information life cycle. The subsequent collection, creation and/or generation of information should be directly linked to the needs that have been identified. The information holdings that result should be organized, stored and protected. Finally, information of no further use or value to the institution should be disposed of pursuant to provisions of *the National Archives of Canada Act* and the *National Library Act*.

2. Collection, creation, receipt

As stated above, planning should determine what information should be collected, created or received, based on operational needs and legislative or policy requirements. This suggests that generating or gathering of information should be articulated in terms of the nature of information needed (what), its operational, legislative or policy purpose (why), which persons or groups of the institution will have custody and use of the information (who), the frequency of need (when), and whether it is to be generated internally or gathered from other sources (where and how).

Treasury Board's MGIH policy states some additional requirements concerning the collection of information. Government institutions are required to avoid collecting information that is already available, minimize the response burden and costs associated with collection, and collect personal information in accordance with the Privacy Act. In addition, in the case of public opinion research, institutions must seek approval of the Cabinet Committee on Operations through the Public Opinion Research Group of Government Services Canada.

3. Organization, transmission, use and retrieval

In order to maximize the value of information holdings, they should relate to the needs of the institution. Consequently, institutions should identify and describe their information holdings to meet their operational requirements (decision making and program delivery) and to meet legislative or policy requirements. Description provides context and meaning. Information holdings also should be organized or arranged in a logical manner that facilitates access by users. In this regard, access includes transmission, use and retrieval.

In the transmission, use and retrieval of information, users should respect the applicable legal and policy constraints, including the access to information and privacy legislation, and the Government Security policy. In addition, the MGIH policy requires that information holdings of government institutions be identified in appropriate government public reference sources and that information holdings be available to the public and for use within the government - subject to legal and policy constraints.

In addition, institutions must recognize the importance of having qualified people and the right equipment to facilitate the transmission, use and retrieval of information. These two factors - the human and physical resources - can greatly affect the value of information holdings, particularly in rendering information available to users.

4. Storage, protection and retention

Information of continuing relevance to the business of the institution should be stored in media appropriate to the characteristics of the information. That is, the media chosen (paper, books, microfilm, computer diskettes, magnetic computer tape, etc.) should be selected to facilitate user accountability, the length of time required to satisfy business needs, and archival or historical requirements. To preserve the corporate memory, information holdings need to be protected against unauthorized loss, access, use, alteration, destruction or alienation (i.e., transfer outside the control of the government).

Institutions keep information holdings as long as they are useful for decision making, program operations and service delivery. As well, the requirement under MGIH to retain information holdings that serve to reconstruct the evolution of policy and program decisions should guide institutions in this matter.

5. Disposition through transfer or destruction

The corporate memory of the Government of Canada includes all government information holdings which are created, collected or received by government institutions to meet their operational needs and the requirements of legislation and policy. These information holdings should be disposed of through destruction or by transfer to the

control of the National Archives or National Library when institutions have no further operational need or legislative or policy requirement for keeping the information holdings, and when authority for disposal has been granted by the National Archives or the National Library.

Key Attributes of Information

Six attributes relating to the quality of information which are useful as a basis to review and assess the management of information within institutions are listed in Figure 3. While these attributes are presented as separate items for descriptive and analytic purposes, they are interrelated.

1. Available
2. Understandable
3. Useable
4. Complete
5. Accurate
6. Up-to-date

1. Available

Throughout their life cycle, information holdings should be available to those who require them. This means that information - regardless of the medium used - must be accessible to users, for retrieval and use when they need it. In short, information must be accessible on a timely basis. Where information technology is used for storage or transmission, the technology should be available to users in order to facilitate retrieval and use of information.

2. Understandable

To be of any use, information holdings need to be understandable. This means that identification and description of information holdings must be meaningful to users. For example, technical information described in abbreviated terms understood by technical experts may not be understood by other users.

3. Useable

Information needs to be useable by those who require it. This means that the information must relate to the purposes for which it was created, collected or received. In other words, the content must be applicable or relevant to users. In addition, the

information must be in a form that can be used by the persons who need to use it. Both the content and form of information should provide for efficient and effective use of information holdings.

4. Complete

Users may need a variety of information in support of decision making or program delivery. Information holdings should be able to meet the needs of every program within the institution.

5. Accurate

Information needs to be correct. The accuracy of information can affect decision making and program delivery.

6. Up-to-date

Another attribute of the quality of information is whether or not it is up-to-date. Information holdings need to contain the most current information relevant to user needs. A lack of up-to-date information can impair decision making and program delivery. Anyone planning to collect or create information should take into consideration the requirements for keeping the information up-to-date.

Chapter Two

Planning a Review of Management of Information

General Issues

A review of the management of information may include any or all of the following components: management and coordination (Chapter 3); information planning (Chapter 4); collection, creation, receipt (Chapter 5); organization, transmission, use and retrieval (Chapter 6); storage, protection and retention (Chapter 7); and disposition through transfer or destruction (Chapter 8). A review of the management of information could also be part of a larger review, where it is a subset of a review of many other management issues.

In addition to the components covered in Chapters 3 through 8, it is important that a review of the management of information also consider the quality of people (human resources) and the adequacy of equipment (physical resources) involved. Further, the attributes of information (discussed in Chapter 1) can be used as a basis to analyze and comment on the management of information.

Some of the general issues and questions that can be addressed in a review are listed below, along with a reference to the relevant chapter of the Guide.

Issue	Question	Reference
1. Assessing overall corporate management of information holdings	Is the corporate framework for the management and coordination of information adequate in terms of the economic, efficient and effective management of information?	Chapter 3
2. Assessing information planning	Have information needs been analyzed and do information holdings relate to information needs?	Chapter 4
3. Assessing the generation and gathering of information	Does the information collected, created or received relate only to user needs, and is unnecessary collection avoided and response burden minimized?	Chapter 5
4. Assessing the identification, description, access and use of information	To what extent are information holdings organized and distributed such that information is easily retrieved and used?	Chapter 6
5. Assessment of protection and preservation of corporate memory	Is information stored, protected and retained as long as it is required to support operational needs and accountability requirements?	Chapter 7
6. Assessing the disposition of information holdings	Are information holdings of permanent value transferred to the control of the National Library as required, and are other holdings destroyed when there is no further operational need or accountability requirement?	Chapter 8

Planning and Scoping Issues

Terminology

The terminology used in this Guide is consistent with that of the Treasury Board information management policies. However, this terminology may differ from that used within individual government institutions. Therefore, users of this Guide are reminded that titles, activity descriptions and other terms within their institutions may be defined differently. For example, the terms "computer support," "informatics" and "information

systems management" may be used by different organizations to mean the same thing. Clarity in the meaning of titles and terms will be important when planning a review of the management of information.

Diversity of Information-Based Functions and Information Media

Management of information involves many functions as well as various media. Each information-based function has its own detailed practices and procedures. Also, characteristics of the storage media are quite different. For example, practices for storage, protection and transmission of microfilm are quite different from those for electronic media.

The issues to be examined and the level of detail required, depend upon the context of the review. A review might look at some issues in the context of the MGIH policy across various functions and media. For example, information retrieval could be reviewed across all information-based functions and media. Alternatively, a review might look at detailed issues pertaining to a particular function or to a particular medium. For example, a review of the library function might look at specific aspects of the handling of books and periodicals. This may require a much more detailed and specific set of review objectives, criteria and questions/practices in order to supplement those set out in this Guide.

It will be useful to identify which functions and which media will be included in the scope of a review. A review of MGIH might cover some or all of the following:

- Corporate policy and planning
- Data management
- Telecommunications
- Office systems and computer support
- Records management
- Library services
- Information collection
- Public opinion research
- Forms management
- Access to information
- Privacy
- Security
- Ministers' offices (refer to MGIH Guideline 9 and the National Archives Act)

If managed outside the above-mentioned functions, a review of MGIH will include the management of records or published material in the following media:

- paper
- maps
- photos
- films
- plans
- videos
- microfilms
- tapes

Type of Review Performed

The Guide does not differentiate between "self assessment," "internal audit" or "program evaluation" issues. It is left to reviewers to decide whether or not to cover specific issues and in what context this will be done. The review of some issues will, however, be viewed as critical by National Archives for purposes of its evaluation and reporting responsibilities under the MGIH policy. Specifically, National Archives is concerned with the identification, organization, storage, conservation, retention and disposal of information holdings. Hence, institutions should discuss the scope of their reviews with National Archives before undertaking them. Likewise, where reviews will cover published materials, institutions should discuss the scope of reviews with National Library before undertaking them.

Magnitude of Information-Based Functions

Particularly in large departments, a review of the management of information may or may not include all components of the functions under review. A review should examine those components of a function, or issues, which are important to the institution as indicated by the reviewer's risk assessment or analysis. Consequently, reviewers may choose to include only certain aspects in a particular review.

Thus it is important to identify the scope of the review so that readers of the review report will understand what is included and excluded. Presumably, other major components of the function which are excluded from a current review would be included in some other review(s).

Level of Focus

A review can be conducted at different levels within an institution. It might examine only centralized functions (at headquarters), or only decentralized functions (in the regions), or both. Similarly, a review might cover only the corporate level or the branch level, or both. An additional dimension is whether a review would be performed on the basis of

an institution's organization chart or whether the review would be conducted on a functional basis (i.e., functions which cut across the organization chart). The scope of a review should be clear as to the level of focus, so that users of the review report will understand the review results.

Chapter Three - Management and Coordination

Framework for the Management of Information: Objective 1

The institution's management structure facilitates effective coordination of all information-based functions.

Criterion

1.1 Accountability and responsibility for the management of information are assigned across the organization to senior management, information-based function specialists, line managers and staff.

Questions/Practices

1.1.1 Have responsibilities for the management of information been included in formal organizational documentation such as policies, procedure manuals, position descriptions, etc? Are responsibilities clearly described? Are accountabilities clearly explained?

1.1.2 Do managers, information specialists, and staff take into account the mission and strategic priorities of their institution in establishing responsibilities for the management of information? Are they aware of, and do they understand, their respective responsibilities for the management of information holdings, i.e. can they explain their responsibilities in discussions or in response to questions?

1.1.3 Are users at all levels aware of their own responsibilities regarding information holdings? Do they have the knowledge, skills and tools to exercise these responsibilities? For example, is information management an element of the orientation for new employees? Do users have printed or on-line guides to institutional holdings and do they know how to retrieve information from them?

1.1.4 Does the delegation of responsibilities, and the related reporting relationships in the organization provide avenues for senior management to resolve conflicts or overlaps between information-based functions? For example, if the security group of an

institution is in a different branch than the office systems and computer support group and a conflict arises between these groups on an information security matter, is it clear which senior managers will be involved - and have the authority to resolve the conflict?

1.1.5 Are reports on the progress of information-based functions towards achievement of their plans forwarded to senior management or to the senior official responsible for the management of information holdings?

Criterion

1.2 A senior official is designated to represent the institution to Treasury Board Secretariat and other central agencies for the management of information holdings. (MGIH policy, requirement 1.)

Questions/Practices

1.2.1 Is a senior official clearly identified and recognized across the institution as the person who is designated for purposes of the MGIH policy? Are the role and responsibilities of the senior "designated official" clearly articulated and communicated throughout the organization?

1.2.2 Does the delegation of responsibilities, and related reporting relationships within the institution permit the designated official to speak for all the relevant information-based functions? If some information-based functions do not have an organizational link or reporting relationship to the designated official, how does the designated official represent them to central agencies? Also, how, for the purposes of the Information Management Plan and related activities, does the designated official for information holdings coordinate actions with the designated official for information technology?

Framework for the Management of Information: Objective 2

The institution ensures coordinated management of all of its information-based functions - leading to improved services and better program delivery.

Criterion

2.1 Linkages and common goals/needs among information-based functions are identified.

Questions/Practices

2.1.1 Have corporate information managers developed an infrastructure of policy, systems and procedures for managing information effectively? Does the infrastructure link separate information management functions in order to provide for coordination of

goals and services?

2.1.2 To what extent does the institution's Information Management Plan (IMP) cover its various information holdings, including non-electronic media? If some information holdings are not included in the IMP, what are the reasons?

2.1.3 To what extent are opportunities for sharing information, services, etc. identified among information-based functions? Are common information requirements, services provided, user audiences, etc. identified in order to avoid possible duplication or overlap?

2.1.4 Are all stages of the information life cycle considered in exploring linkages and common goals/needs among information-based functions?

Criterion

2.2 Plans are established for the support requirements of information holdings in all media.

Questions/Practices

2.2.1 How do plans for the management of information link with support requirements for corporate and operational information holdings? For example, do plans incorporate requirements to ensure the widest possible access and use of information by users?

2.2.2 Do information plans address restrictions on the use and disclosure of information in recognition of privacy and security considerations?

2.2.3 Do information plans include retention and disposal provisions relevant to the nature of the holdings?

Criterion

2.3 A corporate inventory is maintained for managing the institution's information holdings. (MGIH policy, requirement 1.)

Questions/Practices

2.3.1 Does the institution maintain a current, comprehensive and structured identification or classification system or systems which provide an effective means for organizing and locating information and, in composite form, comprise a corporate inventory for managing information holdings? When developing the corporate inventory, it may be useful for institutions to consult Management of Government Information Holdings: Technical Specifications for an Automated Corporate Inventory of Holdings.

2.3.2 Are the criteria that dictate what is in the inventory clearly defined? Is the corporate inventory kept up-to-date? How is this done? How often is it done? Does the inventory reflect the actual, current holdings of the institution?

2.3.3 Where the corporate inventory is a combination of systems, has the institution considered using a thesaurus function as a means to establish a more complete and effective linkage between the component systems? In some institutions, the implementation of a good thesaurus function has avoided the need to create a new corporate inventory. A good thesaurus function can link previously separate "islands of information."

2.3.4 Is there a periodic review of the relevance of the components of the corporate inventory? Who appraises the adequacy and need for particular information holdings and the related information technology? Are actions taken to eliminate unnecessary holdings and avoid duplication of holdings? Has the institution made information easier to share by encouraging greater compatibility among supporting technologies?

2.3.5 Does the corporate inventory include all information holdings under the control of the institution, including those held by individual managers and staff members? Where information is held by individuals, are the responsibilities and accountabilities for this information integrated with those for corporate information holdings - including the maintenance of the corporate inventory? In other words, does everyone understand what "under the control of the institution" means when applied to information held by individuals?

2.3.6 Do users find the corporate inventory helpful when they are looking for information? In other words, do they actually use the corporate inventory? Is there a system in place to measure user satisfaction?

2.3.7 How is information captured in order to maintain the inventory of information holdings? Does the system keep the inventory complete and up-to-date? Is information in all media captured, including electronic forms?

Chapter Four - Information Planning

Service to Users: Objective 3

Information holdings meet the operational needs of the institution and satisfy legislative and policy requirements.

Criterion

3.1 The information requirements for operational, legislative and policy purposes are identified and analyzed.

Questions/Practices

3.1.1 Has the institution identified and categorized information users within and outside of the organization? Have the information needs of users been identified? Have information holdings been analyzed to determine if the information needs of users can be satisfied by existing holdings?

3.1.2 Is dissemination of information to the public considered when planning new databases and information systems?

3.1.3 Has the value of information to users been assessed and balanced against the costs of providing the information?

3.1.4 Does the annual planning process for short- and long-term operational needs include analysis and planning of requirements for information holdings? Where program or subject matter representatives have planned substantive changes in their operations, have the related information needs been analyzed? Is information treated as a resource for planning purposes on the same basis as finance, personnel and assets?

3.1.5 For any new operational, legislative or policy requirements, are information needs identified, together with related information system requirements? (MGIH policy, requirement 2.) When was this done, and by whom?

3.1.6 Is duplication of holdings and technology applications avoided? Are the new information needs compared to existing holdings and information systems, both within the institution and those available outside the institution?

Criterion

3.2 Information management plans are coordinated with the support requirements for corporate and operational information holdings.

Questions/Practices

3.2.1 Do information management plans respond to program and management requirements for information, including the technological tools required to access, retrieve and use information?

3.2.2 To what extent are information holdings specialists (e.g. records managers, librarians, etc.) involved in information management planning, including the technology planning aspects? Often the responsibility for technology planning and acquisition is

delegated to programs, branches and regions in order to better meet operational needs. The question becomes to what extent the need of information holdings for technological support is coordinated with the planning and acquisition of information technology? For example, is a reasonable proportion of the time spent on technology planning and the money spent on technology acquisition devoted to ensuring that the institution's information technologies are compatible?

3.2.3 Prior to proposing or developing new information systems, have existing information systems been assessed for their efficiency and effectiveness? (For further reference to the review of new computer systems, see the OCG's Guide to the Audit of Systems Under Development.)

3.2.4 Has the institution looked at ways of decreasing costs or providing more productivity or value with existing systems, either by combining systems, using new technologies, or using standardized applications? Does this assessment cover all stages of the information life cycle?

Criterion

3.3 Opportunities for information technology applications are assessed in relation to information holdings requirements.

Questions/Practices

3.3.1 How are potential technology applications identified and analyzed for information holdings which are not in electronic form? (For example, in some government departments, maps and blueprints are now created in digital form, but how far should these departments go to convert existing hard copy blueprints to digital form?) How is this analysis linked with corporate information technology planning and preparation of the institutions' Information Management Plan?

3.3.2 To what extent are information technology purchases based on the need to support information holdings? Are technology acquisitions made because they are needed to meet the functional requirements of both the institution and users?

3.3.3 To what extent are information technology alternatives considered and related to information holding support requirements as well as to user needs for such things as information transmission, retrieval and use? How do these information technology choices compare to alternatives in terms of costs, benefits, etc? (For further reference, see the OCG's Guide to the Audit of End-User Computing.)

3.3.4 Does the methodology for developing automated information systems take the need to support information holdings into account? When new automated information systems are planned and implemented, are the MGIH requirements identified?

Chapter Five - Collection, Creation, Receipt

Service to Users: Objective 4

The institution collects, creates and receives only the information that is necessary to meet its operational, legislative and policy requirements.

Criterion

4.1 The information collected or generated meets the identified needs.

Questions/Practices

4.1.1 Are holdings periodically reviewed in order to determine if the information continues to meet identified needs? (MGIH policy, guideline 4.1.) Are users periodically consulted to determine if information collected, created and received continues to meet their needs? How is this done? How often is this done?

4.1.2 Where users are also information providers (i.e., they are partly self sufficient in the collection, creation and receipt of information), is the information which they gather or generate reviewed periodically to determine if it is relevant and meets identified needs? Do the holdings meet the key attributes of information (see page 10 of Guide)?

4.1.3 Does the institution periodically review the use to which information is put? Where information holdings are available to users, do they actually use them? A lot of information may be collected because a need was identified years ago. If the institution stopped collecting the information now, would any person or program be affected?

4.1.4 Legislation or policies may demand that certain information be maintained by an institution. Are legislative and institution-specific policy requirements met as to information content?

4.1.5 Is unsolicited information received from outside the institution assessed for its relevance to the institution? Is the information transmitted quickly to the part of the institution responsible for dealing with that particular subject?

Criterion

4.2 Information collection is coordinated and meets with applicable requirements.

Questions/Practices

4.2.1 Does the institution have policies and plans for information collection, creation and receipt? Are these policies and plans linked to present and future user needs and/or legislative and policy requirements?

4.2.2 Is the coordination comprehensive? Are all information collection activities planned and accounted for, including those in the regions and various organizational units? Is information collection by agents (e.g. consultants) included? Are there controls in place to ensure that information collection policies are known throughout the institution and that collection plans are reported and coordinated at an early stage?

4.2.3 Has the institution ensured that information collection conforms to the applicable standards? For example, does the institution consult the Public Opinion Research Group (Government Services Canada) regarding information collection which qualifies as, or contains a component of, public opinion research?

4.2.4 Is information periodically reviewed in order to ensure that the requirements of the Privacy Act are respected? This might be done during the annual update of personal information banks required by Section 11 of the Privacy Act. (MGIH policy, guideline 4.1.)

Service to Users: Objective 5

The institution avoids collecting, creating and receiving information that is already available in order to minimize costs and response burden. (MGIH policy, requirement 3.)

Criterion

5.1 The costs of collecting, creating and receiving information are minimized. (MGIH policy, requirement 3.)

Questions/Practices

5.1.1 Does the institution know the costs of collecting, creating and receiving the information it uses? Given that users frequently collect, create and receive information themselves, are their costs (mainly time/salaries) identified, justified and kept to a minimum?

5.1.2 Are the costs of collecting, creating and receiving information commensurate with its value to the institution and users?

5.1.3 Where the same or similar information is collected, created and received for more than one user or one group of users, have opportunities been taken to meet common information needs through joint collection, joint creation or joint receipt of information?

Where duplicate collection, creation and receipt of information exists, is it operationally and cost-justified?

5.1.4 Before information is collected, created or received, are existing information holdings reviewed to determine if the information needs can be satisfied by existing holdings or readily accessible external information sources? Would the costs of acquiring new information be justified? Is the information collected, created or received by the institution actually used?

Criterion

5.2 Response burden is minimized in the collection of information. (MGIH policy, requirement 3.)

Questions/Practices

5.2.1 Have respondents been identified and profiled in terms of the detail and frequency of the information being collected from them? (i.e., does the institution know what response burden it is currently placing on respondents?)

5.2.2 Have opportunities been taken to undertake joint collection or information sharing with other institutions where feasible? (MGIH policy, requirement 3.) Where information collection does duplicate or overlap with that of other institutions, is the continuing collection of this information justified, either by the need for more detail, or the need for more up-to-date information?

Criterion

5.3 Forms meet all statutory and policy requirements (MGIH policy, requirement 4).

Questions/Practices

5.3.1 Are forms, in both paper and electronic media, reviewed before they are put into use to ensure that applicable requirements are met? By whom? Are all forms used by the institution reviewed? If not, why not?

Chapter Six - Organization, Transmission, Use and Retrieval

Service to Users: Objective 6

Holdings are organized in order to make the widest possible use of information. (MGIH policy statement.)

Criterion

6.1 Information holdings are organized in order to facilitate efficient access and retrieval by users, subject to legal and policy constraints.

Questions/Practices

6.1.1 Are users - both internal and external to the institution - satisfied with their access to and retrieval of information holdings? Is the information that users need available? Is it easy for them to retrieve? How is user satisfaction measured?

6.1.2 Do custodians of information holdings, e.g. Records Management, Library Services, Data Management, know the information needs of users? Do custodians tailor their services to better meet the needs of users for quick and easy access, e.g. retrieval response time, efficient and effective technology for transmission, friendly formats for use, etc? Do they tailor their services to meet user needs economically, efficiently and effectively? Do they use standards-based technology?

6.1.3 Are information holdings available for public dissemination? Are they sold to the public where appropriate and where there is significant demand? (MGIH policy, requirement 5.) Is the Depository Library System used to make information more widely available to the public?

6.1.4 Are information holdings available for use by other institutions within the government, subject to any legal or policy constraints, e.g. the Privacy Act and the Government Security policy? (MGIH policy, requirement 5.)

6.1.5 Does the institution have an up-to-date publications catalogue? Are all publications deposited in the institution's library? Is published material catalogued according to established standards? Is the resulting bibliographic information reported to the National Library's Union Catalogue or made available to other libraries by other means?

6.1.6 Is all material published by the institution easily accessible to decision makers within the institution and available to the public on request? (MGIH policy, requirement 5.) Does this include "grey literature"? (MGIH policy, guideline 11)

6.1.7 Are all confidences of the Queen's Privy Council managed in accordance with government-wide standards established by the Privy Council Office. (MGIH policy, requirement 1.)

Criterion

6.2 Information holdings are identified and described in a manner that is meaningful to users.

Questions/Practices

6.2.1 Are users satisfied that the organization and description of information holdings are such that information holdings are rendered understandable and useable? Are information holdings identified and described such that users can easily and quickly find the information they need? Are the classification and thesaurus functions effective in helping users to identify and locate the information they need? Do the classification and thesaurus functions, as well as other means of identification and description, cross all media boundaries? Is grey literature identified and described so that users can have access to individual documents?

6.2.2 Does the institution keep track of electronic information on a basis consistent with other forms of media? Information stored on different media may be located in different places, under the custody and control of different information specialists. Therefore a common identification function such as a common classification system is needed.

6.2.3 Are information holdings identified and described in the appropriate public reference sources for use by the public (e.g. InfoSource)? Is information effectively disseminated where there is a duty to inform the public? (MGIH policy, requirement 5.)

Service to Users: Objective 7

Systems for information transmission, use and retrieval respond efficiently and effectively to the needs of users.

Criterion

7.1 Levels of service - in terms of getting information to users - are identified and meet operational needs and user requirements.

Questions/Practices

7.1.1 Does the institution attempt, on a periodic basis, to determine the level of user satisfaction with information products and services? Is formal feedback from users requested and received through mechanisms such as:

- user surveys?
- questionnaires distributed at the completion of major service cycles, or selected intervals?
- participation of user representatives on information management committees designed to solicit input and feedback?

7.1.2 Are the services of information specialists tailored to volume or demand requirements? Are resources shifted to meet changing user needs? Are considerations such as the following used:

- volume of activity, e.g. responses or information requests satisfied, on an annual basis?
- response times for various types of requests?
- number of user complaints or problems?

Criterion

7.2 Responsiveness to users is balanced against cost effectiveness.

Questions/Practices

7.2.1 Has the institution determined the full costs of existing information systems and services? Has the institution compared the cost of the existing systems and services to possible alternatives? Has the institution looked for ways of decreasing costs, e.g. by combining systems or dropping little used services or features?

7.2.2 Where new systems are developed, is there a requirement to integrate them with existing systems and/or to justify costs?

Chapter Seven - Storage, Protection and Retention

Service to Users: Objective 8

The institution maintains information while it has operational value in terms of supporting decision making, program operations and service delivery and while it is required to meet legislative and policy requirements.

Criterion

8.1 The institution has identified and is protecting and retaining information on its projects, programs and policies to ensure continuity in the management of the organization. (MGIH policy, requirement 6.)

Questions/Practices

8.1.1 Does the institution identify and protect its essential information holdings (as defined in the Guide to the Preservation of Essential Records published by Emergency Preparedness Canada)? (MGIH policy, requirement 4.)

8.1.2 Is the way that information is stored and protected appropriate to the institution's operational needs and legislative and policy requirements? For example, do the storage media and location permit quick and easy access and retrieval by users?

8.1.3 Do protection measures prevent unauthorized access, retrieval, use, alteration, inadvertent loss or unauthorized destruction? Do protection measures provide for the survival of the environment in which information is held? Can important information be recovered in the event of a disaster?

Criterion

8.2 Storage and protection methods balance operational, legal and user requirements.

Questions/Practices

8.2.1 Are users satisfied that information holdings are useable, i.e. the holdings are in a form that can be used by the persons who need the information? Where holdings are stored on a medium other than paper, do users have the tools to gain access to the information? For example, if information is held in microform (microfilm or microfiche) is it immediately useable by those who need it or must it be transferred to another medium first? If a transfer of medium is necessary, can the information still be provided to users in a timely fashion?

8.2.2 Do protection measures satisfy legal and policy requirements without undue interference to users? For example, access to holdings should not be unnecessarily restricted because they have been over-classified (e.g. as "Confidential" or "Secret").

8.2.3 Is the level of protection commensurate with the level of risk and does it take into consideration user requirements for access and use?

Criterion

8.3 Information storage, protection and retention methods and costs are justified.

Questions/Practices

8.3.1 Is there an institution policy to permit individuals to hold information? Where individuals hold information, (e.g. on paper files, computer memory and diskettes) is this in fact consistent with the institution's policy for the custody of information holdings?

8.3.2 Do managers and staff understand that their files and computer workspace are included in the scope of legislative and policy requirements applicable to information holdings, e.g. the Privacy Act, Access to Information Act, National Archives of Canada Act, National Library Act, Government Security policy, Management of Government

Information Holdings policy, Management of Information Technology policy, etc? In practice, the institution's information holdings specialists, records managers, librarians, data administrators, etc., cannot know what information each individual manager and staff member is holding. It is the responsibility of all employees to ensure the proper management of information holdings in accordance with applicable requirements.

8.3.3 Where individuals hold information, are all the associated costs recognized and justified? What is the cost of the storage area and computer memory? What is the cost of sorting and searching through additional quantities of information trying to locate specific information? How do these costs compare to using a corporate system to hold the same information? Obviously users will always prefer to hold some of their information. The question is to what extent is it operationally and cost-justified?

8.3.4 Do information storage and protection methods conform to government-wide standards for the transmission, maintenance and protection of information holdings (MGIH policy, requirement 4)?

8.3.5 Does the institution balance frequency and convenience of retrieval against storage costs regarding information not frequently or urgently required? For example, is older electronic information down-loaded from main memory? Are less active records moved from main office areas to specialized, lower-cost storage facilities?

Service to Users: Objective 9

Information holdings that serve to reconstruct the evolution of policy and program decisions are retained. (MGIH policy statement.)

Criterion>

9.1 The institution has a systematic process to ensure that information of enduring value which documents the evolution of the institution's policies, programs and major decisions is identified and retained. (MGIH policy, requirement 6.)

Questions/Practices

9.1.1 Has the institution identified what information should be retained in order to preserve the corporate memory?

9.1.2 Is this information stored and protected for long-term preservation? For example, will the storage media permit retrieval and use of this information for many years into the future?

9.1.3 Are institutional publications stored and protected in the institution's library?

9.1.4 Have migration strategies been implemented in order to convert information held in media with a short-term life to media with a long-term life? For example, compact discs have an estimated ten-year life before oxidation causes decay of the recorded information. New copies will have to be made periodically.

9.1.5 Are storage and retention practices for this information designed to protect against loss or destruction? Are originals kept secure, and copies made available for use?

9.1.6 Has the institution developed any documentation of its history, case studies or profiles in conjunction with the Canadian Centre for Management Development? (MGIH policy, guideline 10.)

Chapter Eight - Disposition Through Transfer or Destruction

Service to Users: Objective 10

Information holdings are disposed of through destruction or by transfer to the control of the National Archives or National Library, or to organizations outside the control of the Government of Canada, in accordance with the requirements of the National Archives of Canada Act and the National Library Act.

Criterion

10.1 All information holdings which are records (i.e. except published material) are scheduled for retention and disposal. (MGIH policy, requirement 6.)

Questions/Practices

10.1.1 Have all such information holdings in all media and in all locations been assigned retention periods? In the setting of retention periods, has duplication of holdings in different media and/or in different locations been considered?

10.1.2 Do the retention periods reflect the operational, fiscal and legal values that the information holdings have?

10.1.3 In the setting of retention periods, have the following costs been considered:

- computer and non-computer storage costs for both active and inactive information holdings?
- costs connected with the retrieval and/or manipulation of information?
- costs connected with the migration of information to different technologies to ensure its continued availability?

Criterion

10.2 The disposition of records occurs in accordance with the requirements of subsections 5(1), 6(1) and 6(3) of the National Archives of Canada Act.

Questions/Practices

10.2.1 Has the consent of the National Archivist been obtained for the disposition (including alienation) of all records in all media and in all locations? If not, has the institution made plans with the National Archives to obtain this consent?

10.2.2 Where the consent of the National Archivist for the disposition of records has not yet been obtained, are records, in the meantime, protected from destruction, deterioration or loss?

10.2.3 Has a Plan covering records disposition activities been signed with the National Archives? If not, when is a Plan to be signed?

10.2.4 If a Plan has been signed, is the institution meeting its commitments under the Plan?

10.2.5 Is the institution transferring archival and historical records to the National Archives in accordance with the terms and conditions agreed upon for their transfer?

10.2.6 Where the National Archivist has consented to the destruction of records, is the institution destroying such records in accordance with the records retention schedule the institution has established for the records?

10.2.7 Where the National Archivist has consented to the alienation of records, has the institution transferred the records to the jurisdiction concerned?

10.2.8 Have the records of agencies or programs which have ceased been transferred to the care and control of the National Archivist (where these records are not required by the institution or by any other federal institution)?

Criterion

10.3 Published material is disposed of in accordance with the requirements of the National Library Act.

Questions/Practices

10.3.1 Does the institution have a library collection policy which includes the requirement for periodic inventory reviews (weeding)?

10.3.2 Does the library collection policy include criteria for identifying surplus material?

10.3.3 Does the institution's library coordinate the disposal of all surplus published material belonging to the institution, both government publications and other published material?

10.3.4 Does the institution consult the Canadian Book Exchange Centre (CBEC) of the National Library regarding disposal of surplus published material, including surplus stocks of institutional publications?

10.3.5 Does the institution follow the direction of the CBEC when disposing of surplus publications?

Appendix A: Glossary

The following list does not attempt to include all terms applicable to the management of information. The intent is to present a glossary of the most frequently used terms. Definitions taken from the MGIH policy are marked with an asterisk (*).

Alienation: The transfer of information holdings outside of the control of the Government of Canada.

Classification system: A logical and systematic arrangement of information holdings into subject groups or categories. The arrangement is based on schematic relationships among information. Numbers, letters or key words are used for identification.

Corporate memory: Information holdings which meet operational needs as well as the requirements of legislation and policy.

Government institution: Any department or ministry of state of the Government of Canada listed in the Financial Administration Act.

Grey literature: Documents distributed by their authors (individuals or organizational units) but not distributed through official government channels, e.g., Canada Communication Group (CCG), or departmental distribution services. Copies of grey literature are usually distributed in limited numbers.

Information collection: The planned gathering by or for an institution of any information (including personal information as defined in the Privacy Act) that is intended to be used for any government purpose. This definition includes, but is not restricted to, the collection of information for direct or indirect use in program planning, operation or policy development, or the provision of benefits, grants or services, whether that information is collected from persons

(including employees of government institutions) businesses, institutions or other entities through surveys, interviews, reports, forms, questionnaires or any other formal or informal method.(*)

Some information collection is specifically exempt from selected requirements as they relate to government information collection and public opinion research.(*). This definition can be further clarified in the Management of Government Information Holdings (MGIH) policy. (Treasury Board Manual, Information Management, Chapter 2.)

Information holdings: All information under the control of a government institution, regardless of physical mode or medium in which such information may be stored. Without restricting the generality of the foregoing, this may include correspondence, memoranda, books, plans, maps, drawings, diagrams, pictorial or graphic works, photographs, films, microforms, sound recordings, videotapes, machine readable records, published material, and any other documentary material. Excluded from the definition are materials held by federal libraries which were not prepared or produced by or for the government.(*)

Information management: The coordinated management of both information holdings and investments in information technology.

Information needs: Those requirements for collecting data and creating information which are relevant and essential to the effective and efficient operation of a program or activity. Normally, they will derive from a statutory or other type of officially declared mandate (e.g. set out in Estimates).(*)

Information of historic or archival importance: Information which, in the opinion of the National Archivist, is of historic or archival importance and is to be transferred to the care and control of the Archivist in accordance with such agreements for the transfer of records as may be agreed on between the Archivist and a government institution.

Integration: The extent to which institutions have ensured that management of information holdings is included and coordinated as an integral part of the corporate management process.

Life cycle of information holdings: The stages of planning, collection, creation or receipt of information; its organization, retrieval, use, accessibility, and transmission; its storage, protection and retention; and, finally, its disposition through transfer to National **Archives or National Library, or destruction.**

Management framework: The framework of interrelated systems and practices adopted by management to achieve established objectives. The management framework includes built-in control systems that provide reasonable assurance to management that the specified

objectives will be achieved.

Management of information holdings: Ensuring the planning, needs assessment, collection, creation, organization, maintenance and transmission of information which has quality, relevance, integrity, accessibility and currency, and includes its protection, retention, and proper disposal or archival preservation.(*)

Published material: An information product which has been created and edited for the purpose of distribution or sale. Material published by or for government institutions is deposited in federal library collections.(*)

Public opinion research: Any research that solicits the views of any segment of the public, including advertising research.(*)

Record: Any correspondence, memorandum, book, plan, map, drawing, diagram, pictorial or graphic work, photograph, film, microform, sound recording, videotape, machine readable records, and any other documentary material, regardless of physical form or characteristics and any copy thereof. (National Archives of Canada Act.)

Thesaurus function: An arrangement of classification terms or identifiers that can be used for indexing, searching and information retrieval. A thesaurus function brings classification terms or identifiers together based on logical relationships, e.g. synonymous words, related subject matters and hierarchical relationships.

Appendix B: References

In a review of the management of information holdings, reference must be made to related policies, guides and documents. Specific references will depend upon the issues and areas to be reviewed. The following list of references is not, therefore, definitive. The intent is to present a list of frequently used references which can be used to supplement and expand upon the details of this Guide.

- *Treasury Board Manual on Information and Administrative Management*, volume on *Information Management*
- *National Archives of Canada Act*
- *National Library Act*
- *Privacy Act*
- Privacy Regulations
- *Access to Information Act*
- Access to Information Regulations
- Access to Information and Privacy policies

- *Copyright Act*
- Government Security policy
- Government Communications policy
- Operational Guidelines for Information Collection and Public Opinion Research (Public Opinion Research Group, Supply and Services Canada)
- Handbook of Managerial Practices for Federal Libraries (National Library of Canada)
- Guide to the Audit of Security (Office of the Comptroller General, 1990)
- Guide to an Audit of the Management Process (Office of the Comptroller General, 1987)
- Guide to the Audit of Systems Under Development (Office of the Comptroller General, 1991)
- Guide to the Audit of End-User Computing (Office of the Comptroller General, 1991)
- Management of Government Information Holdings, Implementation Report No. 5: Corporate Inventory of Information Holdings - Guide to the Structure, Data Model, Data Dictionary (Treasury Board Secretariat, February 7, 1991)
- Enhancing Services: Through the Innovative Use of Information and Technology, Strategic Direction for the 90s (Treasury Board Secretariat, 1992)
- General Records Disposal Schedules of the Government of Canada
- Disseminating Electronic Information: A Primer on Databases for Managers (Treasury Board Secretariat, 1992)
- Responsibilities and Good Practices (Treasury Board Secretariat, 1992)
- Management of Government Information Holdings: Technical Specifications for an Automated Corporate Inventory of Holdings (Treasury Board Secretariat, 1992)

Appendix C: Linkages to Information Technology

As mentioned in the Introduction, the Treasury Board Foreword on Information Management says that linkages between information technology and information holdings should be established to the extent that they are useful and meaningful.

For purposes of the MGIH policy, linkages between information technology and information holdings can be made where technology is used for information management in an operational sense or to meet legislative or policy requirements. Consequently, some institutions may have to distinguish between information technology for such purposes and information technology for other purposes.

An obvious example would be a major office automation system which processes, stores and transmits information to users. In this case, the technology should be linked to the support requirements of the information holdings to ensure that all key attributes of information are

met (i.e., the information is available, understandable, useable, complete, accurate and up-to-date). In addition, the technology should assist in meeting all applicable legislative and policy requirements such as privacy and protection. For example, the technology used may have to ensure that access to and retrieval of some information can be restricted to certain authorized users.

In many institutions, most of the information technology acquired and used is related to the processing, storage, communication and use of information for management, program delivery and accountability purposes. In these cases, the information technology is linked to the management of information holdings.

In some institutions, however, much of the information technology acquired and used has little or no such application. Instead, the technology is used for other purposes, such as controlling and guiding machinery and equipment. For example, the heating, cooling, elevator and security systems of most major buildings are computer controlled. In fact, a great proportion of electric and mechanized equipment is computer assisted, ranging from smaller things like wood lathes and gas chromatographs to larger items like wind tunnels, ships and aircraft. In maintaining, refitting or upgrading such equipment, some institutions make substantial expenditures on information technology.

It can be argued that a "number-crunching" computer used for scientific research and the navigational control system of a vessel are in fact processing information, and thus the term information technology is appropriate to them. While the purpose of this technology is quite different than that of an office automation system, both are described as information technologies for the purposes of Treasury Board policies.

It should also be noted that some technology purchases related to the management of information may not be categorized as information technology, because they are not computer related. For example, a microfilm reader and photocopier can also be called information technology, but they might be procured under an office equipment budget, not the information technology budget. This kind of equipment should also be linked to information holdings in terms of ensuring that all key attributes of information are met.

Linkages between information technology and information holdings should be made when technology is used to support information holdings. The linkages should identify how technology is contributing to the economic, efficient and effective management of information holdings.