THE NATURE OF RECORD AND THE INFORMATION MANAGEMENT CRISIS IN THE GOVERNMENT OF CANADA: A GROUNDED THEORY STUDY

by

Li Xie

MLIS, McGill University, 2004
MAS, The University of British Columbia, 2006

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

The Faculty of Graduate Studies

(Library, Archival and Information Studies)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

April 2013

© Li Xie, 2013
Abstract

Information is considered by the Government of Canada its “lifeblood” and its management is regulated by both law and government policy. Being part of information management, records and their management are required to facilitate “accountability, transparency, and collaboration”, including “access to information and records”. The right to access government records is granted by the Canadian Access to Information Act, which, since 1985, has been the main mechanism for the public to inquiry about the government’s conduct and decision-making. The Office of the Information Commissioner was established to monitor the administration of the Act, including assessing government institutions’ performances under the Act. In 2009, the Office reported that almost 60% of the institutions it assessed were rated with a below-average performance, based primarily on their delay in releasing requested records. The Office thus concluded that “The poor performance shown by institutions is symptomatic of what has become a major information management crisis”.

This information management crisis motivated the present study, which aimed at finding explanations for it. Within the framework of the grounded theory methodology, data were collected from thirty government departments, including publications, emails, site observations, notes of conversations/teleconferences, and internal records released by Access to Information requests. These field data, along with relevant literature, were coded, memoed, and constantly compared for formulating the explanations, or discovering the substantive theory. At the center of the theory lies the core variable record
nature, which underlies ninety six concepts and the hypotheses based on the concepts.

According to the theory, when the understanding of record nature is incomplete, the management of records is ineffective and unable to deliver any concrete results, causing in departments the marginalization of the records management function, the disappearance of records, and ultimately, the inability to perform basic yet critical tasks in supporting government operation and accountability, that is, the information management crisis.

The study contributes to archival science in general, and to records management in particular, both theoretically and methodologically. It specifies the concept of record nature, clarifies popular misconceptions, elaborates on records management principles, and offers a records management work model conforming to the generated theory.
# Table of Contents

Abstract.................................................................................................................................................. ii

Table of Contents ....................................................................................................................................... iv

List of Tables............................................................................................................................................... vii

List of Figures.............................................................................................................................................. viii

Acknowledgements ...................................................................................................................................... ix

Dedication ................................................................................................................................................... xii

1. Introduction.............................................................................................................................................. 1

  1.1. The Research Setting ......................................................................................................................... 1
  1.1.1. Record Management & Information Management ........................................................................ 1
  1.1.2. Government of Canada ............................................................................................................... 3
  1.1.3. Records Management & Information Management in the Government of Canada .................. 6

  1.2. Determining the Area of Interest ....................................................................................................... 7
  1.2.1. Information Management Crisis by the Information Commissioner of Canada .................... 8
  1.2.2. Information Management Crisis in Statistics .............................................................................. 9
  1.2.3. Relationship between the Information Management Crisis and Records Management ........ 13
  1.2.4. Rationale for Determining the RM(IM) Crisis as Area of Interest ............................................. 14
    1.2.4.1. Significance of Researching the Information Management Crisis .................................. 14
    1.2.4.2. Feasibility of the Original Research Interest ..................................................................... 15

  1.3. Selecting Research Methodology ..................................................................................................... 16
  1.3.1. Origin of Grounded Theory Methodology .................................................................................. 18
  1.3.2. Versions of Grounded Theory Methodology ............................................................................. 21
  1.3.3. Rationale for Selecting Classic Grounded Theory Methodology .............................................. 26

  1.4. Chapter Organization ....................................................................................................................... 32

2. Conducting the Grounded Theory Study................................................................................................. 33

  2.1. The Starting Group of Institutions ................................................................................................... 33

  2.2. Investigating the Starting Group – Data Collection ......................................................................... 35
2.2.1. Institution-Specific Data Online .......................................................... 36
2.2.2. Institution-Specific Data by ATI Requests: ATI Data .......................... 38
2.2.3. GC-Wide Data .................................................................................. 46

2.3. Expanding the Starting Group – Data Collection by Site Visit .................. 50

2.4. Investigating the Starting Group – Data Analysis – Constant Comparison... 51
   2.4.1. Substantive-Open Coding & Memoing ........................................... 52
   2.4.2. Emerging Substantive Categories .................................................. 53

2.5. Saturating the Emergent Categories ....................................................... 62
   2.5.1. Formulating Groups of Institutions by Theoretical Sampling ........... 63
   2.5.2. Analyzing the Theoretical Sampling Group Formulation .................. 66
      2.5.2.1. Relationship: Adverse IM/RM and ATI Performance ................. 67
      2.5.2.2. Relationship: Elements of Unsatisfactory IM Performance ........... 69
      2.5.2.3. Relationship: Strong IM/RM and ATI Performance .................... 70
      2.5.2.4. Relationship: Elements of Strong IM(RM) Performance .............. 71
      2.5.2.5. Relationship: IM(RM) Performance by MAF and OIC ................. 72
      2.5.2.6. Relationship: Elements of Strong IM(RM) Performance by MAF VIII
                  ........................................................................................................... 75
   2.5.3. Investigating the Theoretical Sampling Groups – Data Collection ....... 76
   2.5.4. Investigating the Theoretical Sampling Groups – Data Analysis –
         Constant Comparison ........................................................................... 77
      2.5.4.1. Category Confirmation ................................................................. 77
      2.5.4.2. Additional Indicators for Categories ........................................... 77
      2.5.4.3. New Indicators for Categories .................................................... 80
   2.5.5. Ending Open Coding ....................................................................... 81

2.6. Emerging Core Concept: Record Nature ............................................... 82
   2.6.1. Substantive-Selective Coding of Record Nature ............................... 83
      2.6.1.1. Definition/Appearance of Record(s) in IM/RM Relevant Legislation
                   ........................................................................................................... 83
      2.6.1.2. Definition/Appearance of Record(s) in TBS RM and IM Policies .... 86
      2.6.1.3. Definition/Elaboration of Record(s) in Relevant Literature ............ 89
   2.6.2. Record Nature Properties ............................................................... 94

3. Discovering/Formulating the Grounded Theory .......................................... 100
   3.1. Conceptual Building Blocks ................................................................. 100
      3.1.1. Record Value, RM Value & The Related ....................................... 103
      3.1.2. RM Requirement-Oriented Knowledge & The Related .................... 118
      3.1.3. RM Application-Oriented Work & The Related ............................... 129
      3.1.4. RM Extended Knowledge & The Related ....................................... 135
      3.1.5. RM Control & The Related ............................................................ 137
   3.2. Hypotheses ......................................................................................... 138
      3.2.1. High Level Propositions ................................................................. 138
3.2.2. Hypotheses in Narratives ................................................................. 139

4. Explaining the Information Management Crisis ........................................ 147

4.1. The Root Cause: Lack of Sufficient Understanding of Record Nature .... 147
4.2. Representative Symptom: IM as a Single Discipline ............................ 148
4.3. Representative Symptom: Weak/Non-Existential Digital Records Management 149
4.4. Representative Symptom: Lack of Understanding of Record Creation Purpose & Record Instrumental Value................................................................. 152
4.5. Representative Symptom: Insufficient & Ineffective LAC Support ......... 156
4.6. Representative Symptom: Missing Part of Departmental RM Activities..... 160
4.7. Representative Symptom: RM(IM) Distant/Passive Work Model .......... 172

5. Prediction, Future Studies & Conclusion .................................................. 180

5.1. Prediction of Outcomes of the GC IM Improvement Measure .............. 180
5.2. Future Studies ......................................................................................... 190
5.3. Conclusion .............................................................................................. 195

Bibliography ................................................................................................. 202

Appendices.................................................................................................... 216

Appendix 1 GC-Wide Data Open Coding & Memoing – TBS .................... 216
Appendix 2 Institution-Specific Online Data Open Coding & Memoing – sG .... 231
Appendix 3 Institution-Specific ATI Data Open Coding & Memoing – sG (CFIA) .. 271
Appendix 4 Alphabetic Organization of the Conceptual Building Blocks .... 282
Appendix 5 Subject Grouping of Conceptual Building Blocks ................. 322
Appendix 6 Hypotheses in Propositions ...................................................... 330
Appendix 7 The IM Crisis in Measurements .............................................. 337
Appendix 8 List of Acronyms ..................................................................... 344
**List of Tables**

Table 1 Information Management Crisis in Statistics.............................................13
Table 2 The Starting Group (sG).............................................................................35
Table 3 Sources of Institution-Specific Data Online ..................................................37
Table 4 Summary of ATI Data Type ........................................................................45
Table 5 GC-Wide Data.............................................................................................48
Table 6 Types of Site Visit Data................................................................................51
Table 7 Substantive Categories with GC Specific Characterization..........................54
Table 8 Substantive Categories with General Properties.........................................58
Table 9 Comparing Records Issue with ATI Performance in tsG1 ......................67
Table 10 Comparing IM(RM) Performance Elements in tsG2...............................69
Table 11 Comparing Strong IM/RM by Institutions and ATI Performance by OIC in tsG3 .................................................................................................................70
Table 12 Comparing IM(RM) Performance Elements in tsG4...............................71
Table 13 Comparing Unsatisfactory IM(RM) Performance by MAF and OIC .......72
Table 14 Comparing Strong IM(RM) Performance by MAF and OIC .................73
Table 15 Comparing Methodologies of TBS MAF and OIC Report Cards on IM..74
Table 16 Comparing IM Performance Elements in MAF III..................................76
Table 17 Additional Indicators for Categories.........................................................78
Table 18 New Indicators for Categories....................................................................80
List of Figures

Figure 1 ........................................................................................................................................... 29
Figure 2 ........................................................................................................................................... 99
Figure 3 ......................................................................................................................................... 146
Figure 4 ......................................................................................................................................... 179
Acknowledgements

I express, first and foremost, my deepest gratitude – along with love and respect – to Dr. Luciana Duranti, my dissertation supervisor, who advised me not only on digital records management but also on conducting academic research and teaching at graduate school. She fully appreciated – in her unique “tough love” fashion – my passion and ability in these areas, and encouraged and enabled me to pursue the path that I have been truly enjoying ever since joining the Master of Archival Studies program at the University of British Columbia, which she chairs, and the InterPARES project, which she directs, both in 2004. Although rigorous and precise on fundamentals, she allowed me plenty of freedom in conducting the dissertation research – without her belief in me or her timely answering to my questions all along the way, the research would not be able to yield the outcomes that it does today. All my major milestones during the research I own to her!

I thank also Prof. Terry Eastwood, who supervised my MAS thesis, which informed an important part of the dissertation research. Prof. Eastwood advised me on the subject of Canadian public administration, my minor area of study, and served also on my Dissertation Committee until 2010. Dr. Victoria Lemieux, or Vicki, who also served on my Dissertation Committee, has been for me not only a true inspiration in my study of digital records management but also a good and lovely friend ever since we first met in 2007. If Luciana showed me that a life focused on digital records can be fun, Vicki has demonstrated that it can also be fulfilling. ❤️ My heartfelt gratitude goes to you, Vicki!

My heartfelt gratitude goes also to Dr. Carson Woo for serving on my Committee and for
helping me with his expertise on information systems. Prof. Woo’s advice on developing “a graphic roadmap” in my text proved to be a wonderful idea, as the roadmap was later on appreciated by every person who listened to my presentation – including the university examiners. His approach to discussing information technologies certainly helped us in the Faculty of Arts, where narratives are paramount! 😊

Special thanks go to Dr. Deborah O’Connor, who assisted me in the choice and articulation of the research methodology at the research proposal stage. Also, thanks go to Dr. Edie Rasmussen, Dr. Rick Kopak, Dr. Luanne Freund, Dr. Aaron Loehrlein, and Dr. Giovanni Michetti for coming to my “mock defence”, “pressing” me with questions on my methodology, and “forcing” me to reduce my overly detailed presentation to a concise yet much more effective format. I am particularly grateful to Edie, who reviewed my revised presentation slide by slide, and in whose class I learned about the research methodology of grounded theory, which I enjoyed so much in applying it to my research!

Sincere thanks go to Dr. Julie McLeod, Information Sciences, Faculty of Engineering & Environment Northumbria University, England, who served as the external examiner of my dissertation, for her appreciation of the significance of the research, and for her careful review and detailed suggestions.

Thank-You to University examiners, Dr. Yair Wand from the Sauder School of Business and Dr. Gerald Baier from the Department of Political Science, who commented so favourably on my opening presentation before they started “grilling” me. Their questioning indeed made of the examination a truly enjoyable process. Their interest in the subject warms greatly my records heart! 😊
I offer also my sincere gratitude to the Access to Information and Privacy analysts and the Information Management personnel in the Government of Canada who were interested in the research. I also wish to thank the officers of the Office of Information Commissioner of Canada, who helped solve the complaints I made against a number of departments, which disagreed with me on the way of disclosing their records.

Last but definitely not least, I thank my family members, who not only supported me during this journey in innumerable ways – noticeably, the provision of the food I love 😊 – but also – indeed more delightfully 😊😊 – became familiar with and interested in my research. Ask them about records management and grounded theory next time you encounter them – you will be surprised!
Dedication

To my parents, Bing Zhong, Xie and Ping, Deng, who raised me to be me. I know I’m lucky to be your daughter. If there is a next life, let me please still be your daughter. And I promise, I will be a better one.

给我的父母谢炳忠和邓平:

是您们培育和成就了今天的我。我知道成为您们的女儿是我的幸运。如果有来世，

请允许我继续做您们的女儿。我保证，我会做得更好。
1. Introduction

This introductory chapter presents basic information on the research setting (i.e., the environment where the research took place), the determination of the research interest, the research methodology, and the chapters that make up the dissertation.

1.1. The Research Setting

The research setting requires two areas of knowledge for it to be understood: one concerning the professional field called Records Management and the other concerning the Canadian public administration, in particular the Canadian Federal Government or the Government of Canada.

1.1.1. Record Management & Information Management

Record management (RM) is a field that focuses on the management of records. For the purpose of general introduction, the term “record” refers to “[a] document made or received in the course of a practical activity as an instrument or a by-product of such activity, and set aside for action or reference”, and RM refers to “[t]he whole of the activities of a creator aimed at the creation, use and maintenance of records to meet its administrative, programmatic, legal, financial and historical needs and responsibilities”.¹

It is necessary to point out that in the RM field, records and records management definitions vary widely, due to the variety of sources, including archival legislation,

national and local archival authorities (when legal definitions are not available), and international bodies. For example, the Library and Archives of Canada Act defines record as “any documentary material other than a publication, regardless of medium or form”, and government record as “a record that is under the control of a government institution”. The ISO 15489 defines records as “information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business”, and RM as “[the] field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including the processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records”. The understanding of records and RM, therefore, is context specific.

The meanings of information and Information Management (IM), like records and RM, also vary according to context. Unlike records or RM, though, information and IM do not appear to have definitions that are provided by authoritative sources comparable to the law or to an international standards body that is widely recognized. Their meanings are specific to the local environment where the terms are utilized, such as the Government of Canada.

---


4 Ibid., s. 3.16.
1.1.2. Government of Canada

The Government of Canada (GC) is Canada’s national government, also frequently termed as the Federal Government, due to the Canadian federalism. In the federalism context, the Government of Canada operates at the national level as the first order of government, collaborating with the second order of government, that is, the ten provinces and the three territories. The powers of the Government of Canada are derived from the Canadian Constitution Acts, which defines the areas over which the Federal Government and the provincial/territorial governments have either exclusive or concurrent authorities. Constitutionally, the Federal Government has the power “to make laws for the peace, order and good government of Canada,” except for “subjects assigned exclusively to the legislatures of the provinces.” Within this framework, the Federal Government is responsible for such areas as foreign affairs and international trade, defence, the monetary system, criminal law, patents, bankruptcy/insolvency, financial services, and telecommunications. The provincial legislatures have powers over, for example, direct taxation, natural resources, health care, municipal affairs, securities regulation, and education. In some areas, such as agriculture, immigration, and pensions, power is shared between the Federal and the provincial governments. The area of records management or information management is governed by the two orders of government separately.


In a country based on a constitutional monarchy, the Government of Canada is a parliamentary government, with a Governor General representing the Queen, an appointed Upper House (the Senate), and an elected Lower House (the House of Commons). The Governor General governs through the Cabinet, headed by a Prime Minister and functioning as the government’s Executive Branch. The Prime Minister chooses the other Ministers of Cabinet and recommends them to the Governor General for formal appointment. The Cabinet Ministers are responsible for particular departments and agencies, typically described as Ministers’ “portfolios”. These portfolios have different focuses, some in the area of public policy, for instance, the Treasury Board of Canada, while others in service delivery, for instance, the Department of Public Works and Government Services Canada. Individual Ministers are accountable to the House of Commons or the legislature for their portfolio departments, and, as a whole, they are answerable collectively to the House of Commons or the legislature for the policies and conducts of the entire Cabinet. The Privy Council Office is the hub of public service, supporting the Prime Minister, the Cabinet, and its decision-making structures. A complete list of departments and agencies can be found on the GC’s website.

---


which emerged in the research process of the present study as relevant to the study.

There are two other branches within the Federal Government, namely, its Legislative Branch and its Judicial Branch. The Legislative Branch is responsible for constructing and debating parliament legislation and the Judicial Branch is responsible for interpreting such legislation in courts at both government levels. Parliament legislation establishes departments/agencies and enacts public laws.\(^\text{10}\) For example, the Financial Administration Act (FAA) establishes the Treasury Board of Canada and assigns it responsibilities for the GC’s general administration, which includes *records management in GC departments and agencies*.\(^\text{11}\) The Access to Information Act provides the Canadian public right to information *under the control of GC departments and agencies*.\(^\text{12}\) The Canadian judiciary enjoys complete independence from the other two branches, and all government actions are subject to the scrutiny of the courts.\(^\text{13}\)


1.1.3. Records Management & Information Management in the Government of Canada

Records management in the Government of Canada is currently part of information management, as records as well as “documents, data, library services, information architecture, etc.,” are all “encompass[ed]” by information management.\(^{14}\) Information management in the GC is defined as “a discipline that directs and supports effective and efficient management of information in an organization, from planning and systems development to disposal or long-term preservation”.\(^{15}\)

In this RM-as-part-of-IM context, “records are information created, received, and maintained by an organization or person for business purposes, legal obligations, or both, regardless of medium or form”.\(^{16}\) Records management, termed recordkeeping, refers to “A framework of accountability and stewardship in which records are created, captured, and managed as a vital business asset and knowledge resource to support effective decision making and achieve results for Canadians”.\(^{17}\)

The expression IM(RM) is therefore used to refer to the IM-including-RM-as-a-part situation in GC, \textit{when IM is discussed as a whole yet it is necessary to make RM visible.}\(^{18}\)


\(^{15}\) Ibid.

\(^{16}\) Ibid.

\(^{17}\) Ibid.
The expression RM(IM) is used to refer to the RM-as-part-of-IM situation in GC, when RM is indeed the real/sole focus yet it is necessary to point out its GC context. The expression IM/RM is used to refer to the indiscriminating manner by which some GC sources discuss IM and RM.

1.2. Determining the Area of Interest

The research started with an interest on the relationship between electronic/digital records management, currently a major component of records management, and the development of electronic government (eGov), which refers to the governmental utilization of digital technologies – in particular the Internet – for providing information and services online.\textsuperscript{18} This interest was inspired by one of the research focuses of the second phase of the InterPARES (International Research on Permanent Authentic Records in Electronic Systems) project, namely, its Focus 3, Electronic Government. The InterPARES project had centered on electronic/digital records and their management, including long-term preservation, for more than a decade, and this corresponded to the research interest of this author.\textsuperscript{19} Digital/electronic records management was thus identified as the major area for the dissertation project. The eGov movement contributed to the InterPARES research

\textsuperscript{18} With regard to both electronic records management and electronic government, the term digital is more accurate than the term electronic as both refer to digital technologies represented by computers and the Internet. Electronic records and eGovernment are used in this dissertation due to their predominant usages in their early development histories. Digital records and digital records management are also used when there is the need to make the distinction.

\textsuperscript{19} This author was a Graduate Research Assistant for the InterPARES project from 2004 to 2007 and an InterPARES researcher from 2008-2012.
eight case studies in various governmental settings. In carrying out the case studies, this author observed the apparent impact of the processes and technologies employed by the eGov projects on the creation, usage, and maintenance of digital records, which presented the eGov movement as an interesting field for studying digital records management. Therefore, the eGov movement, including its origin, developmental history, achievements, as well as the research efforts treating it as an independent field, was determined to be the minor area of study for the dissertation research. The study revealed that the Government of Canada was a worldwide leader in developing electronic/digital government, and this prompted the further choice of the Federal Government as the research setting, which, in turn, led to the comprehensive study of eGov development in the Government of Canada. *The information management crisis in the Government of Canada surfaced during this process.*

1.2.1. Information Management Crisis by the Information Commissioner of Canada

The expression “information management crisis” appeared in 2009 in the speech entitled “A Dire Diagnosis for Access to Information in Canada” by the then Information Commissioner of Canada, Robert Marleau. Considering it one of the systemic issues, the Information Commissioner stated that “The poor performance shown by institutions is

---

20 The term institution is used in the context of the Access to Information Act, referring to the departments and crown corporations that are subject to the Access to Information Act. See s. 3.
symptomatic of what has become a **major information management crisis**”. 21

In specific terms, the information management crisis means that “There is currently no universal and horizontal approach to managing or accessing information within government. Some institutions don’t even know exactly what information they are holding”. 22 “But in today’s digital environment”, the Information Commissioner continued, “outmoded ‘paper’ practices, inconsistencies, overlapping or duplication of information have serious ramifications. Such unsound practices slow down the retrieval process, lead to unsuccessful or repeated searches, and generate huge amounts of pages to review. This in turn translates into unacceptable delays in responding to information requests”. 23 This crisis, according to the Information Commissioner, “is only exacerbated with the pace of technological developments”; “*Access to information has become hostage to this crisis and is about to become its victim*”. 24

1.2.2. **Information Management Crisis in Statistics**

The information management crisis pointed out in the Information Commissioner’s speech was revealed by the assessments of the performances of GC departments and


22 Ibid.

23 Ibid.

24 Ibid. Italics added.
agencies under the Canadian Access to Information Act (ATI), conducted by the Office of the Information Commissioner of Canada (OIC). The Canadian Access to Information Act is the equivalent of the freedom of information legislation in other jurisdictions, including the Canadian provinces. This Act was enacted to extend the rights in existing Federal laws of Canada that provide access to information under the control of the Government, and, for the purpose of administration, established the Office of the Information Commissioner. The Information Commissioner ranks as a deputy head of a department, has all the powers of a deputy head, and engages exclusively in the duties of the office of Information Commissioner.\(^\text{25}\) The Information Commissioner may, at any time, make a special report to Parliament referring to and commenting on any matter within the scope of the powers, duties and functions of the Commissioner where, in the opinion of the Commissioner, the matter is of such urgency or importance that a report thereon should not be deferred until the time provided for transmission of the next annual report of the Commissioner.\(^\text{26}\)

The “special reports to Parliament”, alternatively called report cards, are issued by the OIC to show “how well federal institutions have met their responsibilities under the ATI [Act]”.\(^\text{27}\)


\(^{26}\) Ibid., s. 39. (1).

The report cards process started in 1998 and, by 2010, a total of twenty-seven institutions had been assessed. In April 2010, the year this author started to collect field data, a special report was submitted to Parliament containing assessments on institutions’ ATI performances for the fiscal year 2008-2009. This report has “timeliness as its chief focus.” Timeliness in this context has three indicators: average completion time with reference to the 30-day statutory timeframe for providing access to public records, deemed refusal rate (i.e., the percentage of requests that have exceeded statutory deadlines), and the number of requests responded to after statutory deadlines have been missed. The deemed-refusal rate was the main base by which institutions’ ATI performances were assessed. The OIC selects institutions for assessment using the criterion that at least five delay-related complaints against the institution were filed to it

________________________________________________________________________


29 Statutory deadlines include those that are extended by citing statutory justifications.

30 OIC. “Out of Time,”

31 There are other factors such as whether or not notices under subsection 9(2) were sent to the Information Commissioner, but the deemed-refusal ratio is the main one. See Appendix B of the report cards for how the OIC determined the rating for each institution.
during the assessment time period. An overall rating was given to each institution indicating their performance, which could be Outstanding (A), Above Average (B), Average (C), Below Average (D), or Unsatisfactory (F).

In the 2010 special report, twenty-four institutions were assessed, including ten that were assessed in the fiscal year 2007-2008 and re-assessed in the fiscal year 2008-2009. This assessment was thereby considered “unprecedented in scope” in terms of the number of the institutions assessed. The OIC considered the twenty-four institutions to represent statistically the overall ATI performance of the Federal Government as the requests these departments received accounted for eighty-eight percent of the access requests submitted to all of the two hundred and forty one federal institutions subject to the Access to Information Act in 2008–2009 (i.e., 29,845 out of 34,041). These two years’ assessments are used to statistically illustrate the IM crisis. See Table 1 below.

---


34 OIC, “Out of Time,”
Table 1 Information Management Crisis in Statistics

<table>
<thead>
<tr>
<th>Year of Assessment</th>
<th>% of OIC ATI Rating &lt; C</th>
<th>% of IM or RM Problematic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-2008</td>
<td>6/10 = 60%</td>
<td>8/10 = 80%</td>
</tr>
<tr>
<td>2008-2009</td>
<td>13/23 = 57%</td>
<td>14/(24 - LAC) = 61%</td>
</tr>
</tbody>
</table>

1.2.3. Relationship between the Information Management Crisis and Records Management

The information management crisis (hereafter the IM crisis) in the Government of Canada is in fact the crisis of RM, not only because the Government considers RM one constituent part of IM, but also because the problems revealed by the OIC are specifically about records retrieval. The relationship between access to information and RM is articulated by the OIC as follows:

“access to information relies heavily on sound records management. Institutions that are unable to effectively manage information requested under the Act face time-consuming retrieval of records, uncertain, incomplete or unsuccessful searches,

---

35 For this year, there were two institutions rated as Outstanding (A), three as Above Average (B), and five as Average (C).

36 LAC, i.e., Library and Archives of Canada, was excluded due to the fact that the ATI requests it processes are mainly about records of other GC institutions, i.e., not about its own operational records.
as well as the risk of substantial delays and complaints”.37

1.2.4. Rationale for Determining the RM(IM) Crisis as Area of Interest

The surfacing of the IM crisis made this author change her research interest from the relationship between electronic records management and electronic government to the IM crisis. This section presents the rationale that supported the decision for the change.

1.2.4.1. Significance of Researching the Information Management Crisis

The significance of researching the IM crisis derives from the importance of administering the Access to Information Act, due fundamentally to its relationships with the transparency and accountability of the operations of the Federal Government and, ultimately, with democracy of Canada as a country. In government operations, records document the decisions that have been made and witness the actions that have been taken; the releasing of them thus becomes the most direct channel that enables the public to inquiry about the government’s operation and decision making. Without the existence or accessibility of records, transparency, accountability, and democracy would be difficult – if not entirely impossible – to be realized. As evident in both the words of the Information Commissioner (section 1.2.1.) and the IM statistics (section 1.2.2.), the issues surrounding IM in the Government are grave. An academic investigation – which did not exist – was thus considered warranted.

1.2.4.2. Feasibility of the Original Research Interest

In addition to the seriousness it displayed, the IM crisis raised questions about the feasibility of pursuing this author’s original research interest, due to the complexity of the eGov environment.

Electronic government is at this time the most advanced development of governments’ utilization (i.e., configuration and deployment) of digital technologies; it has thus caused dramatic changes to operational infrastructures and processes. As a result, the impact that the eGov movement has on RM is unprecedented and the associated challenges are much more complex than the RM practices established in the non-eGov environment, which could be considered basic.  

The 1985 Access to Information Act permits the production of a record that “does not exist but can, …, be produced from a machine readable record”, yet the environment of the “machine readable record” did not possess the same level of complexity of the eGov development, which started, in the case of GC, in 1999. Moreover, such records “need not be produced where the production thereof would

---


unreasonably interfere with the operations of the institution”.\textsuperscript{41} Therefore, the complex records associated with the eGov development are highly unlikely to be the records that are mostly requested under the Access to Information Act. The RM issues revealed by the IM crisis thus fall into the realm of basic RM. It was deduced that it would be more appropriate to investigate the basic RM issues than the more complex ones, as the former is the foundation of the latter and the latter can only be researched on the basis of the former. \textit{The area of interest was thus determined to be the IM crisis, with a goal to find explanations for it.}

1.3. Selecting Research Methodology

The research methodology selected for the study is grounded theory. Grounded theory is one type of social science research method that focuses on the generation of theory, either substantive (i.e., developed for an empirical area) or formal (i.e., developed for a conceptual area).\textsuperscript{42} It features for researchers the requirement of theoretical sensitivity, the principles of no literature review and all-is-data (including literature relevant to the research interest), the process of open, selective, and theoretical coding, and the techniques of theoretic sampling, memoing, and sorting as well as constant comparative analysis. This self-contained system allows the generation of a theory (i.e.,

\begin{itemize}
\end{itemize}
concepts/categories and hypotheses) to be able to explain the social phenomenon or process for which it was developed. As the theory is grounded in empirical data relevant to the particular/substantive area, it is believed that it will “fit the situation being researched and work when put into use”. The focus and strength of this methodology thus correspond to the goal of the research, which, as stated in the previous section, is to discover explanations for the IM crisis.

In the process of searching background information on the IM crisis, it was found that at the time when the research interest was being formed, there was no published academic research on this subject (i.e., the IM crisis in GC). This observation added significance to the research on the one hand and on the other hand, permitted ready bypass of the program requirement on literature review. Not reviewing relevant literature for the purpose of conceiving a research framework with specific research questions prior to embarking on research is one of the foundational principles of grounded theory, although it goes against the standard procedure of traditional social science research. The non-existence of scholarly literature centering on the area of interest overcame the difficulty of satisfying program requirements of traditional social science research while, at the same time, following the principle of the methodology. This section introduces

---

43 Ibid., 3. Here, “fit” refers to that “the categories must be readily (not forcibly) applicable to and indicated by the data under study” and “work” refers to that “they must be meaningfully relevant to and be able to explain the behavior under study”.

44 The non-existence of scholarly literature on the area of interest does not solve completely the problem presented by the need to satisfy traditional research requirements for doctoral students while at the same time following the grounded theory principles. When literature review is a mandatory requirement, it must be conducted even though there is no published scholarly
the origin of the methodology, the different versions of it, the rationale for the selected version, and the illustration of the process of the selected version.

1.3.1. Origin of Grounded Theory Methodology

The grounded theory methodology was first articulated by two sociologists, Barney Glaser and Anselm Strauss, in their book, *The Discovery of Grounded Theory: Strategies for Qualitative Research*, in 1967. The book was a response to readers’ inquiry about the methodology employed in their study on dying patients, which received tremendous attention. The method attracted attention due mainly to its emphasis on inductive theory generation, an idea that was the opposite of the then predominant deductive theory verification method.

The two originators of the grounded theory methodology, Glaser and Strauss, have distinctive academic training in social science research methodology. Glaser received his PhD in the Department of Sociology of Columbia University where he was trained as a researcher directly on the subject: the search for relevant literature can be extended and the criteria for relevance can be modified. For a discussion on this problem see Sherry L. Xie, “Striking a Balance between Program Requirements and Grounded Theory Principles: Writing a compromised Grounded Theory proposal,” *The Grounded Theory Review, An International Journal*, 8 (2), 2009: 35-47.


quantitative researcher. Strauss studied and worked at the University of Chicago – a place famous for its qualitative approach – where he was influenced by interactionist and pragmatist writings. Their research collaboration started soon after Glaser’s arrival at the University of Chicago, where the stage for the development and testing of the new methodology was set. *Discovery* does not reveal in any details how the ideas of the grounded theory methodology were conceived and how the methodological training of the authors contributed to its formation. Some details were offered in their later separate publications. According to Strauss in 1987, what contributed to the development of the grounded theory methodology were two streams of thought: the general thrust in American Pragmatism and the Chicago Sociology tradition. American Pragmatism brought in the melding its emphases on action and problematic situation and the Chicago tradition added to it its extensive use of field observations and interviews as data-collection techniques. Strauss also pointed out that both streams placed social interaction and social processes at the center of attention and the Chicago Sociology tradition especially stressed the importance of understanding social phenomena from the

---

actors’ viewpoints. In 1990, Strauss again traced the origin of the grounded theory methodology, describing briefly Glaser’s input:

“Glaser especially saw the need for a well thought out, explicitly formulated, and systematic set of procedures for both coding and testing hypotheses generated during the research process. The Columbia tradition also emphasized empirical research in conjunction with the development of theory”.

Glaser’s version of their respective contributions was presented in a book published in 1998, in a chapter tracing the “roots of grounded theory”. The chapter explains in detail the linkages between his quantitative research training and the corresponding aspects of the grounded theory methodology. In the last section, Glaser expressed his appreciation for learning symbolic interaction from Strauss, and his excitement about analyzing qualitative data using quantitative ideas. In his view, the success of Discovery came directly from the melding of these two fundamental traditions.

---


1.3.2. Versions of Grounded Theory Methodology

After its initial development, grounded theory methodology has developed into three versions: Glaserian (or the classic grounded theory), Straussian, and constructivism. Their major differences need to be elucidated to clarify the choices made to conduct the research for this thesis.

As an introductory book on a new methodology, *Discovery* focuses on presenting the grounded theory ideas at a general level. Many of its chapters serve primarily the purposes of comparing it with other qualitative methods and of justifying the new method’s credibility. As a result, detailed procedures of conducting a grounded theory research are left out, and this, in turn, resulted in an urgent request for publications that specify procedures and clarify confusions.

The publications following such call were written separately by Glaser and Strauss, and revealed major, irreconcilable differences. Despite the two originators’ earlier close collaboration in research and the successful combination of their distinctive methodological trainings in *Discovery*, Glaser and Strauss never worked together again. They were both active in the grounded theory field but took different directions. In 1990, Strauss published his book, *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*,51 to which Glaser replied with the book *Basics of Grounded Theory Analysis: Emergence vs. Forcing*, criticizing the content of Strauss’ book chapter

---

51 Anselm L. Strauss and Juliet Corbin, *Basics of qualitative research: Grounded theory procedures and techniques*. 

21
by chapter. The following two excerpts, from Strauss and Glaser respectively, clearly show the differences:

“[with respect to the separate publications after the Discovery]…some of the terminology and specific recommended procedures are not always identical. Mainly, this is because of the additional reflection but also because of different experiences resting both on teaching and our specific research projects.”

“Gone in Strauss’ method was our initial clear approach in Discovery of Grounded Theory to the systematic generation of theory from data! Strauss’ techniques are fractured, detailed, cumbersome and over-self-conscious. They interfere with the emergence and discovery which comes from the constant comparative method of coding and analysis.”

Although with different tones, they both believe that the major difference between their approaches lies in “procedures” (Strauss) or “techniques” (Glaser), that is, how to execute


53 Anselm L. Strauss and Juliet Corbin, Basics of Qualitative Research, 8.

54 Barney G. Glaser, Basics of Grounded Theory Analysis, 60.

55 “Glaser and Strauss remained very close friends … and had daily contact until Strauss died in 1996. During meetings and conversations the two friends discussed their differences. It became obvious that Strauss had no strong feelings as to the direction his and Corbin’s ‘interpretation’ of Grounded Theory developed.” From Eli Haugen Bunch, “Commentary on the Application of Grounded Theory and Symbolic Interactionism,” Nordic College of Caring Sciences, 18.
a grounded theory study. As the first author of *Discovery* who wrote most of the chapters, Glaser views Strauss-Corbin’s *Basics* as the result of Strauss’ failure of grasping the methodology in the first place. Although in Glaser’s view the method presented by Strauss and Corbin is no longer grounded theory, practitioners have classified it as the Straussian grounded theory, while labeling Glaser’s ideas the Glaserian/classic grounded theory.

The development of the constructivist version of grounded theory is tied to the criticism to the method. Criticism has accompanied the methodology since its birth, coming from different camps in different time periods. As a combination of quantitative and qualitative research, the methodology can be attacked from both sides as it does not fully adhere to either side. As summarized by Lars Mjoset, grounded theory was criticized as being “extreme inductivism”, “adhockery”, or “excessive conceptualization”, because it “escapes the testing of theory” and is “unextended”. This type of criticism, however, does not appear to have been influential and seems to be fading away with the widespread


56 Barney G. Glaser, *Doing Grounded Theory: Issues and Discussion*, 22


application of grounded theory as one additional method for social science research and with the end of the “war” between quantitative and qualitative research.

The more influential criticism of the methodology arose from the insiders of the grounded theory field, most noticeably, Kathy Charmaz. Her criticism mainly points to the positivist root of the two versions. She does not distinguish the two versions and collectively addresses both as objectivist grounded theory.60 In her view,

“A constructivist approach necessitates a relationship with respondents in which they can cast their stories in their terms. It means listening to their stories with openness to feeling and experience.”

“A constructivist grounded theory recognizes that the viewer creates the data and ensures analysis through interaction with the viewed. Data do not provide a window on reality. Rather, the ‘discovered’ reality arises from the interactive process and its temporal, cultural, and structural contexts.”

Glaser responded to the constructivism grounded theory method by stating that the criticism mixes the grounded theory analysis with techniques from other types of qualitative data analysis, such as preconceived categories, establishing data accuracy,


thick description, etc. He is very much concerned about the “Qualitative Data Analysis (QDA)’s numerous remodelings of [grounded theory] and the subsequent eroding impact.”\(^{62}\) He views the mixing of QDA and grounded theory methodologies as having the effect of downgrading and eroding the grounded theory goal of generating conceptual theories.

“I have said over and over again that GT is not findings, not accurate facts and not description. It is just straightforward conceptualization integrated into theory – a set of plausible, grounded hypothesis. It is just that – no more – and it is readily modifiable as new data come from whatever sources – literature, new data, collegial comments, etc.”\(^{63}\)

Despite Glaser’s suggestion that it is not grounded theory, Charmaz’s constructivism grounded theory method has been categorized by practitioners as the third version. This may be due to two reasons. The first is associated with the influence of postmodernism, which fundamentally rejects the notion of the existence of an objective external world that can be discovered and explained through scientific methods. Consequently, the generation of a universal theory for a given substantive area – as promoted by the original grounded theory – is both ontologically and epistemologically impossible. With the pervasive influence of postmodernism in today’s social science world, a version of


\(^{63}\) Ibid.
grounded theory subscribing to constructivism perspective – which claims the social world is a pure social construction – certainly has its own audience. Secondly, as Charmaz has been working with her version for more than twenty years, with the publication of both guidance books and practical examples, she has established the framework and techniques for conducting constructivism grounded theory.

As a consequence of the fact that there are different versions of grounded theory with distinctive philosophical roots and methodological requirements, grounded theory researchers face the challenge of having to study all three methodological approaches in order to decide which to use. This author selected the classic grounded theory methodology for her research.

1.3.3. Rationale for Selecting Classic Grounded Theory Methodology

The classic grounded theory (hereafter GT) methodology was selected based on this author’s understandings of the three versions of the methodology. It was clear that the methodology’s ability to generate plausible theories in the social world comes solely from its combination of positivism and symbolic interactionism – the originating sources of the methodology. The positivistic thinking gives the methodology its belief in theory generation and its systematic analysis, and the symbolic interactionism influences its emphasis on field data as the main source of theory generation. In contrast, the Strauss-Corbin book “introduces a completely different process of coding and theorizing data, including a new type of coding, axial coding, and a new tool, the conditional matrix”. The axial coding “does not rely on constant comparing of incidents to generate
categories”\textsuperscript{64} and the utilization of the “coding paradigm” and the “diagram” of the conditional matrix imposes in effect a fairly strict coding framework.\textsuperscript{65} As a result, the process of theory emergence becomes one that forces data into categories. As Glaser puts it,

“Thus the outright choice of any one code is clearly the beginning of forcing the theory and derailing its grounded character. The analyst would not know beforehand which to choose. But Strauss ‘knows’ beforehand and exhorts the reader to always show conditions and consequences.” \textsuperscript{66}

The Strauss-Corbin coding approach thus reduces the power of interactionism, thereby undermining the methodology’s ability of generating theories/explanations that are “grounded”.

Constructivism GT limits the ability of generating theory with explanatory powers as well, but in a different manner. As this version rejects positivistic thinking, it over-emphasizes the interpretive, constructive nature of the social world, and ignores entirely the systematic measures in the classic GT that are designed to address the interpretive nature of social reality. Although one could argue that everything relating to language and communication in the social world is subject to interpretation, this


\textsuperscript{66} Ibid.
argument should not be used to dismiss the generation of theories that can be applied to an environment that is not the one under examination. Instead, the interpretive, constructive nature of the social world should be consciously recognized by researchers as a possible source of bias, which requires handling mechanisms. The classic GT’s constant comparative analysis is a mechanism that addresses the interactive, constructive feature at a sufficient level. This author believes that concepts and hypotheses can be abstracted from empirical data regardless of how the data were interpreted by individuals in the first place. Moreover, theories with sufficient levels of abstraction that can be modified in the face of new incidents have a much higher level of practical significance than those comprising only interpretations or descriptions constructed by researchers. For these reasons, the classic GT was determined to be the research methodology of the present research. Figure 1 below demonstrates the classic GT process that the author followed to conduct her research, followed by a list of definitions or explanations of the key techniques displayed in the illustration.
- Coding: Conceptualizing data by constant comparison of incident with incident, and incident with concept to emerge more categories and their properties;\(^{67}\)
  - Coding includes substantive coding and theoretical coding, and substantive coding includes open coding and selective coding;\(^{68}\)
  - Substantive codes conceptualize the empirical substance of the area of

---


research;\textsuperscript{69}

- A category stands by itself as a conceptual element of the theory. A property, in turn, is a conceptual aspect or element of a category;\textsuperscript{70}

- Open coding: the initial stage of constant comparative analysis, before delimiting the coding to a core category and its properties or selective coding. The analyst starts with no preconceived code and remains entirely open;\textsuperscript{71}
  - Selective coding: To selectively code means to cease open coding and to delimit coding to only those variables that relate to the core variable, insufficiently significant ways to be used in a parsimonious theory;\textsuperscript{72}
  - Core variable: a core category [that] accounts for most of the variation in a pattern of behavior;\textsuperscript{73}

- Constant Comparative Coding: Fundamental operation in the constant comparative method of analysis. The analyst codes incidents for categories and their properties and the theoretical codes that connect them;\textsuperscript{74}

- Memoing: Memos are the theorizing write-up of ideas about codes and their

\textsuperscript{69} Barney G. Glaser, \textit{Theoretical Sensitivity}, 55.

\textsuperscript{70} Ibid., 153.


\textsuperscript{72} Barney G. Glaser, \textit{Theoretic Sensitivity}, 61.

\textsuperscript{73} Ibid., 93.

relationships as they strike the analyst while coding. Memos lead, naturally to abstraction or ideation. Memoing is a constant process that begins when first coding data, and continues through reading memos or literature, sorting and writing papers or monograph to the very end;75

- Theoretical sampling: is the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges;76

- Theoretical Coding: A property of coding and constant comparative analysis that yields the conceptual relationship between categories and their properties as they emerge;77
  - Theoretical codes are conceptual connectors to be used implicitly and explicitly in the way and style in which the analyst writes.78


78 Ibid., 39.
1.4. Chapter Organization

This dissertation includes five chapters: Chapter 1 Introduction (the present chapter); Chapter 2 Conducting the Grounded Theory Study, which presents the research process, the emergent core variable, and substantive codes/categories; Chapter 3 Formulating the Grounded Theory, which presents the emerging theory in the formats of conceptual building blocks and hypotheses, Chapter 4 Explaining the Information Management Crisis, which presents explanations of the information management crisis in the Government of Canada utilizing the discovered theory; and Chapter 5 Prediction, Future Studies, and Conclusion, which presents the prediction on the outcomes of the latest attempt of improving the IM situation in the Government of Canada, identification of future studies, and contributions of the research.
2. Conducting the Grounded Theory Study

The first step in grounded theory is to enter the substantive field for research without knowing the problem. The problem will emerge.  

2.1. The Starting Group of Institutions

Guided by the IM crisis, the general questions of what exactly does IM mean in departments and how is it performing were used to direct the selection of institutions for the first round of data collection, that is, the starting group of institutions. The determination of this group relied on the 2008-09 report cards produced by the Office of the Information Commissioner, which were the latest available in 2010, the year when this author started data collection.

As introduced in the previous chapter, the 2008-09 report cards assessed twenty-four institutions, including ten assessed in 2007-08 that were reassessed in 08-09. Library and Archives Canada (LAC) was excluded from the group identification process due to the fact that most of the Access to Information (ATI) requests the institution receives are for transferred records of other government institutions, rather than for its own business


80 Ibid., 116.

81 OIC, “Out of time”.

33
records. Describing the objectives of the creation, the enabling act of LAC reads that the institution is established “to be the permanent repository of … government and ministerial records that are of historical or archival value”, which entails the transfer of records. LAC was later on included in the group of visited government institutions due to another objective of its creation: “to facilitate the management of information by government institutions”.

For the identification of the members of the starting group, twenty-three report cards were analyzed, relying on a criterion that combined the below average ATI performance ratings with the explicit indication of IM/RM as an adverse factor to the ATI performance, symbolized as OIC<>C (Average) + IM/RM Adverse. The following text is an example of the indication of the adverse impact of IM/RM:

“Information management continues to be a challenge for Health Canada. Access officials noted that employees at all levels rely heavily on email and common drives

---


84 Ibid., s7.
to store documents, which makes locating relevant records difficult.  

Eight institutions qualified as members of the starting group, with IM/RM issues represented typically by records retrieval difficulties. Table 2 lists the institutions.

Table 2 The Starting Group (sG)

<table>
<thead>
<tr>
<th>Selection Criterion</th>
<th>OIC&lt;C (Average) + IM/RM Adverse</th>
<th>Name of Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATI Rating</td>
<td>Records Issue</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Yes</td>
<td>1. Canadian Food Inspection Agency (CFIA)</td>
</tr>
<tr>
<td>F</td>
<td>Yes</td>
<td>2. Canadian International Development Agency (CIDA)</td>
</tr>
<tr>
<td>D</td>
<td>Yes</td>
<td>3. Canada Revenue Agency (CRA)</td>
</tr>
<tr>
<td>F</td>
<td>Yes</td>
<td>4. Correctional Service of Canada (CSC)</td>
</tr>
<tr>
<td>F</td>
<td>Yes</td>
<td>5. Environment Canada (EC)</td>
</tr>
<tr>
<td>D</td>
<td>Yes</td>
<td>6. Health Canada (HCan)</td>
</tr>
<tr>
<td>D</td>
<td>Yes</td>
<td>7. National Defence (ND)</td>
</tr>
<tr>
<td>F</td>
<td>Yes</td>
<td>8. Canadian Heritage (PCH)</td>
</tr>
</tbody>
</table>

2.2. Investigating the Starting Group – Data Collection

In order to investigate the records issues in these institutions, it was necessary to obtain first an overall understanding of the RM(IM) function in the institutions. Within each institution, data revealing the RM(IM) function should be locatable in institutional records such as organizational charts, plans, policies, procedures, and reports. The data

---

collection process involved two complementary steps: first, searching for relevant publications on the websites of the eight institutions and, second, submitting ATI requests to the institutions for internal records that were unavailable online. The two steps generated two types of data and were labeled as *institution-specific data online* and *institution-specific data by ATI requests* (ATI data). The use of institution-specific as one of the two qualifiers for the two types of data was due to the existence of GC-wide data, which surfaced in the ATI request processes. For the purpose of clarity, the term *data* is used to designate either the actual data or the specific data container (i.e., government records and the records generated by the research process such as conversation notes), and the term *data source* is used to indicate the types of documentation (i.e., legislation) or the channels (e.g., conversation) from which the actual data were collected.

### 2.2.1. Institution-Specific Data Online

The search for data online was guided by this author’s study on the government’s electronic/digital government initiative, Government On-Line (GOL). According to the final report of the GOL project, one hundred and thirty departments and agencies had transformed their information provision and service delivery using the Internet. The websites of the eight institutions, the Treasury Board Secretariat of Canada (TBS) (which hosts certain institutional documentation such as the departmental performance report), and the Government Electronic Directory Services (GEDS) were identified as relevant to online data collection. The data sources found on these websites included organizational

---

charts, Reports on Plans and Priorities (RPP), Departmental Performance Reports (DPR), audit reports on IM/RM, and the assessment of institutions’ management performance under the GC’s Management Accountability Framework (MAF). Table 3 summarizes this type of data.

**Table 3 Sources of Institution-Specific Data Online**

<table>
<thead>
<tr>
<th>Website</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Institution</td>
<td>Organizational chart (high level)</td>
</tr>
<tr>
<td></td>
<td>Report on Plans and Priorities (RPP) (recent years)</td>
</tr>
<tr>
<td></td>
<td>Departmental Performance Report (DPR) (recent years)</td>
</tr>
<tr>
<td></td>
<td>Audit report on IM/RM</td>
</tr>
<tr>
<td>TBS</td>
<td>TBS MAF assessment on IM(RM) (since 2006)</td>
</tr>
<tr>
<td></td>
<td>Report on Plans and Priorities (RPP) (since 2006)</td>
</tr>
<tr>
<td></td>
<td>Departmental Performance Report (DPR) (since 2006)</td>
</tr>
<tr>
<td>GEDS</td>
<td>IM/RM organizational chart (detailed)</td>
</tr>
</tbody>
</table>

All sources, except the MAF assessment, are self-explanatory as they are common to the establishment and operation of organizations regardless of type. The MAF assessment “is a key performance management tool that the federal government uses to [s]upport the management accountability of deputy heads [and to] improve management practices across departments and agencies”. Administered by TBS, this tool aims to

- clarify management expectations of deputy heads and support ongoing dialogue on management priorities with their executive team and the

---

87 TBS, “Management Accountability Framework,”
Treasury Board Secretariat;
- provide a comprehensive perspective on the state of management practices and challenges in the federal government; and
- identify government-wide trends and general issues in order to help deputy heads set priorities and resolve issues.\textsuperscript{88}

Among the “management practices and challenges” assessed by MAF is the area of IM(RM).\textsuperscript{89}

\textbf{2.2.2. Institution-Specific Data by ATI Requests: ATI Data}

The decision to submit ATI requests for internal records was reached soon after the analysis of the collected online data had begun, due to two reasons. First, the insufficient information provided by the online data (e.g., there were no institutional IM policies online), and second, the difficulty of discerning RM among the online data, which typically focus on IM as a whole (e.g., the MAF assessments). The decision to submit ATI requests rather than to conduct invited interviews was due to the consideration that records represent the actions/decisions of the institution while interviews capture only the opinions of the interviewees, and that the focus of the research was institutional behavior, operation, and performance, rather than personal insights, perceptions, or observations. In

\textsuperscript{88} TBS, “MAF Objectives,”

\textsuperscript{89} TBS, “MAF Methodology,”
addition, to gather data by ATI requests allowed this author to experience the ATI administrative process, which was the very channel that revealed the IM/RM crisis. Because the ATI requests asked for records generated by the IM(RM) function, the process also tested the effectiveness of the IM(RM) programs’ own RM practices. Interviews could still be conducted when the need arose (e.g., to clarify content of released records) or the opportunity surfaced (e.g., voluntary interview), and the generated data would serve as one additional type of data that can be compared with other types of data (following the principle of the GT methodology “all is data”). For the potential interviews, ethics review approval was obtained prior to the data collection process.  

To prepare the submission of ATI requests, a component study was conducted to familiarize this author with the ATI administration in the government. The right and procedures of obtaining government records were stipulated jointly by the Access to 

90 Many conversations took place during the data collection process, which constituted the ATI request handling process. As such, these conversations did not require invitations for interview (see data types of the ATI data later in this section). There was one voluntary interview conducted with the Director of the IM program in the Privy Council Office, for which the interview invitation was sent.

91 A component study in the context of this project refers to a study, regardless of scale, that emerged in the process of carrying out the main research activities (i.e., collecting, coding, and memoing data) and was considered necessary because it contributed to the making of research decisions and to the rigor of the study. The major difference between the main study and a component study is that the data collected for the component study is not open coded in relation to the general research question, i.e., what is going on with IM/RM in the Government of Canada.
Information Act\textsuperscript{92} and the Access to Information Regulations.\textsuperscript{93} Canadian citizens or permanent residents all have the right to access government records,\textsuperscript{94} as long as they submit the Access to Information Request Form with “sufficient detail to enable the officer to identify the record”.\textsuperscript{95} To help applicants provide sufficient detail, the ATI Act requires the designated Minister (currently the President of the Treasury Board of Canada) to publish information on government institutions, including:

(a) a description of the organization and responsibilities of each government institution, including details on the programs and functions of each division or branch of each government institution;

(b) a description of all classes of records under the control of each government institution in sufficient detail to facilitate the exercise of the right of access under this Act;

(c) a description of all manuals used by employees of each government


\textsuperscript{94} Government of Canada, “Access to Information Act. R.S.C., 1985, c. A-1,” s4. (1) Subject to this Act, but notwithstanding any other Act of Parliament, every person who is (a) a Canadian citizen, or (b) a permanent resident within the meaning of subsection 2(1) of the Immigration and Refugee Protection Act, has a right to and shall, on request, be given access to any record under the control of a government institution.

institution in administering or carrying out any of the programs or activities of the government institution; and

(d) the title and address of the appropriate officer for each government institution to whom requests for access to records under this Act should be sent.  

The publication that contains information regarding the categories (a), (b), and (c) is called Info Source, published annually online by TBS. The appropriate officers in (d), addressed as ATI Coordinators in government institutions, are listed on the TBS website with contact information.

The IM(RM) in GC is considered a function common to all institutions, and the records generated by it are called Standard Classes of records, defined as “records created, collected and maintained by most government institutions in support of common internal

---


98 It is in fact called ATIP Coordinator because the unit is typically also responsible for administering the GC Privacy Act.

functions, programs and activities”\textsuperscript{100} In the Index of Standard Classes of Records, records created by the IM(RM) function were assigned a Record Number, PRN 944, and described as

related to the cost-effective and efficient management of information under the control of the institution throughout its life-cycle and regardless of format. Also includes the acquisition, control and disposal of library and other information products, items kept for reference purposes, and the provision of information management services to employees. May also include records related to the management, use and maintenance of an automated document, records and information management system. This type of system is used to capture and manage documents, records (including e-mail) and information created, collected or received by the institution in support of its business functions, programs and activities.\textsuperscript{101}

The ATI requests to the eight institutions were drafted based on this general description and on the analysis of the online data, which had helped identify the records needed. The requests were identical, with only two variations: the time period for certain records and the technology used for managing information/records in a particular institution. The specific time period for each institution was suggested by the institution’s ATI performance assessment history, that is, from the year when the institution was first


assessed by the OIC to the present year. For example, the time period was “since 1998” for the Department of Health Canada and “since 2008” for the Department of Environment Canada, because 1998 and 2008 were the years when the departments were first assessed for their ATI performances by the OIC, respectively. To gain knowledge of the technology used for managing information/records in these institutions, a component study was conducted regarding the developmental history of such technology in GC, which revealed (1) the name of the technological system, that is, RDIMS (Records, Document and Information Management System), which was established as a GC-wide shared service, and (2) the department responsible for the deployment of the system, that is, the Department of Public Works and Government Services Canada (PWGSC).

PWGSC is the department “responsible for providing and managing services to the Government of Canada, Canadians, and internally to the department”, 102 and the supply of RDIMS (i.e., system configuration and licence issuing) is one type of service provided. 103 To confirm whether the eight institutions had indeed implemented the RDIMS, an ATI request was submitted to PWGSC to obtain institution names and the numbers of user licences, which revealed that not all of the institutions had implemented the system and numbers of user licences varied greatly. With this information, the ATI request template was constructed as follows:

---


Please provide, with reference to PRN 944, meeting minutes or resolutions regarding the establishment of the IM/RM program; detailed organizational charts for the IM/RM function, job descriptions for IM/RM positions, and the numbers of IM/RM personnel since [the year when the institution was first assessed by the OIC]; IM/RM policies and procedures since [the year when the institution was first assessed by the OIC]; IM/RM operation and performance reports (e.g., annual reports and/or any audit reports unavailable online) since [the year when the institution was first assessed by the OIC]; budgetary information including both annual and special budgets since [the year when the institution was first assessed by the OIC]; reports on significant IM/RM projects since [the year when the institution was first assessed by the OIC] and here “significant” means that the project either had an impact on the entire organization or was reported to the TBS in MAF assessment; copies of all editions of records classification systems/schemes; and copies of user manuals or guide for RDIMS [or the technological system used for managing information/records in the institution that did not have RDIMS implemented].

Data generated in this process were categorized as three types: request handling data (ATI-RH Data), ATI process responsive Data (ATI-PR Data), and ATI disclosed records data (ATI-DR Data). The ATI-RH data refer to those that emerged in the process of the institution processing the request, in particular the step called request clarification. Data sources include phone conversations and email exchanges between this author and the ATI analyst(s) assigned with the requests. Data generated by this step reflected, in an indirect manner, the operation of the IM(RM) function. The ATI-PR data refer to those emerged during the same stage of request clarification and directly responsive to the
inquiry on the IM/RM function. Data sources include phone conversations, teleconferences, and email exchanges with IM(RM) personnel in the institutions. The ATI-DR data are internal records considered pertinent to the requests by the institutions and were released to the requestor after they were processed in accordance with the ATI Act (i.e., reviewing, reduction, and withholding). The ATI-DR data include the records released from PWGSC on the RDIMS. Table 4 summarizes the three ATI data types.

Table 4 Summary of ATI Data Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Source</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATI-RH Data</td>
<td>• Phone conversations</td>
<td>• Notes</td>
</tr>
<tr>
<td></td>
<td>• Email exchanges</td>
<td>• Emails</td>
</tr>
<tr>
<td></td>
<td>with ATI Analyst(s)</td>
<td></td>
</tr>
<tr>
<td>ATI-PR Data</td>
<td>• Phone conversations</td>
<td>• Notes</td>
</tr>
<tr>
<td></td>
<td>• Teleconferences</td>
<td>• Emails</td>
</tr>
<tr>
<td></td>
<td>• Email exchanges</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with IM(RM) personnel</td>
<td></td>
</tr>
<tr>
<td>ATI-DR Data</td>
<td>IM/RM Internal records</td>
<td>• Departmental IM policy; IM strategic plan; IM business case; RDIMS implementation report; …</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Observations of disclosed records (i.e., their creation and management quality)</td>
</tr>
</tbody>
</table>
2.2.3. GC-Wide Data

As stated at the beginning of section 2.2, the ATI request processes revealed the existence of GC-wide data. GC-wide data refer to the policies, directives, standards, etc. on IM(RM) at the government level, that is, they were developed and issued by the central agency TBS. The TBS IM(RM) responsibility was stipulated by the Financial Administration Act (FAA), the law that established the agency. The TBS IM policy instruments (i.e., policy, directive, and standard) were referenced by the IM personnel and/or the ATI analysts in some of the institutions when discussing with this author the ATI requests. The key message was that their institutions followed the TBS policy instruments for planning and operating their IM(RM) functions. Therefore, TBS policy instruments became necessary for understanding the IM(RM) functions in these institutions. In other words, they were relevant data. For other institutions in the starting group, a component study was decided needing to be conducted to determine whether or not they were subject to the TBS policy instruments. All TBS IM(RM) policy instruments state that they are applicable only to institutions possessing a department status established in accordance to section 2 of the FAA. The examination of the ATI Act, on the other hand, revealed that the act encompasses more institutions than the FAA, indicating that not all of the institutions subject to the ATI Act (among which the eight institutions were selected) respond to the FAA definition for department (to which, the TBS IM policy instruments were issued). The component study established that all of the eight members of the starting group qualified as departments according to the FAA definition, thus were all subject to the

TBS IM(RM) policy instruments. Also due to this component study, the terms institution and department will be used as synonyms in the rest of the dissertation.

The TBS site was then systematically searched for all relevant policy instruments, and so were the sites of LAC, the Canada School of Public Services (CSPS), and PWGSC for information relevant to IM/RM, as these three institutions were identified in the TBS Policy on Information Management as relevant institutions. The CSPS is part of the Treasury Board Portfolio and was established to, among other things, “formulate and provide training, orientation and development programs for public sector managers and employees, particularly for those in the public service” and to “assist deputy heads in meeting the learning needs of their organization, including by way of delivering training and development programs”. The training programs include courses on IM. This systematic search examined the entire list of TBS policies and followed “Related Instruments” and “Related Links” for legislation, policy, directives, and standards. The search results were filtered first by an apparent IM/RM relevance (i.e., IM or RM in the title or objectives of the policy instrument) and then by their currency. The issuing year was particularly noticed due to the consideration that it would take time for departments to implement the policies, and this, as a result, became relevant to the coding of institutional data (which may or may not reflect the most recent policies).


In order to understand the authority of and relationships between these policy instruments, a component study was conducted to examine the Foundation Framework for Treasury Board Policies. According to this framework, policies, directives, and standards are instruments of a mandatory nature while guidelines are of a voluntary nature. All selected TBS policy instruments, LAC tools and guidelines, and information on CSPS IM courses and PWGSC shared services were grouped under the category GC-wide data, summarized in Table 5.

**Table 5 GC-Wide Data**

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TBS</strong></td>
<td>Mandatory Instruments</td>
</tr>
<tr>
<td></td>
<td>4. Standard for Electronic Documents and Records Management Solutions (EDRMS), 2010</td>
</tr>
<tr>
<td></td>
<td>5. Standard on Metadata, 2010</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Data</th>
</tr>
</thead>
</table>
| LAC\(^{108}\) | 1. The Legacy Business Records Toolkit, 2006\(^{109}\)  
2. Information Management (IM) Capacity Check, 2006  
4. Email Management in the Government of Canada, 2006  
5. Email Management Guideline, 2008  
8. Multi-Institutional Disposition Authorities (MIDA), 2012 |
| PWGSC\(^{110}\) | 1. Delivering Government of Canada IT Shared Services |


\(^{109}\) All dates are based on the year of website modification, which may not accurately reflect the dates of document creation. Accurate dates were unavailable on the sites.

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Data</th>
</tr>
</thead>
</table>
| CSPS\textsuperscript{111} | 2. Information Management: Environment and Vision in the Government of Canada (I110)  
3. Information Management: Legal and Policy Framework (I120)  
4. Information Management: Assessment and Evaluation (I210)  
5. Managing Government Information Throughout its Life Cycle (I220)  
6. Information Management-Personal Awareness and Capacity Test (IM-PACT) (I004E)  
7. Records Management (I001)  
8. Fundamentals of Recordkeeping (I003E) |


### 2.3. Expanding the Starting Group – Data Collection by Site Visit

Three institutions, TBS, LAC, and PWGSC, were added to the starting group due to their unique roles in the GC IM/RM landscape. They were identified as suitable for a site visit for the same reason. Before the site visit, ATI requests were sent to these departments utilizing the same template developed for the departments of the starting group. The generated ATI data followed the same categorization. Table 6 summarizes only the field data generated by the site visit.
Table 6 Types of Site Visit Data

<table>
<thead>
<tr>
<th>Institution</th>
<th>Data Source</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBS</td>
<td>• Meeting with IM/RM personnel</td>
<td>• Notes</td>
</tr>
<tr>
<td>LAC</td>
<td>• RDIMS demo</td>
<td>• Observations</td>
</tr>
<tr>
<td>PWGSC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These data constituted part of the data coded for investigating the institutions in the starting group.

2.4. Investigating the Starting Group – Data Analysis – Constant Comparison

The term data analysis is used to encompass all the methodological steps that include “open coding of the data soon after collection of research data, theoretical sampling, generating many memos with as much saturation as possible and emergence of core … problems and processes, which then become the basis for more selective theoretical sampling, coding and memoing as the analyst focuses on the core”.¹¹² As introduced in 1.3.3. Rationale for Selecting Classic Grounded Theory Methodology, these steps are analytical techniques, the effective application of which ensures the emerging of concepts. The techniques of theoretical sampling and memoing need to be applied for multiple steps: data collection, open coding, substantive coding, theoretical coding, etc., as directed by the needs of the research. The method of constant comparative analysis is used throughout the entire process of analysis.

2.4.1. Substantive-Open Coding & Memoing

The open coding, along with memoing, of the institutional online data, the ATI data, the GC-wide data, and the site visit data was conducted both sequentially and simultaneously. As introduced in the section of data collection, the institutional online data were first analyzed, which led to the collection of the other types of data. This analysis was not a line-by-line coding but a quick digest for determining whether the data were sufficient for understanding the IM(RM) function in these institutions.

As processing times for the ATI requests varied, the times of receiving the disclosed records varied accordingly. When this author began writing this dissertation, the requested records of the departments of Environment Canada and National Defence had not yet arrived, due to the complaints filed by this author against the ATI request handling procedures of the two institutions. The open coding therefore followed the availability of data at the time, as well as emerging questions, such as how the RM performance was evaluated. The GC-wide data were coded before the ATI disclosed responsive data but together with the ATI request handling data and the process responsive data. Within the GC-wide data, the TBS data were coded first, due to its central-managing role in GC-wide IM, and those of LAC documentation followed for its central-guiding role in GC-wide IM. Some data were coded multiple times due to their different usages for answering questions. Moreover, as directed by the constant comparative analysis method, many data and sometimes one entire type of data were re-coded when new data became available and/or when comparisons generated new questions or ideas. The institutional online data were re-coded in a more systematic manner (i.e., line-by-line coding) after the
coding of the GC-wide data, and this led to the recoding of some of the ATI disclosed responsive data, those arrived and coded before the systematic coding of the GC-wide data, the institutional online data, and the site visit data. The site visit data were constantly compared with those of the other institutions in both the processes of coding and memoing. As illustrated by the GT methodology, the entire theory-discovery process “is a process composed of a set of double-back steps [:] as one moves forward, one constantly goes back to previous steps”. Re-coding consists of re-thinking/memoing about the generated codes in light of newly emerging codes and of discovering codes from the same data that did not emerge previously.

Appendixes 1 to 3 are samples of the interrelated coding and memoing process, presented in the form of coding tables.

2.4.2. Emerging Substantive Categories

*Lower level categories emerge rather quickly during the early phases of data collection. Higher level, overriding and integrating, conceptualizations-and the properties that elaborate them-tend to come later during the joint collection, coding and analysis of the data.*

The substantive categories/codes first emerged in association with their characterizations or status in the government, as presented in section 2.4.2.1 (with the characterizations in italics). Subsequently, the analyzing process went through the abstracting exercise that

---


distilled the specific characterizations into general properties (P) and sub-properties (sP), as presented in section 2.4.2.2.

**Table 7 Substantive Categories with GC Specific Characterization**

<table>
<thead>
<tr>
<th>GC Indicator</th>
<th>Substantive Category</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Clearly outlined</em></td>
<td>IM(RM) Governance-Accountability Structure</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>IM(RM)Whole-of-Government Approach</td>
</tr>
<tr>
<td><em>High</em></td>
<td>IM(RM) Expectation</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>IM(RM) as a Single Discipline</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>IM(RM) as Internal Service</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>IM(RM) as Resource Management Function</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>Integration of IM(RM) Requirements with Business Needs</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>Notion of IM(RM) Shared Responsibility</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>Employee IM(RM) Responsibility</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>IM Awareness of Employees</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>IM Communication with Employees</td>
</tr>
<tr>
<td><em>Much emphasized</em></td>
<td>IM Training for Employees</td>
</tr>
<tr>
<td><em>Inadequate</em></td>
<td>Conceptual Framework IM(RM)</td>
</tr>
<tr>
<td>- Inadequate = definitions are unclear</td>
<td></td>
</tr>
<tr>
<td>- Inadequate = there are no definitions</td>
<td></td>
</tr>
<tr>
<td>- Inadequate = lack elaborations of conceptual relationships</td>
<td></td>
</tr>
<tr>
<td><em>Confusing</em></td>
<td>IM(RM) Concept Application</td>
</tr>
<tr>
<td>- Confusing = different concepts were used without</td>
<td></td>
</tr>
<tr>
<td>GC Indicator</td>
<td>Substantive Category</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>differentiation</td>
<td><em>Confusing = concepts were used not in accordance with their definitions</em></td>
</tr>
<tr>
<td>Unclear</td>
<td>IM(RM) Policy Requirements on IM Specialists</td>
</tr>
<tr>
<td></td>
<td><em>Unclear = requires only what-to-do without how-to-do</em></td>
</tr>
<tr>
<td>Less emphasized</td>
<td>IM Specialist IM Responsibility</td>
</tr>
<tr>
<td>Unclear</td>
<td>TBS IM(RM) Guidance</td>
</tr>
<tr>
<td></td>
<td><em>Unclear = there are no details regarding the IM constituent parts</em></td>
</tr>
<tr>
<td>Confusing</td>
<td>LAC IM(RM) Guidance</td>
</tr>
<tr>
<td></td>
<td><em>Confusing = guidance is insufficient for application</em></td>
</tr>
<tr>
<td>Limited execution of</td>
<td>IM(RM) Policy Requirements</td>
</tr>
<tr>
<td>Non-execution of</td>
<td>IM(RM) Policy Requirements</td>
</tr>
<tr>
<td>Reversed</td>
<td>IM(RM)/IT Relationship</td>
</tr>
<tr>
<td></td>
<td><em>Reversed = much stronger presence of IT than IM(RM)</em></td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>IM(RM) Performance</td>
</tr>
<tr>
<td>Lingering unsatisfactory</td>
<td>RM(IM) Performance</td>
</tr>
<tr>
<td></td>
<td><em>Lingering = IM(RM) problems long revealed by the OIC, the Auditor General, and departmental internal audits</em></td>
</tr>
<tr>
<td>Insufficient specifics in IT</td>
<td>IM(RM) Evaluation</td>
</tr>
<tr>
<td>IT-centered</td>
<td>IM(RM) Audit</td>
</tr>
<tr>
<td>Limited GC IM framework in</td>
<td>IM(RM) Audit</td>
</tr>
<tr>
<td>GC Indicator</td>
<td>Substantive Category</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Lack of specifics in \IM(RM) Strategic Plan</td>
<td></td>
</tr>
<tr>
<td>Non-existence of \IM(RM) Strategic Plan</td>
<td></td>
</tr>
<tr>
<td>Lack of specifics in \IM(RM) Strategic Plan Implementation</td>
<td></td>
</tr>
<tr>
<td>Non-existence of \IM(RM) Strategic Plan Implementation</td>
<td></td>
</tr>
<tr>
<td>Less emphasized \RM(IM) Practice</td>
<td></td>
</tr>
<tr>
<td>• Less emphasized = the fact that IM practice was not evaluated by MAF until the most recent round (round VIII)</td>
<td></td>
</tr>
<tr>
<td>Passive \IM(RM) Work Model</td>
<td></td>
</tr>
<tr>
<td>• Passive = provides only policies, guidelines, and trainings</td>
<td></td>
</tr>
<tr>
<td>• Passive = waiting for employee inquiries</td>
<td></td>
</tr>
<tr>
<td>Non-existence of \RM-ATI Relationship</td>
<td></td>
</tr>
<tr>
<td>Non-existence of \RM-Business Activity Integration</td>
<td></td>
</tr>
<tr>
<td>Non-existence of \RM Practice Work</td>
<td></td>
</tr>
<tr>
<td>Low level of demonstration of \RM(IM) Value</td>
<td></td>
</tr>
<tr>
<td>Weak \Record Presence in departments</td>
<td></td>
</tr>
<tr>
<td>• In departments = in departmental organizational structures; performance reports; audit reports</td>
<td></td>
</tr>
<tr>
<td>Non- \Record Presence in departments</td>
<td></td>
</tr>
<tr>
<td>Weak \RM Presence in departments</td>
<td></td>
</tr>
<tr>
<td>Non- \RM Presence in departments</td>
<td></td>
</tr>
<tr>
<td>Extremely limited \Electronic Record Presence</td>
<td></td>
</tr>
<tr>
<td>Extremely weak \RM(IM) Control</td>
<td></td>
</tr>
<tr>
<td>GC Indicator</td>
<td>Substantive Category</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td><em>Extremely weak</em> =</td>
</tr>
<tr>
<td></td>
<td>• Records retrieval relies on employees: their experiences and memories</td>
</tr>
<tr>
<td></td>
<td>• Records retrieval relies on their currency: whether or not they are created recently</td>
</tr>
<tr>
<td></td>
<td>• Unsatisfactory RDIMS Implementation, including leading agencies TBS, PWGSC and the particularly worse case, LAC</td>
</tr>
<tr>
<td>Technology-driven</td>
<td>IM(RM) Solution</td>
</tr>
<tr>
<td></td>
<td>• Technology-driven = the focus is on replacing existing technologies with new ones</td>
</tr>
<tr>
<td>Ineffective</td>
<td>LAC-Institution Relationship</td>
</tr>
<tr>
<td></td>
<td>• Ineffective = LAC’s extremely limited assistance to departmental IM(RM)</td>
</tr>
<tr>
<td>Most problematic</td>
<td>IM Practice</td>
</tr>
<tr>
<td></td>
<td>• Most problematic = when compared to IM Governance and IM Strategic Planning</td>
</tr>
<tr>
<td></td>
<td>• Most problematic = difficult in finding relevant records</td>
</tr>
<tr>
<td>Inadequate</td>
<td>RM(IM) Ability</td>
</tr>
<tr>
<td></td>
<td>• Inadequate = insufficient for demonstrating IM(RM) value</td>
</tr>
<tr>
<td></td>
<td>• Inadequate = insufficient for improving the unsatisfactory IM(RM) performance</td>
</tr>
<tr>
<td>Substantive Code</td>
<td>General Properties</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-----------------------------------------</td>
</tr>
</tbody>
</table>
| Deputy Head IM(RM) Responsibility        | • P. Establishment
                              • P. Fulfillment                      |
| Classification                           | • P. Characterization
                              • P. Development
                              • P. Implementation
                              • P. Effectiveness                    |
| Disposition                              | ▪ P. Characterization
                              ▪ P. Establishment
                              ▪ P. Effectiveness                    |
| Document                                 | ▪ Presence
                              ▪ Characterization                    |
| Electronic Document                      | ▪ P. Presence
                              ▪ P. Characterization                  |
| Electronic Records                       | ▪ P. Presence
                              ▪ P. Characterization                  |
| Electronic System                        | ▪ P. Presence
                              ▪ P. Role                               |
| Electronic Records Management            | ▪ P. Presence
                              ▪ P. Characterization                  |
| Employee IM(RM) Responsibility            | ▪ P. Establishment
                              ▪ P. Fulfillment                      |
| Employee IM(RM)                          | ▪ P. Presence
                              ▪ P. Effectiveness                     |
| Information                              | ▪ P. Presence
                              ▪ P. Characterization                  |
<p>| Information Lifecycle                    | ▪ P. Presence                           |</p>
<table>
<thead>
<tr>
<th>Substantive Code</th>
<th>General Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td>Information Management</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td>Information Resource</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td>Information Resource of Business Value</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td>IM(RM) Ability</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td>IM As a Whole</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Impact</td>
</tr>
<tr>
<td>IM(RM) Practice Work</td>
<td>▪ P. Establishment</td>
</tr>
<tr>
<td></td>
<td>▪ P. Effectiveness</td>
</tr>
<tr>
<td>IM(RM) as Resource Management Function</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Impact</td>
</tr>
<tr>
<td>IM(RM) as Service</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Impact</td>
</tr>
<tr>
<td>IM(RM) Audit</td>
<td>▪ P. Methodology</td>
</tr>
<tr>
<td></td>
<td>▪ P. Effectiveness</td>
</tr>
<tr>
<td>IM(RM) Functional Specialist</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td>IM(RM) Requirement-Business Need Integration</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Effectiveness</td>
</tr>
<tr>
<td>IM(RM) Capacity</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td>IM(RM) Compliance Requirement</td>
<td>▪ P. Establishment</td>
</tr>
<tr>
<td></td>
<td>▪ P. Execution</td>
</tr>
<tr>
<td>Substantive Code</td>
<td>General Properties</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>IM(RM) Conceptual Framework</td>
<td>▪ P. Development</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Method</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Quality</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Precision</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Comprehensiveness</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Coherence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Application</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Accuracy</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Clarity</td>
</tr>
<tr>
<td>IM(RM) Directional Work</td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td></td>
<td>▪ P. Effectiveness</td>
</tr>
<tr>
<td>IM(RM) Expectation</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Characterization</td>
</tr>
<tr>
<td>IM(RM) Guidance</td>
<td>▪ P. Development</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Sufficiency</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Quality</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Precision</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Comprehensiveness</td>
</tr>
<tr>
<td></td>
<td>▪ P. Application</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Existence</td>
</tr>
<tr>
<td></td>
<td>❖ sP. Effectiveness</td>
</tr>
<tr>
<td>IM(RM) Governance Structure</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td></td>
<td>▪ P. Effectiveness</td>
</tr>
<tr>
<td>IM(RM) Performance Evaluation</td>
<td>▪ P. Methodology</td>
</tr>
<tr>
<td></td>
<td>▪ P. Effectiveness</td>
</tr>
<tr>
<td>IM(RM) Specialist Responsibility</td>
<td>▪ P. Establishment</td>
</tr>
<tr>
<td></td>
<td>▪ P. Fulfillment</td>
</tr>
<tr>
<td>IM Specificity</td>
<td>▪ P. Presence</td>
</tr>
<tr>
<td>Substantive Code</td>
<td>General Properties</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>P. Impact</td>
<td></td>
</tr>
<tr>
<td>P. Existence</td>
<td></td>
</tr>
<tr>
<td>P. Effectiveness</td>
<td></td>
</tr>
<tr>
<td>P. Presence</td>
<td></td>
</tr>
<tr>
<td>P. Effectiveness</td>
<td></td>
</tr>
<tr>
<td>P. Development</td>
<td></td>
</tr>
<tr>
<td>P. Effectiveness</td>
<td></td>
</tr>
<tr>
<td>P. Presence</td>
<td></td>
</tr>
<tr>
<td>P. Characterization</td>
<td></td>
</tr>
<tr>
<td>P. Presence</td>
<td></td>
</tr>
<tr>
<td>P. Characterization</td>
<td></td>
</tr>
<tr>
<td>P. Presence</td>
<td></td>
</tr>
<tr>
<td>P. Effectiveness</td>
<td></td>
</tr>
<tr>
<td>P. Establishment</td>
<td></td>
</tr>
<tr>
<td>P. Fulfillment</td>
<td></td>
</tr>
<tr>
<td>P. Presence</td>
<td></td>
</tr>
<tr>
<td>P. Impact</td>
<td></td>
</tr>
<tr>
<td>P. Establishment</td>
<td></td>
</tr>
<tr>
<td>P. Fulfillment</td>
<td></td>
</tr>
<tr>
<td>P. Presence</td>
<td></td>
</tr>
<tr>
<td>P. Characterization</td>
<td></td>
</tr>
<tr>
<td>P. Presence</td>
<td></td>
</tr>
<tr>
<td>P. Characterization</td>
<td></td>
</tr>
<tr>
<td>P. Presence</td>
<td></td>
</tr>
<tr>
<td>P. Effectiveness</td>
<td></td>
</tr>
<tr>
<td>P. Condition</td>
<td></td>
</tr>
<tr>
<td>P. Effectiveness</td>
<td></td>
</tr>
</tbody>
</table>

61
### 2.5. Saturating the Emergent Categories

As indicated by the method of formulating the starting group, the above data collection and analysis focused on the group of GC institutions whose IM/RM performance was considered having adverse impact on the administration of the ATI Act. The categories generated from this process were thus limited to the situation where IM/RM is adverse and the ATI performance is unsatisfactory. In order to investigate the overall RM(IM) situation in the government, it was necessary to collect more data outside the starting group; or, in the terminology of the GT methodology, to saturate the emerging categories.
A saturated category is indicated by the fact that “no additional data are being found whereby the [researcher] can develop properties of the category, [a]s he sees similar instances over and over again”. At this moment, the researcher “becomes empirically confident” with the category generated.\textsuperscript{115}

The process of saturating emergent categories serves also the purposes of category verification, modification, and/or correction, actions that are carried on inherently by the method of open coding, which features line-by-line analysis.\textsuperscript{116}

\textbf{2.5.1. Formulating Groups of Institutions by Theoretical Sampling}

Two methods were employed to sample groups for more data collection and analysis:

- Selecting all departments that the OIC report cards discussed with regard to their IM/RM programs and
  - grouping these departments by their IM/RM program being
    - adverse (i.e., identified by the OIC as adversely contributing to the administering of the ATI Act), or
    - positive (i.e., reported by institutions as positively contributing to the administering of the ATI Act or at least not an issue), and
  - Selecting all departments whose performance was assessed by the TBS MAF


\textsuperscript{116} Barney G. Glaser, \textit{Theoretic Sensitivity}, 50; 60.
VII (the most recent round at the time of data collection) and grouping these departments by their IM(RM) performance being unsatisfactory (i.e., rated as Opportunity For Improvement or Attention Required in either 12.1 IM Governance or 12.2 IM Strategy Planning and Implementation) or satisfactory (i.e., rated as Strong in either 12.1 IM Governance or 12.2 IM Strategy Planning and Implementation).

For the second method, the MAF middle-point rating, Acceptable, was not used for grouping departments, because it was expected that the results of its use would be encompassed by the two ends of the rating scale. Four groups were thus identified as follows:

- Theoretical Sampling Group 1: IM/RM Adverse to ATI by OIC Report Cards, including
  - Aboriginal Affairs and Northern Development Canada (AANDC)\(^ {117}\)
  - Canada Border Services Agency (CBSA)
  - Citizenship and Immigration Canada (CIC)
  - Fisheries and Oceans Canada (DFO\(^ {118}\))
  - Industry Canada (IC)

\(^{117}\) Previously called Indian and Northern Affairs Canada. The name was changed on May 18, 2011.

\(^{118}\) DFO standards for Department of Fisheries and Oceans and is used by the Department.
• Public Safety Canada (PS)

• Theoretical Sampling Group 2: Unsatisfactory IM Performance by MAF VII, including
  • Canada Border Services Agency (CBSA)
  • Canadian Food Inspection Agency (CFIA)
  • Canadian Security Intelligence Service (CSIS)
  • Health Canada (HCan)
  • Human Resources and Social Development Canada (HRSDC)
  • Royal Canadian Mounted Policy (RCMP)

• Theoretical Sampling Group 3: IM/RM Positive to ATI by Institutions in OIC Report Cards, including
  • Canadian Security Intelligence Service (CSIS)
  • Natural Resources Canada (NRCan)
  • Privy Council Office (PCO)

• Theoretical Sampling Group 4: Strong IM Performance by MAF VII, including
  • Aboriginal Affairs and Northern Development Canada (AANDC)
  • Canada Revenue Agency (CRA)
  • Department of Fisheries and Oceans (DFO)
  • Foreign Affairs and International Trade Canada (FAITC)
  • Natural Resources Canada (NRCan)
• Public Safety Canada (PS)

An additional group, i.e., theoretical sampling group 5, emerged when MAF VIII became available in late 2011. Although the coding process at that time was reaching its end, the theoretical sampling process identified the potential that this new document may have for the research, due to the fact that MAF VIII assessed IM practices, a new element of IM performance, which was evaluated for the first time. The formulation of this group thus focused on this new element and identified the following institutions based on their ratings as Strong:

• Canadian Security Intelligence Service
• Transport Canada

2.5.2. Analyzing the Theoretical Sampling Group Formulation

Observations emerged in the process of formulating the theoretical sampling groups (tsG), that is, before the open coding of the institutional data. They were included as part of the analysis process due to the high relevance they possessed. The following tables demonstrated the analyses.
2.5.2.1. Relationship: Adverse IM/RM and ATI Performance

Table 9 Comparing Records Issue with ATI Performance in tsG1

<table>
<thead>
<tr>
<th>Department</th>
<th>Records Issue</th>
<th>OIC ATI Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>AANDC</td>
<td>Yes</td>
<td>C (Average)</td>
</tr>
<tr>
<td>CBSA</td>
<td>Yes</td>
<td>B (Above Average)</td>
</tr>
<tr>
<td>CIC</td>
<td>Yes</td>
<td>A (Outstanding)</td>
</tr>
<tr>
<td>DFO</td>
<td>Yes</td>
<td>C (Average)</td>
</tr>
<tr>
<td>IC</td>
<td>Yes</td>
<td>B (Above Average)</td>
</tr>
<tr>
<td>PS</td>
<td>Yes</td>
<td>C (Average)</td>
</tr>
</tbody>
</table>

The comparison between the columns of Records Issue and OIC ATI Rating demonstrated that the correlation between records issues and ATI performance as indicated by the starting group did not exist here. In order to find an explanation, the report cards of the six institutions were open coded, which showed that there were other reasons accounting for the acceptable or satisfactory ATI performances, despite the fact that records issues were present. These reasons included: strong leadership,\(^{119}\) added resources,\(^{120}\) streamlined ATI procedures (or reliance on extension rules),\(^{121}\) and the


\(^{120}\) For example, DFO.

characteristics of record types. The case of the Department of Citizenship and Immigration Canada (CIC) demonstrated that the type of records could make a major difference in the ATI performance. Typical CIC records were case files regarding individuals and were organized according to the names of individuals, which made the retrieval of records simple and easy. Because it is this type of records that was mostly requested, the CIC ATI performed exceptionally well. This observation indicated that:

- Institutions’ ATI performance could be improved by mechanisms other than effective RM;
- Yet, the improvement would be limited when records issues do exist (i.e., the outstanding ATI performance could only be achieved when records retrieval was not a problem);
- In addition, unsatisfactory ATI performance is only one indicator of poor RM.

The last point further confirmed the need to analyze the assessment of TBS MAF on IM(RM).

October 19, 2012; IC.

122 OIC, CIC.
2.5.2.2. Relationship: Elements of Unsatisfactory IM Performance

Table 10 Comparing IM(RM) Performance Elements in tsG2

<table>
<thead>
<tr>
<th>Institution</th>
<th>MAF VII</th>
<th>12.1 Governance</th>
<th>12.2 Strategy Planning &amp; Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBSA</td>
<td>OFI</td>
<td>Attention Required</td>
<td></td>
</tr>
<tr>
<td>CFIA</td>
<td>(Acceptable)</td>
<td>Opportunity for Improvement</td>
<td></td>
</tr>
<tr>
<td>CSIS</td>
<td>(Acceptable)</td>
<td>Opportunity for Improvement</td>
<td></td>
</tr>
<tr>
<td>HCan</td>
<td>(Acceptable)</td>
<td>Opportunity for Improvement</td>
<td></td>
</tr>
<tr>
<td>HRSDC</td>
<td>(Acceptable)</td>
<td>Opportunity for Improvement</td>
<td></td>
</tr>
<tr>
<td>RCMP</td>
<td>(Acceptable)</td>
<td>Opportunity for Improvement</td>
<td></td>
</tr>
</tbody>
</table>

The comparison between 12.1 and 12.2 demonstrated that the percentage of Acceptable was much higher for the requirement of Governance than that for the IM Strategy Planning and Implementation. In other words, *the requirement of IM Governance was much easier to satisfy*. This confirmed the observation generated with the starting group, where all eight institutions had an Acceptable or a Strong rating for 12.1, yet not all of them had an Acceptable rating for 12.2 (see Appendix .2).
2.5.2.3. Relationship: Strong IM/RM and ATI Performance

Table 11 Comparing Strong IM/RM by Institutions and ATI Performance by OIC in tsG3

<table>
<thead>
<tr>
<th>Name</th>
<th>Strong IM/RM</th>
<th>OIC ATI Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian Security Intelligence Service (CSIS)</td>
<td>“CSIS has a strong information management structure”(^{123})</td>
<td>D (Below Average)</td>
</tr>
<tr>
<td>Natural Resources Canada (NRCan)</td>
<td>“NRCan reports that its information management structure is strong, allowing for ease of records retrieval”(^{124})</td>
<td>F (Unsatisfactory)</td>
</tr>
<tr>
<td>Privy Council Office (PCO)</td>
<td>PCO “has a disciplined and localized information management capacity, which enhances its efficiency in responding to requests”(^{125})</td>
<td>D (Below Average)</td>
</tr>
</tbody>
</table>

The most obvious result of this comparison was the non-existence of a correlation between a strong IM/RM program and satisfactory ATI performance. The open coding of

\(^{123}\) OIC, CSIS.

\(^{124}\) OIC, NRCan.

\(^{125}\) OIC, PCO.
the report cards of the three institutions demonstrated that there were three common factors other than the IM/RM impact that accounted for the poor ATI performance: “staffing instability/large turnover”, “lengthy consultation”, and “delegation of authority”. Together with the observation from 2.5.2.1, which indicated that unsatisfactory ATI performance is only one indicator of poor RM, this result suggested that, despite the inherent relationship between information and the ATI Act, the fields of IM/RM and ATI administration remain distinct, and each requires unique conditions for success.

2.5.2.4. Relationship: Elements of Strong IM(RM) Performance

Table 12 Comparing IM(RM) Performance Elements in tsG4

<table>
<thead>
<tr>
<th>Institution Name</th>
<th>MAF VII</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12.1 Governance</td>
</tr>
<tr>
<td>AANDC</td>
<td>Strong</td>
</tr>
<tr>
<td>CRA</td>
<td>Strong</td>
</tr>
<tr>
<td>DFO</td>
<td>Strong</td>
</tr>
<tr>
<td>FAITC</td>
<td>Strong</td>
</tr>
<tr>
<td>NRCan</td>
<td>Strong</td>
</tr>
<tr>
<td>PS</td>
<td>(Acceptable)</td>
</tr>
</tbody>
</table>

The comparison between 12.1 and 12.2 indicated that, again, it was easier to obtain a better rate for 12.1 than for 12.2 (with PS as the only exception), which confirmed the result of the comparison conducted in 2.5.2.2 as well as the result by the starting group
2.5.2.5. Relationship: IM(RM) Performance by MAF and OIC

The comparison between the respective IM(RM) performances by MAF VII and OIC report cards was directed by the inconsistency displayed in the two sources for some institutions. All institutions were then systematically compared. Tables 11 and 12 present the results.

<table>
<thead>
<tr>
<th>Total No.</th>
<th>tsG2 (MAF VII)</th>
<th>tsG1 (OIC)</th>
<th>sG (OIC)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. = 6</td>
<td>No. = 6</td>
<td>No. = 8</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>AANDC</td>
<td></td>
<td></td>
<td>MAF ≠ OIC</td>
</tr>
<tr>
<td>2.</td>
<td>CBSA</td>
<td>CBSA</td>
<td></td>
<td>MAF = OIC</td>
</tr>
<tr>
<td>3.</td>
<td>CIC</td>
<td></td>
<td>CIC</td>
<td>MAF ≠ OIC</td>
</tr>
<tr>
<td>4.</td>
<td>CFIA</td>
<td>CFIA</td>
<td></td>
<td>MAF = OIC</td>
</tr>
<tr>
<td>5.</td>
<td>CIDA</td>
<td></td>
<td></td>
<td>MAF ≠ OIC</td>
</tr>
<tr>
<td>6.</td>
<td>CRA</td>
<td></td>
<td>CRA</td>
<td>MAF ≠ OIC</td>
</tr>
<tr>
<td>7.</td>
<td>CSC</td>
<td></td>
<td>CSC</td>
<td>MAF ≠ OIC</td>
</tr>
<tr>
<td>8.</td>
<td>CSIS</td>
<td></td>
<td></td>
<td>MAF ≠ OIC</td>
</tr>
<tr>
<td>9.</td>
<td>DFO</td>
<td></td>
<td></td>
<td>MAF ≠ OIC</td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>EC</td>
<td></td>
<td>MAF ≠ OIC</td>
</tr>
<tr>
<td>11.</td>
<td>HCan</td>
<td>HCan</td>
<td></td>
<td>MAF = OIC</td>
</tr>
</tbody>
</table>

This is an example of how one code was saturated. All these comparisons here (by 3 groups) saturated the category insufficient/lack of specifics in IM plan and work (i.e., it is difficult to specify the IM program in institutions) first generated by the starting group.

126
It was apparent that, in the above two comparisons, only a small number of institutions (namely, 3 among 17 and 1 among 8, respectively) had received consistent evaluation results from TBS MAF and OIC report cards. This inconsistency led to a comparison...
between the methodologies employed by TBS and OIC, presented in the following Table.

Table 15 Comparing Methodologies of TBS MAF and OIC Report Cards on IM

<table>
<thead>
<tr>
<th>Method</th>
<th>Source</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>OIC Report Card</td>
<td>Answers provided by institutions to Part C of OIC ATI Assessment Questionnaire: Contributing Factors&lt;sup&gt;127&lt;/sup&gt;</td>
<td>Whether “Difficulties to retrieve records” was a significant issue that affected the institution’s ability to respond to access to information requests in a timely manner (within 30 days and/or statutory timelines)</td>
</tr>
<tr>
<td>TBS MAF</td>
<td>Reports with supporting documents submitted by institutions&lt;sup&gt;128&lt;/sup&gt;</td>
<td>12.1 IM Governance: The IM governance structure effectively supports the organization’s business lines and participation in setting government-wide strategic directions for IM; 12.2 IM Strategic Planning &amp; Implementation: The organization’s IM strategy supports the effective management of information and records to meet program and service outcomes, operational needs and accountabilities.</td>
</tr>
</tbody>
</table>

The comparison demonstrated that the TBS and OIC approaches toward IM/RM had


different focuses. The OIC report cards focused on a very specific aspect of IM/RM, that is, records retrieval, yet the TBS MAF methodology focused on high level aspects of IM(RM), with general criteria. This result confirmed the observations made when analyzing the starting group (see Appendix 2): MAF evaluation on IM(RM) was insufficient (i.e., it focuses only on high level aspects) and ineffective (i.e., it is unable to reveal specific issues).

2.5.2.6. Relationship: Elements of Strong IM(RM) Performance by MAF VIII

MAF VIII (i.e., for the year 2010-11) assessed IM Practice (12.3) in addition to IM Governance (12.1) and IM Strategy Planning and Implementation (12.2). The assessment of 12.3 IM Practice focused on “information repositories, recordkeeping practices, retention, and disposition activities”.\(^\text{129}\) The following table presents the relationships between these elements as indicated by the ratings of the thirty departments to which the author had sent ATI requests.\(^\text{130}\) Eight of the thirty departments were not assessed by


\(^{130}\) The total number of departments that released records on their IM(RM) functions includes: the starting group (8), the theoretical sampling groups (13), TBS, LAC, OIC, OAG (the Office of the Auditor General of Canada), and the group of institutions that were assessed in 2006, including the Department of Agriculture and Agri-Food Canada (AAFC), the Department of Finance, the Department of Justice, and the Immigration and Refugee Board of Canada. The records that were not open coded were used to verify the generated codes. In addition, AAFC was visited for the purpose of experiencing its RDIMS.
MAF VIII, reducing the number of comparable departments to twenty two.

<table>
<thead>
<tr>
<th>IM Performance Elements</th>
<th>MAF VIII Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strong</td>
</tr>
<tr>
<td>12.1 IM Governance</td>
<td>9/22 = 41%</td>
</tr>
<tr>
<td>12.2 IM Strategy Planning &amp; Implementation</td>
<td>4/22 = 18%</td>
</tr>
<tr>
<td>12.3 IM Practice</td>
<td>2/22 = 9%</td>
</tr>
</tbody>
</table>

The comparison demonstrated that the requirement that was most difficult to satisfy was 12.3 IM Practice, as 68% of the institutions assessed were rated lower than acceptable and only 9% were rated strong. This result confirms the OIC experience that, when it comes to specific IM(RM) practices, the IM performance has become worse. This comparison confirmed also the previous observation that the element 12.1 IM Governance was the easiest one to achieve, as it possessed the highest percentage of the rating Strong and, accordingly, the lowest percentage of the rating Opportunity for Improvement including Attention Required.

2.5.3. Investigating the Theoretical Sampling Groups – Data Collection

The data collection process for all the theoretical sampling groups followed the same process of the starting group, except the parts relating to the GC-wide data and the site visit data. The search for GC-wide data was considered systematic and comprehensive,
and the data so collected, as well as those collected by visiting TBS, LAC, and PWGSC, were all applicable to the theoretic sampling groups. For institution-specific data, both online and ATI data were sought, the organization of which followed the same typology. The ATI requests sent to the departments of the theoretical sampling groups followed the same template developed for the departments of the starting group.

2.5.4. Investigating the Theoretical Sampling Groups – Data Analysis – Constant Comparison

Data of all theoretical sampling groups were open-coded, memoed, and constantly compared with the emerging categories established by the starting group data. The results were characterized as confirming, additional to, and new to the existent categories.

2.5.4.1. Category Confirmation

The tsG coding and comparing process confirmed overwhelmingly the starting group categories: all of them were supported by tsG data. Moreover, for a large number of categories such as IM(RM) Conceptual Framework, IM as a Whole, IM(RM) Guidance, IM(RM) as Service, IM(RM)/IT Relationship, IM Specificity, etc., not only was the confirmation universal for each theoretical sampling group but also consistent with many indicators in one institution.

2.5.4.2. Additional Indicators for Categories

Table 15 lists exemplar indicators by the tsG data coded as additional to the emergent sG categories. “Additional” here refers to the indicators that are similar to those suggested by
the sG data. The list is not exhaustive as many institutions offered data for more than one category.

Table 17 Additional Indicators for Categories

<table>
<thead>
<tr>
<th>Indicators by tsG Data</th>
<th>Emergent Categories by sG Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AANDC</strong></td>
<td><strong>Record Retrieval - Effectiveness</strong></td>
</tr>
<tr>
<td>• 5470.00 CND search fee estimated for the ATI request (= more than 500 hours GC work time)</td>
<td></td>
</tr>
<tr>
<td><strong>CBSA</strong></td>
<td><strong>IM(RM) Capacity - Characterization</strong></td>
</tr>
<tr>
<td>• IM Skills = attending training courses offered by the Canada School of Public Service</td>
<td></td>
</tr>
<tr>
<td><strong>CIC</strong></td>
<td><strong>Records Retention – Presence</strong></td>
</tr>
<tr>
<td>• Retention schedules as means to identify records</td>
<td><strong>Records Retention – Characterization</strong></td>
</tr>
<tr>
<td><strong>DFO</strong></td>
<td><strong>RDIMS Implementation - Effectiveness</strong></td>
</tr>
<tr>
<td>• RDIMS implementation considered having negative impact on business effectiveness</td>
<td></td>
</tr>
<tr>
<td><strong>IC</strong></td>
<td><strong>Record Classification - Development</strong></td>
</tr>
<tr>
<td>• A Business-based Classification Structure to be developed over a 36 month period with an estimated $3.2M budget; LAC developed methodology BASCS was not referenced</td>
<td><strong>IM(RM) Guidance - Application: Existence</strong></td>
</tr>
<tr>
<td><strong>PS</strong></td>
<td><strong>Electronic Document(s) - Presence</strong></td>
</tr>
<tr>
<td>• Electronic documents representing RDIMS</td>
<td></td>
</tr>
<tr>
<td>Indicators by tsG Data</td>
<td>Emergent Categories by sG Data</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td><strong>HRSDC</strong></td>
<td></td>
</tr>
<tr>
<td>• Guidelines on Managing Electronic Information, Mail and Documents</td>
<td>• Electronic Document(s): Presence</td>
</tr>
<tr>
<td>• Stronger encouragement than GC requirements</td>
<td>• Electronic Record(s) - Presence</td>
</tr>
<tr>
<td></td>
<td>• Employee “RM” – Presence</td>
</tr>
<tr>
<td><strong>NRCan</strong></td>
<td></td>
</tr>
<tr>
<td>• Quick achievement of developing an IM Policy and of designating an IM departmental senior officer</td>
<td>• IM(RM) Compliance Requirement – Execution</td>
</tr>
<tr>
<td><strong>PCO</strong></td>
<td></td>
</tr>
<tr>
<td>• Employee high turnover</td>
<td>• Employee “RM” – Effectiveness</td>
</tr>
<tr>
<td></td>
<td>• Institutional RM – Effectiveness</td>
</tr>
<tr>
<td><strong>DFAIT</strong></td>
<td></td>
</tr>
<tr>
<td>• Identical set up of institutional IM policy instruments as with that of TBS</td>
<td>• IM(RM) Compliance Requirement – Execution</td>
</tr>
<tr>
<td>• Clean-ups for various drives mostly welcomed</td>
<td>• RM Practice Work – Effectiveness</td>
</tr>
<tr>
<td>• Frozen shard drives for RDIMS take-up</td>
<td>• RDIMS Implementation – Condition</td>
</tr>
<tr>
<td>• Longer finding/searching time with more documents in RDIMS</td>
<td>• RDIMS Implementation - Effectiveness</td>
</tr>
<tr>
<td>• Abandoned/orphan documents in RDIMS</td>
<td></td>
</tr>
<tr>
<td><strong>TC</strong></td>
<td></td>
</tr>
<tr>
<td>• Strong focus on awareness and training</td>
<td>• IM(RM) Directional Work – Performance</td>
</tr>
<tr>
<td>• Close work relationship with IT</td>
<td>• IM(RM)/IT Relationship – Characterization</td>
</tr>
<tr>
<td>• Active participation in GC IM</td>
<td>• IM(RM) Whole-of-Government Approach – Presence</td>
</tr>
</tbody>
</table>
### 2.5.4.3. New Indictors for Categories

A small number of indicators offered by the tsG data were new to some of the sG emergent categories – yet still encompassed by the categories. Table 16 lists all of them.

**Table 18 New Indictors for Categories**

<table>
<thead>
<tr>
<th>Indicators by tsG Data</th>
<th>Emergent Categories by sG Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBSA</td>
<td>• IM(RM) Compliance Requirement – Execution</td>
</tr>
<tr>
<td>• Difficulty caused by changing compliance requirements</td>
<td></td>
</tr>
<tr>
<td>CIC</td>
<td>• Senior Officer IM(RM) Responsibility – Fulfilment</td>
</tr>
<tr>
<td>• Resources are in place</td>
<td>• IM(RM) Capacity - Characterization</td>
</tr>
<tr>
<td>IC</td>
<td>• Electronic Records - Characterization</td>
</tr>
<tr>
<td>• electronic records = records in employee personal folders</td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>• RDIMS Implementation – Condition</td>
</tr>
<tr>
<td>• After implementation required shared drives to be blocked and training must be attained;</td>
<td>• RDIMS Implementation – Effectiveness</td>
</tr>
<tr>
<td>• ATIP unit has access to implemented RDIMS</td>
<td></td>
</tr>
<tr>
<td>CSIS</td>
<td>• Record Retrieval - Effectiveness</td>
</tr>
<tr>
<td>• classifying each and every record, including emails</td>
<td></td>
</tr>
<tr>
<td>HRSDC</td>
<td>• IM(RM) Directional Work – Establishment</td>
</tr>
<tr>
<td>• long time period for departmental IM strategy approval</td>
<td></td>
</tr>
<tr>
<td>Indicators by tsG Data</td>
<td>Emergent Categories by sG Data</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>NRCan</td>
<td>• Improvement Mechanism – Development</td>
</tr>
<tr>
<td>• a wiki and Google environment to lessen user and manager burden</td>
<td>• Improvement Mechanism – Effectiveness</td>
</tr>
<tr>
<td>• fewer responsibilities for employees and managers</td>
<td></td>
</tr>
<tr>
<td>• difficult to find all responsive records</td>
<td></td>
</tr>
<tr>
<td>PCO</td>
<td>• Record Retrieval – Effectiveness</td>
</tr>
<tr>
<td>• Identified responsive records were comprehensive</td>
<td>• RDIMS Implementation - Condition</td>
</tr>
<tr>
<td>• capturing records into RDIMS done by RM officers</td>
<td>• RDIMS Implementation - effectiveness</td>
</tr>
<tr>
<td>• A stronger focus on RM actual work</td>
<td>• RM Actual Work – Completion</td>
</tr>
<tr>
<td>• Retention schedules used as reasons for not releasing certain records</td>
<td>• Records Retention – Presence</td>
</tr>
<tr>
<td>• No records documenting the disposition</td>
<td>• Records Disposition - Effectiveness</td>
</tr>
</tbody>
</table>

2.5.5. Ending Open Coding

[Researchers] look for patterns so that a pattern of many similar incidents can be given a conceptual name as a category, and dissimilar incidents can be given a name as a property of a category, and the compared incidents can be seen as interchangeable indices for the same concept. And when [researchers] get many interchangeable incidents [the categories] get saturation. That is, it is unnecessary to keep collecting more incidents which keep indicating the same pattern and no new properties of it.\(^{131}\)

As the categories/codes were considered saturated and the core variable emerged, the

open coding process ended.

2.6. Emerging Core Concept: Record Nature

The open coding process pointed strongly to the significance of the code IM(RM) Conceptual Framework, as its GC characterization, inadequacy, was indicated by all types of data and at both GC-wide and institution-specific levels. The indicators include:

- Imprecise definition for key concepts (e.g. information lifecycle);
- Lack of definitions for key concepts (e.g., information and document);
- Inconsistent definition/characterization for the concept of record;
- Inconsistent definitions for the concept of recordkeeping;
- Lack of relationship deliberations for key concepts, in particular
  - document and record in digital technological environment;
  - information and information resource; and
  - record and information resource of business value.

Among these indicators, the inadequate and inconsistent information surrounding the concept of record appeared to be most problematic. This observation led to the emerging of the question: “what is the nature of a record in the context of GC IM?” or “how is a record fundamentally different from other IM constituent parts?”. The code record nature was used to capture this emergent question and was identified as the core variable entailing selective coding.
2.6.1. Substantive-Selective Coding of Record Nature

The data collection for the selective coding relied on information on record(s) provided by three types of sources: IM/RM relevant legislation in the GC setting, TBS IM/RM policies, and representative RM literature.

2.6.1.1. Definition/Appearance of Record(s) in IM/RM Relevant Legislation

The coding of the first type of data (T$_1$) included the following GC acts, identified by TBS IM policies as key to IM/RM. They are listed below in chronological order:

- Financial Administration Act, R.S.C., 1985, c. F-11
- Access to Information Act, R.S.C., 1985, c. A-1
- Statistics Act, R.S.C., 1985, c. S-19
- Canada Evidence Act, R.S.C., 1985, c. C-5, amended 2000
- Library and Archives of Canada Act, S.C. 2004, c. 11

The analysis included two steps: first, coding the appearance/use and/or definition of record(s), including electronic or digital records (S1), and second, coding the appearance/use and definition of the terms information, document, information resource, information resource of business value. The indicators and memos (I&M) from the first step coding (labeled as T1-S1-I&M-#) are:

- T1-S1- I&M-1: record is defined by the Access to Information Act and the Library and Archives of Canada Act:
  - Both consider records as “any documentary material”,
“regardless of medium or form”, yet
  o The latter qualifies “any documentary material” as “other than a publication”;

- T1-S1- I&M-2: The Canada Evidence Act defines record\textsuperscript{132} in the context of the admissibility of business records as evidence in legal proceedings, and generally refers to it as any recorded information;

- T1-S1- I&M-3: Record(s) appears in all other acts, and is used
  o in association with specific spheres of activity, e.g., “records of public property”, “records of land management”, or
  o as synonym of document;

- T1-S1- I&M-4: Electronic record(s) or digital record(s) does not appear;
  o The phrase “machine readable records” appears in the Access to Information Act. The term is not defined but machine readable records are qualified as being produced by “using computer hardware and software”;

The indicators and memos generated by the second step (labeled as T1-S2-I&M-#) are:

- T1-S2-I&M-1: information is not defined by any of the acts;
- T1-S2-I&M-2: information is used

\textsuperscript{132} “record” includes the whole or any part of any book, document, paper, card, tape or other thing on or in which information is written, recorded, stored or reproduced, and, except for the purposes of subsections (3) and (4), any copy or transcript admitted in evidence under this section pursuant to subsection (3) or (4).
• T1-S2-I&M-3: document is not defined by any of the acts;

• T1-S2-I&M-4: document is used
  o as a general term (with less frequency than information), or
  o in parallel with “books, papers, and accounts” or
  o in parallel with “records”;

• T1-S2-I&M-5: electronic document is defined by the Canada Evidence Act, following the Personal Information Protection and Electronic Documents Act, PART II Electronic Documents, S.C. 2000, c. 5, as “data that is recorded or stored on any medium in or by a computer system or other similar device and that can be read or perceived by a person or a computer system or other similar device. It includes a display, printout or other output of that data”;
  o “data” means representations of information or of concepts, in any form;

• T1-S2-I&M-6: Information resource or information resource of business value has no appearance in any of the acts.

The overall results of the coding of the first type of data are:

• The legal definitions only partially answer the question of what a record is (i.e., any documentary material, other than a publication), and are
therefore unable to effectively distinguish record from information or document as all can possess both the characteristic of being documents and published;

- The terms information and document are commonly and extensively used, but are used without differentiation and in parallel with records as different entities;
- The inclusion of digital records in the definition of records is suggested by the phrase “regardless of medium or form”, but being implicit as it is based on interpretation;
  - This inclusion is not made explicit in institutional IM/RM policies, plans, or tools either;
- The association of electronic documents with the computing environment is made clear; and
- No linkage is made between electronic documents and business records.

2.6.1.2. Definition/Appearance of Record(s) in TBS RM and IM Policies

The coding of the second type of data included the three predecessors of the current TBS Policy on Information Management (2007):

- Chapter 460 in TBS Administrative Policy Manual, Records Management, 1983;
- Policy on the Management of Government Information Holdings,
1994;\textsuperscript{133}


The coding of the policies issued in 1994 and 2003 was done by using the actual copies of the policies, but for the one issued in 1983, the coding was done based on a surrogate, that is, a review article on it published in Archivaria.\textsuperscript{134} Efforts to gather a copy of the 1983 policy as well as a copy of the Records Management policy in the TBS Administrative Policy Manual published in 1978 were made by contacting both TBS and LAC. TBS does not keep rescinded policies and relied on LAC for long-term access. The response from LAC indicated that administrative policies were kept but they would not be open for access until 2013. As a result, the policy issued in 1978 was not coded; its title, however, signaled that the focus of the policy was on records not information.

The coding of these policies yielded the following indicators and memos:

- T2-I&M-1: The policy changed its focus in 1994 from records (1978) and “information contained in records” (1983) to “information holdings” (1994) and


“government information” (2003);
  o  information holdings were defined as “all information under the control of a government institution, regardless of physical mode or medium in which such information may be stored”;
  o  government information was defined as “information created, received, used, and maintained regardless of physical form, and information prepared for or produced by the Government of Canada and deemed to be under its control in the conduct of government activities or in pursuance of legal obligations”;
  
  T2-I&M-2: The 1994 policy did not define records but used the term in phrases such as “essential records”, “records of enduring value”, “historical records”, “personnel records”, and “ministerial records”;
  
  T2-I&M-3: The 2003 policy considered records a related term to government information and provided a definition from the National Archives of Canada Act and the Access to Information Act:
  o  Records: “Includes any correspondence, memorandum, book, plan, map, drawing, diagram, pictorial or graphic work, photograph, film, microform, sound recording, videotape, machine readable record, and any other documentary material, regardless of physical form or characteristics, and any copy thereof”;

The overall findings of this coding process include:
  
  • The existence of no intention or effort to distinguish records from “information
holdings” or “government information”; or, in other words, to make explicit the relationships among these terms;

- There is a tendency to use the term information in association with the operation of government institutions; and
  
  - The use of the term record(s) was limited to
    - traditional (i.e., paper-dominant) RM;
    - the non-current-use stage of the records lifecycle, confirming the tendency discovered when coding LAC data;
  
  - The term information resource, or information resource of business value, is not present in any of the policies.

2.6.1.3. Definition/Elaboration of Record(s) in Relevant Literature

As an established profession, RM produces literature regarding records and their management. As an established academic discipline, archival science studies records and their administration, and has generated a sizable body of scholarly literature. Due to the different development histories of RM and archival science in different countries and cultures, a universally accepted definition for the concept of record does not currently exist. What exist are numerous definitions offered by a variety of bodies such as legislatures, archival institutions, RM and archival educators, RM and archival professional associations, national and international standards, guidelines, glossaries and dictionaries, and research projects. For the selective coding, three sources were considered sufficiently representative of the relevant literature: the International Organization for Standardization (ISO) RM Standard 15489, the Association of Records
Managers and Administrator (ARMA) International, and the International Research on Permanent Authentic Records in Electronic Systems (InterPARES) project. ISO 15489 is the first and still current international standard dedicated to RM, ARMA International is the largest professional association in the RM field, and the InterPARES project is the largest research project on digital records, which had also run for the longest time period among similar projects. In addition, the project features the Canadian setting, involving several Canadian partners, including LAC. Although weak, all three sources had a presence in the GC IM landscape, at either the government or the institution level, and this was the other factor that guided their selection for analysis.

The three definitions are:

- ISO 15489: records [means] information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business; “information” is not defined;\(^{135}\)

- ARMA: [A] record [is] recorded information, regardless of medium or characteristics, made or received by an organization in pursuance of legal obligations or in the transaction of business; “recorded information” is not defined;\(^{136}\)


• InterPARES: [A] record [is] a document made or received in the course of a practical activity as an instrument or a by-product of such activity, and set aside for action or reference;
  o [a] “document” [is] an indivisible unit of information constituted by a message affixed to a medium (recorded) in a stable syntactic manner. A document has fixed form and stable content;
  o information [is] an assemblage of data intended for communication either through space or across time; and
  o data [are] the smallest meaningful units of information.\(^{137}\)

The coding of the definitions yielded the following facets:

• Fixity
  o indicated by the term “recorded” in the ARMA definition;
  o indicated by the term “document” in the InterPARES definition and its definition provided by the project;
  o only the first type of information in the ISO definition presents this feature as indicated by the term “maintained”; the second type of information does not, because oral information, e.g., a phone call, may be able to make a transaction take place under certain circumstances;

• Relationship with an activity (that is part of the usual and ordinary operation of the organization or person); sub-categorized as association and connection:

---
• Purpose of record creation
  o as “evidence” for the first type of information in the ISO definition; the relationship of being associated with an activity can be considered the purpose of record creation for the second type of information;
  o the relationship of being associated with an activity can be considered the purpose of record creation in the ARMA definition;
  o as “an instrument or a by-product of such activity” in the InterPARES definition;
• Purpose of records maintenance
  o same as that for record creation in the ISO definition;
  o same as that for record creation in the ARMA definition;
  o “for action or reference” in the InterPARES definition.

As the InterPARES definition of record yielded more facets than the other two definitions, the tool developed by the project to dissect the definition of record called Diplomatic Analysis Template and the definition of activity were further coded.\textsuperscript{138} The results include:

• There are relationships between records of the same activity;
• There are roles in the records creating process;
• There are roles in the records maintaining process;
• There are environmental factors impacting records creation;
• There are (hierarchical) relationships among action, activity, and function.\textsuperscript{139}

Neither the ISO 15489 nor the ARMA Glossary provided definitions for activity or action. In the text of ISO 15489, activity and business activity are both used, and business


\textsuperscript{139} InterPARES 2, “Terminology Database,” Action: The conscious exercise of will by a person aimed to create, maintain, modify or extinguish situations; Activity: A series of acts or actions aimed to one purpose; Function: All of the activities aimed to accomplish one purpose, considered abstractly.
activity is used mostly alongside function, transaction, and/or business process. In its section of Design and implementation methodology, however, the standard suggests that a hierarchical relationship should be established among function, activity, and transaction. A further tracing was conducted for the term business process, or process, and the result was that neither the ISO 15489 nor the ARMA Glossary provide a definition for it, while the InterPARES project defines a process as “the series of motions, or activities in general, carried out to set oneself to work and go on towards each formal step of a procedure”. The project further defines procedure as “the body of written and unwritten rules governing the conduct of a transaction, or the formal steps undertaken in carrying out a transaction”. The ARMA Glossary also defines procedure as “instructions, exhibits, and/or other methodologies to follow in order to complete tasks in a predictable and orderly way”.

2.6.2. Record Nature Properties

By synthesizing the above coding in relation to the GC context (e.g., removing the parts relevant to personal activities), the concept of record nature can be described by three properties: creation, maintenance, and use, each with a number of specifications. Creation refers to the manner by which a record comes into existence, that is, it is created (made or received and set aside) as part of an operational activity, which entails the understanding of the characteristics of such activity and the implications of making, receiving, and


141 ARMA, “Glossary of Records and Information Management Terms,”.
setting aside (i.e. keeping) a record. An operational activity is an activity that is carried out as part of an organization’s planned operations. It may consist of a series of procedures (steps or phases) or workflows (i.e., processes) or several sub-activities, each consisting of one or more procedures or processes, but it is at the lowest action level at which the work is being carried out. The procedures and/or processes may not be limited to one business unit or organization; depending on the need of the activity, it may develop across multiple administrative configurations. The specific acts and the relationships among activities, sub-activities, procedures and processes, their phases, and the acts that are part of them are determined by the organization, which designs all its activities in order to achieve its goals and objectives. The design of the activity reflects its operational environment, consisting of the juridical, administrative, and technological contexts, where the juridical-administrative requirements may include those for the creation of records. As part of the design for execution and management purposes, each activity needs an owner and a number of players, which can be human beings or information systems with assigned roles and responsibilities, including those for the creation of records. Records are created at specific steps as the byproducts of acts, and creation attaches to each record attributes derived from the operational environment that are definite and specific at that moment. For the design to enable consistent operation, all activities need to have clearly defined boundaries that delimit them as independent

142 Adapted from the five contexts in the InterPARES, Diplomatic Analysis Template.

143 Strictly, an information system is not a player in acting as either a natural or juridical person. It is used as a player here with the implication that it functions in accordance with the requirements of a juridical person, that is, the records creation organization.
entities, despite the interrelations they may possess with each other. To facilitate automation, requirements and conditions stipulating the conduct of each activity, including records creation, need to be broken down as much as possible within each step. The activity that causes the creation of records is a records creating activity and for a particular record, there is always only one creating activity.

To be created encompasses two types of actions: to be made or received and to be saved to an aggregation of records, and the difference lies in the authoring of the record. To make a record is to produce a document (i.e., information affixed to a medium in a stable form) at a specific step of an activity and to follow record-making rules or documentary procedures. The specific step in question is a record-making step of the record creating activity. Record-making rules determine the documentary form\(^ {144}\) of the record being made, that is, the manner by which the content of a record, its administrative and documentary context, and its authority are communicated. \(^ {145}\) The development of record-making rules requires adequate understanding of the creating activity, including its operational environment and the RM principles ensuring that the resulting record both satisfies the need of the activity and fulfills legal requirements. Receiving a record takes

---

\(^ {144}\) Documentary form consists of the rules of representation that allow for a message to be conveyed, and comprises extrinsic and intrinsic elements. Extrinsic elements constitute the external appearance of a record and intrinsic elements constitute the internal composition of the record, conveying the action in which the record participates and its immediate context. Luciana Duranti, “Chapter 5 The Form of Documents and Their Criticism,” in Diplomats: New Uses for An Old Science (Chicago, Ill.: SAA, ACA and Scarecrow Press, 1998), 133-150.

\(^ {145}\) InterPARES 2, “Terminology Database,” Record-making.
place also at a specific step of an activity, but enters the records creation procedure from a different direction as the received record was made and issued by an entity external to the activity. Both the record-making and record-receiving steps are followed by the action of setting the record aside (or saving it to a records aggregation), which gives the record its archival bond\textsuperscript{146} and establishes its record status within the organization’s fonds. For digital records, setting aside needs to take place at the same time of saving (in the sense of computer science, i.e., affix it to a certain medium), which typically takes the form of assigning the records classification codes and placing them in the records maintenance system of the organization. For receiving a record, saving requires first downloading (e.g., from an email or a website) or uploading (e.g., from a removable memory device) the transmitted record, which may cause changes to the external appearance of the record if the technologies used to open/reassembly the record are different. RM procedures thus need to be developed to require the documentation of such changes, following the guidance of the concept of fixed documentary form.\textsuperscript{147} It needs to be pointed out that digital records have become the predominant type of records in today’s records creating organizations.


\textsuperscript{147} For a discussion on fixed documentary form with respect to digital records, see Luciana Duranti and Kenneth Thibodeau, “The Concept of Record in Interactive, Experiential and Dynamic Environments: the View of InterPARES,” *Archival Science* 6, 1 (2006): 13-68
The property of maintenance emphasizes that maintaining records requires decision-making and conscious actions carried out for intended outcomes. A record needs to be maintained in order to continue its existence after creation and the quality of maintenance determines the quality of its existence, that is, the fact that the record is retrievable and usable. Record usability can be specified using the factor of time, and can be categorized as present and future\textsuperscript{148} uses. Record present use refers to the use of it by its creating activity during the period that the activity is taking place. Although the usages may happen at different times and locations, they all happen within the boundaries of the activity. The activity therefore determines the maintenance of the record. Record future use refers to its use by a future activity, which takes place not only in different times and locations but also outside the activity, and this can, therefore, be termed reuse. As it is difficult to predict the occurrence of future activities, the taking of maintenance decision for future use requires multiple sources of input and takes a much more complicated path.

These properties collectively depict the nature of record and therefore, are capable of distinguishing records from document, information, publication, information resource, knowledge resource, and business asset, and of examining the IM(RM) function in the study setting.

\textsuperscript{148} The term future use is chosen to distinguish subsequent use, which, as an additional facet to present use, refers also to the use of records within the same activity.
Figure 2 below summarizes the research process:

The next chapter presents the emergent grounded theory that utilized the grounded theory mechanism of theoretical coding.
3. Discovering/Formulating the Grounded Theory

The essential relationship between data and theory is a conceptual code. [Theoretical] codes conceptualize how the substantive codes may relate to each other as hypotheses to be integrated into the theory. Thus, in generating a theory by developing the hypothetical relationships between conceptual codes (categories and their properties) which have been generated from the data as indicators, we “discover” a grounded theory.¹⁴⁹

This chapter presents the grounded theory generated through theoretically coding the substantive categories. It emerged first in the form of conceptual building blocks and then hypotheses, which were formulated on the basis of the building blocks. The grounded theory centers on the core variable Record Nature and displays the relationships among concepts and hypotheses. The specifications of each concept are not intended to be universally applicable but relevant only to the study setting. In addition, the specifications are modifiable in the face of new data and/or new coding. The term record in this and subsequent chapters is synonymous with the term digital record, which is also used for the purpose of emphasis when needed. Both the building block concepts and the hypotheses are presented in an alternative form, which are listed as appendices to the dissertation.

3.1. Conceptual Building Blocks

The building block concepts, marked by capitalized first letters in this section and the rest of the dissertation, are described below utilizing properties that characterize them as

¹⁴⁹ Barney G. Glaser, Theoretic Sensitivity, 55.
indicated by both the substantive and theoretical codes. The properties resulting from the substantive coding are mainly those of a descriptive nature, that is, they possess no relationships with other properties or concepts. For example, the property “An independent administrative configuration” of the concept Central RM, describes only an inward characteristic of the concept rather than pointing out any outward relationship with other building block concepts or their properties. In contrast, the properties resulting from the theoretical coding describe mainly relationships. For example, the property “Relies on dedicated RM Personnel for operation” of the same concept (i.e., Central RM) indicates that a dependent or conditional relationship exists between the concepts of Central RM and RM Personnel. These properties are called specifications in the presentation of the building block concepts, in conformance with the methodological guidance that “conceptual specification is the focus of grounded theory, not conceptual definition”. To further specify the relationship, or in other words, to functionally enable the usage of these concepts in formulating hypotheses, the property measurement is added to all concepts designating the requirement(s) associated with their practical applications, for example, to be timely, comprehensive, or adequate. These measurements are used to indicate the level of achievement of the activities involved in putting the concepts into practice and, when connected to the relationships captured by other properties, they reveal relationships among concepts, thus facilitating the formulation of

---

150 This is because the operational meaning of the concept derives from the use of its learned distinctions in the theory. In this way the meaning of a concept can be modified or added to as indicators change—thereby changing the applicable distinctions. It is hard to keep changing a conceptual definition. Barney G. Glaser, *Theoretical Sensitivity*, 64.
hypotheses. For example, the effective operation of the Central RM (effectiveness is one measurement for Central RM) relies on adequate RM Capacity (adequacy is one measurement for RM Capacity). The other feature regarding measurements is that they are inheritable. When a concept is a compound one, that is, it contains component concepts, its measurements are inherited by the components. For example, the compound concept Organizational RM has two components, Central RM and Local RM, both of which inherit the measurement of effectiveness of operation established for Organizational RM. Although many component concepts have their own measurements, there are situations where component concepts have inherited measurement(s) but not their own, for example, the components constituting the concept Record Value. This group of component concepts inherits the measurement “Degree of recognition by organization” and “Degree of realization by Organizational RM” from its upper level concept and possesses no other measurements specific to them.

There are in total 96 building block concepts, all of which are traceable back to the concept Record Nature, either directly or indirectly. Their description in this section starts with the concepts that are in a direct manner derived from the core concept Record Nature, collectively termed the RM Foundational Concept (including the concept Record Nature). It then follows the thread as indicated by the relationships in properties, that is, the specifications and/or measurements. This order implies, in a loosely manner, the different degree of importance of the building block concepts in formulating the theory/explanations; however, it does not suggest any differences in their necessity or usefulness for presenting a coherent theory. In other words, all concepts are considered necessary for illustrating the situation as indicated by data in the study setting and for
identifying the cause of the problem being studied.

3.1.1. Record Value, RM Value & The Related

In addition to Record Nature, the RM Foundational Concept includes the concepts of Record(s) Purpose, Record Value, RM Nature, and RM Value. The concept Record(s) Purpose consists of two components, Record Creation Purpose and Record(s) Maintenance Purpose, \(^{151}\) and is measured by the degree to which the two components are distinguished by the records creating organization. Record Creation Purpose emphasizes that records are created for, and only for, satisfying the needs of an Operational Activity, and the Operational Activity, correspondingly, is the sole reason that causes the creation of the record. An Operational Activity can be any activity that the organization determines to be necessary for its operation, the conduct of which typically requires resources allocation and records creation. This indicates that, within the context of conducting an Operational Activity, records must be created when needed, and must not be created when not needed, and the reasoning for creation is needed for each and every record, as creation is relevant only to individual records. This notion is well documented in archival literature and is also widely adopted by practitioners of both the

\(^{151}\) The use of the expression record(s) in relation to Maintenance Purpose is to emphasize that the action of maintenance needs to be performed at both individual and aggregation levels. This usage applies to all other instances where both levels are the concern. When only one level, either individual or aggregation, is considered, the expression record or records is used, such as in the case of Record Creation Purpose, which emphasizes that the purpose of creation must be understood in relation to individual records. Whenever a component concept is expressed using record(s), its upper level concept reflects it.
professions of archives administration and records management. Moreover, it is extensively elaborated by the InterPARES project in the context of digital records management and long-term preservation.\textsuperscript{152} The guidance offered to practice by this notion is that the creation of records must be analyzed and determined when the Operational Activity is being conceived and designed, which was largely absent in the study setting. This analytic result prompted the codification of the concept Record Creation Purpose, which emphasizes the notion of record-creation-as-part-of-operational activity and differentiates it from the purpose of Record(s) Maintenance. The concept Record(s) Maintenance Purpose was codified as a response to the fact that information management policies excessively emphasize that information (including records) needs to be managed as “business assets” and “knowledge resources”. Because no definition for these two terms could be found in all collected data, the understanding of their meaning relied on the analysis of relevant literature\textsuperscript{153} in conjunction with indications offered by other data (e.g., the establishment of IM(RM) as a resource management function). As the analysis displayed, the term business asset or knowledge resource emphasizes the use of


\textsuperscript{153} The relevant literature consists of typically RM professional literature including RM consultants’ publications.
records by activities that are different from the records creating activity, that is, records reuse or repurposing. Records do have the potential for being reused or repurposed as business assets and/or knowledge resources; however, it is critical to realize that records are not created (i.e. made or received and kept) in order to be business assets or knowledge resources, but may become such after having exhausted their usefulness for the activity that required their creation. This differentiation is of critical importance because:

- It guides the understanding of the different types of value that a record may possess to the different activities that create and reuse it. A record that is indispensable for an Operational Activity (e.g., an ATI request form) is however typically not considered as a business asset (in the sense of contributing to the generation of business intelligence) or a knowledge source (in the sense of contributing to organization’s strategic planning or of becoming part of the archives that are significant to Canada);

- It indicates that the degree of knowledge of activities required for records creation and maintenance is different: for record creation, it is only the understanding of the creating activity that is required, while for enabling record(s) reuse, the understanding of as many future activities as possible is desired; and

- It points out that record creation is the foundation of record(s) maintenance, which relies on the creation quality.

Based on these distinctions, Record Creation Purpose is measured by the existence of a decision and justification for creation, which, when implemented, form part of the records
of the creating activity. Record(s) Maintenance Purpose is measured by the existence of a decision and justification for maintenance, which, when implemented, form part of the records of the activity of RM Appraisal. Decision and justification are separately measured as data indicate that either or both may be absent in institutions.

The concept Record Value includes two components: Record Instrumental Value and Record Reuse Value, and is measured by the degree of recognition, distinction, and realization by the organization and the Organizational RM. The concept Record Instrumental Value is tightly related to Record Creation Purpose and, as such, it is exclusive to the activity creating the records. It communicates the idea that a record required by the conduct of an Operational Activity possesses value to the activity, an idea that is conveyed by the term instrumental. This value is relevant to work productivity and effectiveness as the conduct of the activity relies on the quality and availability of the record. The degree of institutions’ recognition of the Record-Instrumental Value impacts directly the recognition of the importance of Record Identification and the adequacy of the establishment of an Organizational RM. To ensure the Record-Instrumental Value, records must be identified one by one with content, documentary form, and metadata sufficient for enabling their lifecycle management. To facilitate Record Identification, a work relationship between the writer of the record content (i.e., employees designated to a particular Operational Activity), the originator of the extrinsic elements of the documentary form (i.e., the part of Organizational IT supporting the activity),\textsuperscript{154} and the

\textsuperscript{154} The concepts of writer and originator are used here in conformance with digital diplomatics as developed by the InterPARES project.
RM Personnel dedicated to the activity must be administratively enabled. Dedicated RM Personnel and their continued work relationships with Organizational IT are required for ensuring the quality of records and their availability to the creating activity during its operating time. This implies that this type of work should not be temporary.\(^{155}\) The demonstration of this type of value supports the RM Function Design, that is, the establishment of the RM Governance Structure, the RM Responsibility Arrangement, and the RM Activity.

As the Instrumental Value of a record is limited to its creating activity, it is irrelevant to the determination of Records Retention for future activities. In other words, the requirement for records maintenance/retention is defaulted by the need of their creating activity: the records exist for as long as the activity requires them. The extension of the retention period beyond the operation time of the activity is determined by Record Reuse Value.

Record Reuse Value, the other component of Record Value, follows, or is subsequent to, the Record-Instrumental Value. It consists of two sub-components, Record Immediate Value and Record Distant Value, both of which further include three sub-components: Record Accountability Value, Record Investigation Value, and Record Resource Value,\(^{156}\)

\(^{155}\) The typical temporary personnel include consultants and students. This is not to diminish the reasonableness of having such temporary help under certain circumstances, but to emphasize the demand of dedicated attention to the work, which is necessary to realizing the record instrumental value.

\(^{156}\) As the criteria used to categorize components are descriptive facets of the concepts, they serve as qualifiers in the names of the component concepts. For example, the full name of the
corresponding to the types of Operational Activity, which are Accountability-Related Activity, Investigation-Related Activity, and Business Activity. These three activities form the category Non-RM Activity, and together with the category RM Activity, constitute the Operational Activity. The relationship between the Non-RM Activity and RM Activity is not exclusive as the term may suggest, but instead, inclusive, that is, every type of Non-RM activity includes certain forms of RM Activity. The use of Non-RM vs. RM is intended to highlight the differences in their primary purposes of establishment and, accordingly, the different kinds of knowledge needed for their respective operation.

To understand Record Reuse Value requires the introduction of the concept Activity Time Boundary, which categorizes Operational Activity as Past Activity (one that has been completed), Present Activity (one that is currently taking place), and Future Activity (one that will take place either according to design/plan or unexpectedly). The time boundary of activity indicates that the ending point of a Present Activity changes it to a

sub-component concept Record(s) Accountability Value is Record(s) Reuse-Immediate-Accountability Value.

157 This relationship is detailed in the specifications of the concept Organizational RM and its component Unit RM.

158 It needs to be pointed out that this characterization is limited as it does not accommodate the possibility that activities may last for a very long time. When this is the case, accountability- and investigation-related activities may take place before the activity ends. This however does not invalidate the use of the time factor because it can be used within the long lasting activity to separate sub-activities or processes, which then can follow the past, present, and future categorization. A more important point is that the discussion on records creation and management must be rooted in the design and conduct of activity.
Past Activity and the starting time of a Future Activity marks it as a Present Activity. Time boundaries between activities assist the understanding of the transformative relationships between activities and the different types of Record Value associated with the transformation, in particular with regard to Record-Reuse Value. Being reusable by different activities is one characteristic of records: those created by a Past Activity can be reused by a Present Activity and those created by a Present Activity may be reused by a Future Activity. When a record is being created and used by an activity, this activity is its creating activity, which is also a Present Activity, and the record value for the activity is instrumental. When this activity ends, it becomes a Past Activity and its records need to be assessed for reuse by either identified or potential Future Activities. The assessment is typically conducted in two forms of appraisal: RM Appraisal and Archival Appraisal. RM appraisal assesses Record Reuse-Immediate Value in consideration of the institution’s operations, which determines retention periods of records in the organization. Archival appraisal, in contrast, assesses Records Reuse-Distant Value, which determines the requirement for records to be transferred to an archival institution/unit/program where they can be permanently preserved and made accessible. Archival appraisal\textsuperscript{159} requires as a foundation the quality work of the organizational RM program, including that of RM Appraisal.

When a Future Activity becomes present (i.e., starts to take place), the document reused

\textsuperscript{159} The specifications of the concept Archival Appraisal are limited to its relevance to the present study, including only its relationship with RM Activity (i.e., it requires RM work as a foundation) and the impact it has on the conduct of RM work (i.e., it needs to be conducted in a timely fashion and in supportive to the issuing of Disposition Authorities).
by it becomes its record and its reusable value becomes instrumental. It is critical to recognize that this change transforms the document (created by a Past Activity) into a new, different record, despite the fact that it may still maintain the same content and external appearance under certain circumstances. The major difference lies in the archival bond that the two records possess: the archival bond of the record being reused as a document indicates its relationships with the Past Activity and the archival bond of the new/transformed record indicates its relationships with the Present Activity. These indications need to be made explicit and the typical RM Tool used for doing so is Records Classification Scheme (RCS). When logically designed, a RCS is capable of depicting a network of relationships weaved by linkages between individual records, between classes of records, and between records and activities. The reuse of the document by another activity does not change its archival bond with its creating activity, which makes of it a record of such activity (now a Past Activity), but causes the formulation of a new archival bond between the document and the reusing activity (a Present Activity), thereby producing a new record. This is easier to be understood with respect to paper records because the reuse of a paper record typically results in a production of a physical copy and it is this copy – not the original – that becomes the record of the reusing activity. This physical reproduction not only differentiates the two records by appearance (even if the reproduction is by photocopying) but also by the change of physical location (the copy is in a paper folder different from the one that keeps the original). In other words, both the

---

160 For example, in the context of a Present Activity B reusing a PDF document created by a Past Activity A, the PDF document may look like exactly as the same as the PDF record - when the software for both activities is the same.
birth of the new record and the formulation of a new, different archival bond are visible. It becomes much more difficult to understand the changes in archival bond when the document is a digital one and managed in an electronic document management system (EDMS) that lacks the functionality for managing records. An EDMS makes it possible for one document to be reused/accessed by many activities without making duplicates of the document itself and without any location change. The relationships between the record and all its reusing activities may only be documented in the audit trials of the system, thus invisible to regular human users. For regular human users, there is only one document in the system and can be accessed unlimited times (assuming compliance to security rules are in place). This technological reality, however, does not diminish the need of conceptually distinguishing records on the basis of their archival bond because this understanding is the foundation on which consistent and effective digital records management rests. A case in point is constituted by certified Electronic Records Management System (ERMS) which can be configured to allow access to audit trails

161 Making digital copies in the context of an electronic document management system is indeed discouraged. Accordingly, such system’s functionality of providing multiple/unlimited access to a single instantiation of an electronic document is a highly praised advantage.

not only to system administrators but also to RM personnel. The display of the “history” of a record to ordinary users by showing access information is useful to make evident the uses of the record by different types of activities. This design indeed imitates the RM practices that predated the time of photocopying documents for reuse, which required metadata (i.e., classification codes) to be added to the reused document to make it a new record without duplicating the document. Thus, all future uses of the document were explicit in corresponding classification codes, the accumulation of which tells the reuse history of the document. Lack of such understanding typically contributes to the chaotic status of records management in organizations.163

The facets immediate and distant are used to distinguish the environments where the reuse takes place. The term immediate designates the environment as the conduct of a Non-RM Activity of the records creating organization, which may involve other organizations that cooperate with the organization in question on the Non-RM Activity. These cooperating organizations are not an archival institution. In contrast, the term distant designates the environment as outside the boundaries of the records creating organization including its partners, indeed, an archival institution. The reuse activities that take place in the archival institution do not belong to the records creating institution. A record possesses Reuse-Immediate-Accountability Value when it is used by an


Accountability-Related Activity, that is, an activity that responds to inquiries from the public (i.e., ATI/FOI requests) and/or authorities (e.g., Parliament) in the form of disclosing records that account for the conduct of their creating activity (hence the term accountability). The value is of a reuse nature because the records used by the Accountability-Related Activity (which is a Present Activity) were created by a Past Activity (which is currently being inquired on). When Reuse-Immediate-Accountability Value is being assessed for maintenance/retention, the Accountability-Related Activity acts as a Future Activity. This type of Future Activity may be regular and expectable, and institutions can design procedures and workflows for its conduct even though the activity is initiated outside it. This value is characterized as not directly relevant to institutions’ operation but significant to their status of being public organizations in a democratic country. Associated with this value are thus the requirements for institutions to be legislatively compliant and operationally transparent. This value, however, cannot be assessed independently for retention decisions because the Access to Information Act and the Access to Information Regulations do not stipulate the time periods for records to exist in institutions. When the inquiring activity (i.e., the sending of requests to institutions) takes place, the calculation of retention periods of potentially

---

164 The term directly is used to qualify the irrelevance due to the understanding that an unsatisfactory performance of accountability-related activities may very well impact the operation of the institution as it results in damages to its reputation and loss of public trust.

165 This indicates that when there are legal or regulatory requirements existing that stipulate specific retention periods or appraisal criteria for establishing specific retention periods, this value can be independently assessed.
responsive/relevant records is suspended and the Reuse-Immediate-Accountability value becomes the sole value by which the retention period of the records can be determined. As the inquiring activity is now the present and the records creating activity, the Reuse-Immediate-Accountability Value has become Record-Instrumental Value and the retention periods for all records of the activity are defaulted by the completion of the ATI process. After completion, records need to be re-assessed for retention based on their reusable value. This indicates that, even though the requirements for being accountable, transparent, and compliant are widely used by organizational RM programs to build RM business cases, the recognition/advocacy of this value alone does not assist RM work in any concrete manner.

A record possesses Reuse-Immediate-Investigation Value when it is used by an Investigation-Related Activity, that is, an activity that requires records to be admissible in a court of law or an administrative tribunal for legal or administrative investigations regarding the records creating activity. The creating activity is now a Past Activity and the investigation activity is a Present Activity. As with the Reuse-Immediate-Accountability value, the Reuse-Immediate-Investigation value has the nature of reuse and is assessed in consideration of a Future Activity. It is not directly relevant to institutions’ operation, but may be significant to the protection of the rights and interest of the institutions. Associated with this value are thus the requirements for institutions to be legally compliant with, in particular, the order of electronic discovery

\[166\] The term directly is used to qualify the sentence because the results of litigations may in fact affect the regular operation of the institution.
and to satisfy the digital evidence rules. The occurrence of this type of Future Activity is typically unpredictable, even though the handling procedures can be designed and established based on the known legal/juridical environment. As a result, this value cannot be independently assessed for retention decisions. When the investigating activity takes place and a litigation/legal hold is issued to suspend the calculation of established retention periods, the Reuse-Immediate-Investigation value becomes the sole value by which the retention period of the records can be determined. As the investigating activity is now the present record creating activity, the Reuse-Immediate-Investigation value has become Record-Instrumental Value and the retention period for all records of the activity becomes the time defaulted by the completion of the litigation process. After that, records need to be re-assessed for retention based on their reusable value. Therefore, emphasizing this value alone will be unable to demonstrate the value of RM activities. Both Reuse-Immediate-Accountability value and Reuse-Immediate-Investigation value are embedded in, or co-exist with, Record Reuse-Immediate-Resource Value. A record possesses Record Reuse-Immediate-Resource Value when it is used by a Business Activity that is not its creating activity. The term resource in this context captures its meaning in the expressions of information resource, knowledge resource, and business asset, which is predominant in the study setting as well as in professional literature. The use of this term is intended to facilitate communication with practitioners. It is necessary to point out that, even when records are used as resources, they possess the unique characteristics of records (e.g., the archival bond) and are distinct from other types of

167 There are organizations where law suits can be frequent (e.g., investment banks), but this is not the typical situation in the study setting.
information such as publications, which can also serve as information/knowledge resources or business assets for Operational Activities. When a record is being reused by a Business Activity, the activity is a Present activity (which is transforming the document into its record) and the creating activity of the record becomes a Past Activity (which produced a record with reusable resource value). A Business Activity is an activity designed to achieve a specific, mandate-related institutional objective, thus, is not an Accountability-related Activity or an Investigation-related Activity. As such, it serves as the primary reason for records retention decisions. The assessment of this value can be rather precise in terms of the determined retention periods when the design (including modifications) of all Operational Activities of the organization is in place. The realization\textsuperscript{168} of the Reuse-Immediate-Resource value encompasses the realization of the Record-Reuse-Accountability value (in cases where there are no retention periods stipulated by legislation or regulations) and the realization of the Record-Reuse-Investigation value. In other words, the need for records to be retained for accountability- and investigation-related activities is subsumed by the need for records to be retained for business activities, as the legal/juridical system permits approved destructions of records that are based on justified business needs. A clearly identified and

\textsuperscript{168} The term realization was chosen for the coding because of its usage in the IT field, which focuses on demonstrating the detailed benefits it can bring to the organization. The intention is to emphasize that the RM profession should learn from other professions in particular IT in terms of realizing value in a concrete manner. Examples of using the term from Accenture and IBM: http://www.accenture.com/us-en/Pages/service-consulting-value-realization-summary.aspx (accessed October 19, 2012) and http://www.redbooks.ibm.com/abstracts/sg247934.html?Open (accessed October 19, 2012).
managed Record Reuse-Immediate-Resource Value therefore assists the institution’s preparation for legal compliance. In this sense, it is justifiable to emphasize the significance of Record Reuse-Immediate-Resource Value. However, it must be recognized that the realization of Record-Reuse-Immediate-Resource Value requires as a foundation the recognition and realization of Record Instrumental Value, which is not present in the study setting. Because of this absence, policy requirements do not distinguish the types of value and the relationships among them, causing difficulties to the development of pertinent, specific mechanisms.

The concept Record-Reuse-Distant Value includes three components: Record Reuse-Distant-Accountability Value, Record Reuse-Distant-Investigation Value, and Record Reuse-Distant-Resource Value, corresponding largely to the components of the Record-Reuse-Immediate Value, except that their realization takes place in an archival institution rather than a records creating institution. Like Record-Reuse-Immediate Value, Record-Reuse-Distant Value follows Record-Instrumental Value, but unlike Record-Reuse-Immediate Value, Record-Reuse-Distant Value is assessed through the conduct of Archival Appraisal.

The concept RM Nature is specified as indispensable (i.e., the management of records is part of any Operational Activity including RM Activity), professional (i.e., it requires specialized knowledge and skills), managerial (i.e., it includes the administration of personnel and technology in addition to records), institutional (i.e., it is conducted on behalf of the institution), dedicated (i.e., it requires dedicated personnel and technology due to the volume and complexity of digital records), and centralized (i.e., it aims to
control every record of the organization, regardless of its physical location). The concept is measured by the degree of recognition that the records creating organization possesses. The concept RM Value includes five components: RM Constant Value, RM Regular Value, RM Occasional Value, RM Recurrent Value, and RM Longer-Term Value, and is measured by the degree of recognition and distinction by the organization and the degree of demonstration by Organizational RM. Relationships exist between RM Value and Record Value. The RM Constant Value is demonstrable by realizing Record-Instrumental Value, the RM Regular Value is demonstrable by realizing Record Reuse-Immediate-Accountability value, the RM Occasional Value is demonstrable by realizing Record Reuse-Immediate-Investigation Value, the RM Recurrent Value is demonstrable by realizing Record Reuse-Immediate-Resource Value, and the RM Longer-Term Value is demonstrable by realizing Record Reuse-Distant Value.

3.1.2. RM Requirement-Oriented Knowledge & The Related

The understanding of RM Foundational Concept constitutes one specification of the concept RM Core Knowledge, which includes also understanding of the concepts RM Activity and RM Technology. RM Activity consists of RM Requirement-Oriented Work and RM Application-Oriented Work. RM Requirement-Oriented Work focuses on the development of requirements that impact the entire institution, including the design of RM Function, the construction of RM Policy Instrument, RM Procedure, RM Tool, Record Titling Guidelines, and RM Development Plan, the design of RM Performance Evaluation, and, as a prerequisite for developing these requirements, the codification of RM Conceptual Framework. RM Conceptual Framework consists of concepts, originated
from RM Requisite Knowledge & Skill, and relationships among these concepts, including interrelated (e.g., Record Purpose and Record Value), derivable (e.g., RM Nature from Record Nature), mutually exclusive (e.g., Reuse-Immediate Value vs. Reuse-Distant-Value), inclusive (e.g., Local RM = Unit RM + Employee RM + Technology RM), hierarchical (e.g., Operational Activity > RM Activity > Record(s) Maintaining Activity > Record Capture, multiple (e.g., Organizational RM > Local RM > = Unit RM > + Employee RM), and synonymous (e.g., Information Technology = Digital Technology). RM Requisite Knowledge & Skill encompasses RM Core Knowledge, RM Extended Knowledge (i.e., understandings of Non-RM Activity and Non-RM Technology), and RM Skill (i.e., the analytic, managerial, and technological techniques identified based on RM Core Knowledge and RM Extended Knowledge). The command of RM Requisite Knowledge & Skill enables an organization’s RM Functioning Ability. RM Functioning Ability is measured by the degree of adequacy with respect to the conduct of RM Activity, and as such, it serves as the most foundational condition for the success of an Organizational RM program. RM Conceptual Framework focuses on articulation, and this distinguishes it from RM Requisite Knowledge & Skill, which emphasizes understanding. RM Conceptual Framework is measured by the degree of precision, comprehensiveness, and coherence, and it requires maintenance to be consistent with the advancement of RM Requisite Knowledge & Skill.

RM Function Design refers to the conception of RM Governance Structure, RM Responsibility Arrangement, and RM Activity, and is measured by design adequacy with respect to the establishment of Organizational RM. An adequate RM Governance Structure should establish the following administrative relationships:
• Reporting relationship between Unit\textsuperscript{169} RM and Central RM;
• Reporting relationship between Employee RM and Unit RM;
• Reporting relationship between Technology RM and Unit RM;
• Reporting relationship between Unit RM and Business Activity;
• Reporting relationship between Unit RM and Accountability-Related Activity;
• Reporting relationship between Unit RM and Investigation-Related Activity;
and
• Reporting relationship between Central RM and the highest level of decision making body in the organization.

In addition, the administrative relationship between the Central RM and all other operational activities should be one that requires a joint responsibility for the conduct of those activities. In this structure, Unit RM, Employee RM, and Technology RM constitute the Local RM and, together with Central RM, constitute Organizational RM. Central RM refers to the independent administrative configuration to which adequate authorities are assigned for its operation. It fulfills the responsibilities as outlined in the RM Responsibility Arrangement and operates the Central Digital Records Management System (CDRMS). A CDRMS is part of Record(s) Maintaining Technology (of RM Technology), an information system that manages the records of Central RM (i.e.,

\textsuperscript{169} The choice of the term unit is suggested by its usage in the study setting where it refers to the various kinds of administrative configurations, including department, directorate, division, office, and programs.
records created by RM Requirement-Oriented Work). A Unit RM is structurally part of
the Organizational RM and also of a unit, an administrative configuration responsible for
a Non-RM Activity.\textsuperscript{170} It manages the creation and maintenance of records of the
Non-RM Activity and also of the Local RM, that is, that of the RM Application-Oriented
Work. It operates the Unit Digital Records Management System (UDRMS), which can be
designed to have either a one-to-many\textsuperscript{171} or many-to-one\textsuperscript{172} relationship with the records
creating activities. A UDRMS must be managerially, and is desirable to be
technologically, integrated with the records creating activity, and UDRMSs must be
managerially, and are desirable to be technologically, integrated with each other.
Moreover, UDRMSs must be managerially, and are desirable to be technologically,
integrated with the Central Digital Records Management System. Employee RM includes
two types of work: one which refers to the creation of record content that is in a manner
compliant with record-making rules and one which refers to the tasks of record
maintenance, such as record capturing and titling, which can be quickly completed. The
carrying out of Employee RM requires assistance from the Central RM in the form of a
detailed RM Procedure, including templates and supervision from the Unit RM for the

\textsuperscript{170} A unit may be responsible for a portion of an activity or for a number of activities, depending
on how the activities are designed and how the administrative structure is configured to
accommodate the design. Here the situation where one unit is responsible for one activity is only
one example and is used for illustration purpose only.

\textsuperscript{171} An EDRMS is the typical example of this type.

\textsuperscript{172} An example can be a complex activity that crosses the boundaries of many units or
institutions.
purpose of quality control. Technology RM refers to the technological capacity that enables automation of the portion of RM Maintaining Activity (e.g., capturing, titling, and classifying records), which is identified to accommodate the digital records reality and to take advantage of the development of information technology. Like the conduct of Employee RM, the carrying out of Technology RM requires detailed RM Procedures, including templates issued by the Central RM and supervision from the Unit RM for quality control. With all components established, Organizational RM manages all records of the organization. In concert with the Governance Structure, the RM Responsibility Arrangement should require that

- Central RM to be responsible for RM Requirement-Oriented Work;
- Local RM to be responsible for contributing (i.e., providing input) to RM Requirement-Oriented Work;
- Unit RM to be responsible for the conduct of RM Application-Oriented Work, including
  - The carrying out of all RM Activities assigned to it (e.g., Record Identification, Record Capture, Record Classification, Record Retrieval, etc.);
  - The ensuring of Employee RM quality; and
  - The ensuring of Technology RM quality
- Employee RM to be responsible for

---

173 This includes making decisions on not to manage certain records based on risk analysis, but no records should exist without any RM decisions.
o Capturing records;

o Titling records; and

- Technology RM to be responsible for

  o Capturing records according to pre-determined workflow and rules (i.e., auto-capturing), which, when enabled, replaces saving records into designated space by Employee RM;

  o Titling records according to pre-determined templates attached to pre-determined workflow and rules (i.e., auto-titling), an activity which, when enabled, replaces (fully or partially) titling by Employee RM; and

  o Classifying records according to pre-determined workflow and rules (auto-classification), an activity which, when enabled, replaces classification by Unit RM.

The design of RM Function and, in particular, the establishment of Organizational RM, determines RM Capacity. The concept RM Capacity consists of two components RM Personnel and RM Technology, which are measured respectively by establishment adequacy (i.e., the sufficient number of dedicated RM positions) and design optimization (i.e., pertinence to the achievement of RM objectives). RM Personnel must be recognized by the organization as RM Professionals, who possess the RM Functioning Ability as a qualification. The RM Technology is one type of Information Technology (i.e., relating to computers and the Internet) and a component of Organizational Information Technology, including, as two sub-components, Record Creating Technology and Record(s) Maintaining Technology. The Record Creating Technology is part of the
Non-RM Technology that is directly relevant to the creation of record,\textsuperscript{174} and the Non-RM Technology is the other component of the Organizational Information Technology, referring to the technologies utilized by Non-RM Activities, that is, the Business Activity, Accountability-related Activity, and Investigation-related Activity.

The Record(s) Maintaining Technology is the technology utilized by the Record(s) Maintaining Activity, including Business Process Management System (BPMS),\textsuperscript{175} which is useful for Record Identification, and Digital Records Management System (DRMS), which is needed for all the other Record(s) Maintaining Activities. The design and implementation of the systems require an understanding of both Non-RM Activity and RM Activity, a condition that facilitates technological optimization. The Digital Records Management System can be integrated with the Record Creating Technology to facilitate Record Capture. Depending on the configuration of the technologies, the DRMS technology may cause changes to the records documentary form which was originally determined by the Record Creating Technology, and this needs to be documented in the conduct of RM Maintaining Activities as part of Record Metadata. As one type of IT, the RM Technologies change in accordance with the changes in the IT field. RM Technologies are necessary for managing records in particular digital records and can be

\textsuperscript{174} For example, a database designed for the marketing activity of an organization is by definition a type of Non-RM Technology because its primary purpose is to achieve the business goals set for the marketing activity. However, the function of the database that is designed to generate reports regarding the various transactions of the activity qualifies as Record Creating Technology.

very complicated, depending on the types of records they aim to control. To be effective, the technologies have to be configured based on specific RM needs and the implementation has to fully enable RM Control. The advent of RM Technology for digital records creation and maintenance added new requirements to RM Professionals, who have to understand technologies in order to specify RM needs, communicate with the IT personnel, and operate Organizational Digital Records Management System.

The RM Policy Instrument refers to the mandatory policies, directives, and standards that regulate the RM Governance Structure and RM Responsibility Arrangement in the form of compliance requirements, with enforceable penalties for non-compliance. To be effective, they need to be comprehensive and clear. The RM Procedure transforms the mandatory compliance requirements into specific, executable work steps with instructions on when, how, and by whom they should be carried out. To be specific and executable, it requires input from RM Application-Oriented Work for development. Correspondingly, it is measured by the degree of executability with respect to the conduct of RM Application-Oriented Work. RM Tool consists of Records Classification Scheme (RCS), Records Retention (RR), and Records Disposition Authority (RDA). A RCS is developed to organize records by relationships and may contain or point to individual records, records classes, Record Metadata, and Records Class Metadata. The concept Record Metadata refers to recorded information about individual records that is intended for their identification, retrieval, and maintenance. Record Metadata take the form of discrete items and can be combined in accordance with defined rules to achieve a defined goal. Their development relies on the conduct of RM Application-Oriented Work, from Record Identification to Record(s) Disposition, indicating a continuous process of development.
When adequately developed, they facilitate the long-term preservation of records at item level.\textsuperscript{176} The Records Class Metadata refers to recorded information that describes the records classes in a Records Classification Scheme. Like Record Metadata, Records Class Metadata takes the form of discrete items, which can be combined according to defined rules to structurally present the description. The development of metadata about a class relies on the metadata of the records in the class, in particular the portion that describes the records. Records Class Metadata facilitates the retrieval of records at the class level.

The development of RCS needs to be integrated with Records Retentions, which facilitates the conduct of Records Disposition Activity. The relationships among records and records classes are determined by the design of Operational Activities; the structure of the RCS thus corresponds to the structure of the activity, which is generally hierarchical.\textsuperscript{177} As it aims to capture individual records (either actually or through pointers to their locations), it

\textsuperscript{176} Long-term preservation of records at item level refers to the technological maintenance of records with respect to their existence and accessibility. Long-term preservation of digital objects, including records, is itself an independent field, encompassing more aspects, such as planning, issuing policies, building systems, etc., than technologically maintaining the existence and accessibility of digital objects. One example of a strategy comprehensively addressing the long-term preservation of records is offered by the InterPARES project’s Chain of Preservation Model, and one example of focusing on preservation at the level of individual object can be the Library of Congress’ PREMIS (Preservation Metadata: Implementation Strategies) project. http://www.loc.gov/standards/premis (accessed October 19, 2012).

\textsuperscript{177} This does not suggest that hierarchy is the only type of relationship existing in the design of an Operational Activity. Other types of relationships, such as, parallel and conditional, may also exist. The emphasis here is the overall feature of the structure depicting the activity, that is, from general to specific.
relies on RM Application-Oriented Work for developing the lower level structure. In other words, the development of a RCS requires a joint effort from the Central RM and the Unit RM. As an indicator of Centralized RM, an Organizational RM has only one RCS. For a RCS to be effective, it needs to be comprehensive in terms of the coverage of Operational Activities or their records, to be accurate in representing the relationships between records and their creating activity, and to be current, that is, keeping abreast with the creation of records. The effectiveness of RCS relies on its implementation, which includes the deployment of the RCS using digital technology and the conduct of the activity of Record Classification (part of RM Application-Oriented Work). Utilizing digital technology for deploying a RCS is necessary due to the volume and complexity of digital records, and currently the most advanced technology for this purpose is the Electronic Document and Records Management System (EDRMS) or Electronic Records Management System (ERMS).  

The concept Records Retention consists of two aspects: scheduling, which is carried out as part of RM Requirement-Oriented Work by Central RM, and calculation, which is carried out as part of RM Application-Oriented Work by Local RM. Based on the results of RM Appraisal (and of risk analysis when warranted), scheduling sets up time periods (i.e., retentions) for records maintenance. Records should be individually scheduled along with Record Identification, and the individual retentions in a record class collectively determine the retention period of the class. The establishment of retention periods entails a joint effort

178 ERMS and DRMS (Digital Records Management System) are used as synonyms.

179 Retention calculation will be detailed when introducing the RM Application-Oriented Work.
by the Unit RM, which is responsible for individual scheduling, and the Central RM, which is responsible for synthesizing schedules for records aggregations and integrating retentions with the organizational RCS. Retention periods can be modified to respond to changes in appraisal decisions or to accommodate unusual events such as litigation. Like the RCS, retention rules need to be comprehensive, covering all identified records, and current, reflecting the present status of RM decisions. The concept Records Disposition Authority (RDA) is the mechanism employed by an Archival Institution to express authorization for records destruction and to prevent records loss. It is issued to records creating organizations based on Archival Appraisal; it is typical for one institution to have multiple RDAs. For RDAs to be effective, they need to be pertinent (i.e., respond to records types), comprehensive (i.e., cover all identified records), and up to date (i.e., stay current with records creation). This requires the existence of a current and comprehensive Records Classification System as a foundation. To obtain RDAs from the archival authority and to enable Archival Appraisal, records retention rules need to be established and integrated with the Records Classification System.

Record Titling Guidelines are developed to guide the construction of record titling templates, which are required to be in the format of structured place holders for content descriptive facets. The development relies on input from Record Identification, including knowledge of the technologies utilized by the creating activity. The concept RM Development Plan is specified by RM strategic plan and RM action plan. Their construction relies on the RM Conceptual Framework and the RM Application-Oriented Work, which jointly ensure the clarity and executability of the plans. The RM Performance Evaluation includes periodical review (e.g., annually) or on-demand audit (e.g., when
programs end or issues are discovered). The review or audit needs to be RM focused in terms of both design and conduct, that is, with scope and evaluation criteria centering on RM and RM Professionals as the reviewer or auditor.

3.1.3. RM Application-Oriented Work & The Related

The completion of RM Requirement-Oriented Work with effectiveness requires the conduct of RM Application-Oriented Work (the other component of RM Activity) as a necessary condition. The concept RM Application-Oriented Work includes Record Identification, Record(s) Maintaining Activity, and Record Retrieval Activity. The concept Record Identification refers to the determination of content, documentary form, and metadata of each and every record of an Operational Activity, on the basis of the achievement of objectives set by both the activity and the Organizational RM. The identification of metadata serves as a powerful mechanism for all subsequent RM Activities, including the management of vital records. When a vital status is identified in a record’s metadata, it permits the cycling of the status as either being renewed or removed. Record Identification relies on the recognition of Record Creation Purpose and Record Instrumental Value as fundamental to the conduct of all other RM Activities and ultimately

---

180 The code Record Identification was inspired by one of the major research activities of the InterPARES project, namely, diplomatic analysis. This activity assessed digital entities’ record status that the project investigated. Diplomatic analysis in the context of the InterPARES project is methodologically different from the Record Identification articulated in this section because first, it encompassed both the creation and maintenance environments of the digital entities being assessed and second, it was conducted in a retrospective manner as the digital entities were created before the research team started its investigation. As a core RM Activity here, Record Identification is advocated to be conducted along with activity design and project planning.
to the effective operation of the Operational Activity. The conduct of Record Identification requires the establishment of Unit RM with sufficient and dedicated RM Personnel participating in both the design and conduct of Operational Activities. The concept is measured by the degree of importance recognition, identification comprehensiveness, and identification quality.

The concept Record(s) Maintaining Activity consists of Record Capture, Record Classification, Record Titling, RM Appraisal, calculation of Records Retentions, Record Destruction, Records Transfer, Record(s) Long-Term Preservation, and operation of Unit Digital Records Management System. Record capture marks the beginning of record(s) maintenance as it embodies the identified record content, documentary form, and metadata in the form of a complete record. Record Capture is performed at the level of the individual record and needs to be accompanied by Record Classification and Record Titling. Capturing records can be managerial only, or both managerial and technological, and is measured by the percentage of captured records against all identified records. To managerially capture a record is to create (or associate it with pre-created) metadata about the record in the Unit Digital Records Management System (i.e., to establish intellectual control), where the identified record cannot be saved. This implies that the identified record exists physically in its originating technological environment with its archival bond.

---

181 The operation of the UDRMS in fact includes the other activities. They are separately listed for the purposes of explaining them individually and of emphasizing their status as key features of the system.

182 For example, a database or a large portion of a website.
The maintenance of such records would require the integration of a digital records management module (DRMM) with the Record Creating Technology for ensuring the records authenticity and permitting disposition. This way, Decentralized Records are RM centrally managed. To both managerially and technologically capture a record is to save the identified record and create (or associate it with pre-created) metadata for it in the Unit Digital Records Management System. This may result in two different scenarios, one which leaves a copy of the record in the record-making environment (e.g., Microsoft SharePoint) to allow local access, and one which leaves no copy of the record in the record-making environment and requires all subsequent accesses to take place in the Unit Digital Records Management System. Centralized Records are produced in the second scenario, which permits RM Maintaining Activities to be performed with efficiency and effectiveness. The issue with the first scenario is that the Reuse Immediate Value of the record is manifested in relation to the local access copy and not the record, and this requires the Unit RM to monitor the usage of the copy and add this information to the metadata of the record. Moreover, the Unit RM has to ensure that the copy is destroyed when the retention period for the record expires, regardless of the disposition decision for the record (i.e., destruction or transfer).

Except for the records created by RM Requirement-Oriented Work, Record Capture is carried out by Local RM and is desirable by Technology RM. To capture records by Technology RM involves auto-capturing, which requires foundational work by both the Organizational RM and IT. The captured records may be identical to or different from the copies in the record-making environment, depending on the complexity of the records, the different types of value they possess, and the RM solutions conceived to manage them.
differences must be documented, which can be in either the form of records of the capture activity or of record(s) metadata. The capture itself creates metadata additional to those identified as necessary for the records when they were in their originating environments. Record Classification refers to the determination of the location of individual records in classes of a Records Classification Scheme and is measured by the percentage of classified records against all identified records, the degree of classifying timeliness, and the degree of accuracy. To ensure efficiency and effectiveness, classification needs to be completed by RM Personnel in Unit RM and/or Technology RM under the guidance of RM Procedure. To classify records by Technology RM implies auto-classification, which, like auto-capturing, requires foundational work on the part of both the Organizational RM and IT. Record Titling is part of records classification and can be carried out by employee RM and/or RMT RM, with quality assurance from the unit RM. The activity of titling is measured by the percentage of named records against all identified records, the degree of description sufficiency (i.e., how many facets), the degree of description accuracy (i.e., pertinence to the content), and the degree of titling consistence among similar records. Being at the lower or lowest levels of a RCS, this type of work cannot be completed without having the details on records creating activities. In fact, when a step-by-step activity design is absent, no RCSs can be developed that is truly functional, that is, able to follow the way activities are conducted (grouped into functions in a function-based scheme), thus achieving the goal of reducing the burden of records classification.

Although RM Appraisal is not needed for records existing within the period of their creating activities (i.e., when they possess Instrumental Value), it may be performed at this time to permit the design and implementation of the records long-term preservation
Calculation of retention is typically planned, with specified triggers, but they can be suspended when needed (e.g., to respond to ATI requests or comply with e-discovery order). When retention periods expire, Records Disposition Activities then take place. The concept Records Disposition Activity includes two components: Records Destruction and Records Transfer. Records Destruction refers to the removing of records from the Organizational Digital Records Management System with the goal of disabling any possible recovery from the destructed records. Destruction relies on Records Disposition Authorities for authorization, which prevents loss of valuable records. Destruction is carried out at the level of records aggregation and is required to be carried out in a timely fashion. The effectiveness of destruction can be measured by the percentage of destroyed records against all records with expired retention periods that are not selected for transfer. The concept Records Transfer includes two aspects: Legal Transfer and Physical Transfer; in most cases, the two types of transfer are negotiated and take place together. Transfer refers to the moving of the custody of records from a records creating organization to an archival institution. Legal transfer involves the reassignment of the rights associated with records (e.g., ownership right, copyright, etc.) and physical transfer means the reassignment of storage location. The reassignments typically require legislative and legal support and can be effectively executed only with formal terms and conditions. Records Transfer should only be performed at the level of records aggregation, but the metadata regarding both records aggregation and individual records should be transferred. The concept Record(s) Long-Term Preservation—in the context of the creator—refers to

Long-term preservation takes place within the records creating instituting when records are needed for a time period longer than the life of the technology supporting the records’ existence.
the situation where records are needed by their creating organization for a time period longer than the existence of the digital technologies that support their management and use. The conduct of Record(s) Long-Term Preservation aims at continuing the RM Control after technological changes (e.g., system upgrade) and, as such, is measured by the percentage of records with continued RM Control after the technological change against all controlled records before the technological change.

The Record(s) Retrieval Activity refers to the locating of a record or an aggregation of records including the obtaining of copies of records. It relies on Record(s) Retrievability and is conducted typically by Employee RM and Technology RM in compliance with access/security rules. When the retrieval by Employee RM or Technology RM is ineffective, Unit RM should provide assistance by locating the records being requested and forwarding the access information to the requester. The Record(s) Retrieval Activity is measured by the time needed for finding the record(s), the retrieval completeness, and the retrieval precision. The Record(s) Retrievability refers to the development of access points/descriptive facets for both individual and aggregation of records. The development of Record Retrievability relies on Record Metadata enabled by Record Identification, and the development of Records Class Retrievability relies on Records Class Metadata enabled by Records Classification System. For both Record and Records Class Retrievability, the information regarding the location of records in Organizational Digital Records Management System must be included.
3.1.4. RM Extended Knowledge & The Related

The concept RM Extended Knowledge consists of two components: Non-RM Activity Knowledge and Non-RM Technology Knowledge, and is specified as additional to the RM Core Knowledge but equally important to the conduct of RM Activities. The component Non-RM Activity Knowledge encompasses the knowledge of business activity, accountability-related activity, and investigation-related activity, each of which is further specified as Business Activity Design Knowledge and Business Activity Execution Knowledge. The understanding of activity design is necessary for record identification, which is obtainable through the Unit RM’s participation in activity design. The scope of understanding is determined by the goal that the organization sets for the Organizational RM. For example, if the goal is to manage each and every record that the organization creates, then all activities need to be understood, and this, in turn, determines the level of understanding of the activity. When the goal is to manage each and every record, then the Unit RM needs to understand the activity to the level of each and every step at which records are created. As activities may change, the RM understanding of them needs to be renewed accordingly. The understanding of activity execution is necessary for the Unit RM to conduct RM Maintaining Activities and Record(s) Retrieval Activity including the supervision of Employee RM and Technology RM. Obtaining such understanding relies on the RM’s participation in the execution of the activity, working side-by-side with the players of the activities. Like the understanding of activity design, the scope and level of the understanding of activity execution corresponds to the goal set by the organization for the Organizational RM.
To participate in activity design and execution requires the understanding of the digital technologies employed by the activity, that is, it requires Non-RM Technology Knowledge, because of the ubiquitous deployment of digital technologies in today’s organizations, and their impact on records creation and maintenance. This requirement may seem to be difficult to satisfy due to the complexity of digital technology; it is, however, necessary. The current situation with digital records management is that either the RM Profession commits itself to command digital technologies as part of their expertise, or the IT (or even the business) unit decides to take on the challenges of digital records, while they may not choose to inherit the terms record or RM and indeed considers it a “new” field/discipline.\textsuperscript{184} The level of understanding of technologies is determined by the goal set by the organization for the Organizational RM and is limited, in most cases, to functionality (i.e., not the underlying coding of the software or the technical architecture of an information system).\textsuperscript{185}

\textsuperscript{184} The disappearing of records and RM in the Government of Canada serves as one (sad) example of the latter scenario.

\textsuperscript{185} It is necessary to recognize that, for certain records, the understanding of the technical architecture of an information/data processing system is necessary for Record Identification. For example, the understanding of data availability and the relationships among data fields permits the determination of record content (i.e., which types and instantiations of data need to be assembled) and documentary form (i.e., how the technology can make up the appearance of the assembled data and affix them to a medium). The understanding is thus necessary for satisfying both the business and RM requirements.
3.1.5. RM Control & The Related

The concrete results of RM Activities and the evidence-based demonstration of RM Value are both manifested in the achievement of RM Control. The concept RM Control refers to the existence of Record(s) Retrievability and Record Usability, and is measured by the percentage of controlled records against all identified records. The concept Record Usability encompasses the characteristics of records that are authentic, contextualized, and human readable. A record is authentic when, after creation, its content and documentary form remain unchanged,\textsuperscript{186} which ensures its authority in reuse. A record is contextualized when its archival bond is explicit or identifiable, which ensures the accuracy of its interpretation. An authentic and contextualized record can only be useful when it is human readable, that is, it survives technological obsolescence. The percentage of useful records against all of the identified records reflects directly the performance of the Organizational RM and ultimately the performance of the organization.

Appendix 4 lists the concepts in alphabetic order and Appendix 5 groups them in relation to RM major tasks.

\textsuperscript{186} The documentary form of certain records can be changed as long as the changes are planned or expected and are traceable (i.e., known to the RM program). This type of changeable documentary form is considered still a fixed documentary form, and when the changes are documented in accordance with RM rules, the authenticity of the record is considered ensured. For an in-depth discussion on fixed documentary form, see Luciana Duranti and Kenneth Thibodeau, “The Concept of Record in Interactive, Experiential and Dynamic Environments: the View of InterPARES,” Archival Science 6, 1 (2006): 13-68.
3.2. Hypotheses

This section presents the hypotheses formulated on the basis of the building block concepts, illustrating the relationships among the concepts. It starts with a list of high level propositions, which is then followed by narrative explanations.

3.2.1. High Level Propositions

- When Record Nature is *adequately understood* by the institution, the RM Functioning Ability, i.e., the command of RM Requisite Knowledge & Skill, can *adequately exists* →
- When the RM Requisite Knowledge & Skill adequately exists, the RM Conceptual Framework (part of RM Requirement-Oriented Work) can be *adequately codified* →
- When the RM Conceptual Framework is adequately articulated, the RM Function can be *adequately designed* →
- When the RM Governance Structure and RM Responsibility Arrangement are adequately designed, the Organizational RM can be *adequately established* →
- When the Organizational RM is adequately established, the RM Capacity can be *adequately determined* →
- When the RM Capacity is adequately determined, other RM Requirement-Oriented Work can be *effectively accomplished* →
- When the RM Requirement-Oriented Work is effectively accomplished, the RM Application-Oriented Work can be *effectively accomplished* →
• When Record Retrievability Activity is effectively accomplished and Record Usability is fully enabled, the RM Control, or the goal of the Organizational RM, is *fully achieved*.

• When the RM Control is fully achieved, all types of Record Value can be *fully* and *effectively* realized.

• When Record Value is fully and effectively realized, RM Value can be *fully* and *concretely* demonstrated.

• When RM Value is fully and concretely demonstrated, the justifications for RM Function Design can be confirmed.

### 3.2.2. Hypotheses in Narratives

Records have existed long in human society and are generally recognized as valuable to human conduct. Yet, their nature seems not to be understood as widely and thoroughly as one may think. The level of understanding of Record Nature directly impact the framework of their management – it is only by this understanding that a records creator can truly appreciate the different purposes of record creation and maintenance, the different types of use a record may have, and the different types of value a RM program can/should offer to the records creating organization. An organization can design its records management program based on this understanding rather than on influential technological trends. An organization’s understanding of the nature of record relies on the professionalism of its RM staff, which derives from its formal education in archival

---

187 The influence is evident with the government’s focus on “information resources” and “business assets”.

139
science. For an Organizational RM program to demonstrate its value, it must be equipped with RM Functioning Ability, that is, with RM Professionals. This will allow for the development of an accurate, comprehensive, and coherent RM Conceptual Framework, which illustrates both concepts and conceptual relationships, and acts as the foundation of all RM Activities.

The construction of the RM Conceptual Framework is of critical importance because, as a blueprint, it canvases the knowledge that is core to records management, as well as the extended knowledge related to handling digital records, and the skills necessary to implement the two types of knowledge. Guided by this framework, the RM Function can be designed with adequate authority (represented by the RM Governance Structure), logical division of work (represented by the RM Responsibility Arrangement), and specific job requirements (represented by RM Requirement-Oriented Work and RM Application-Oriented Work). Based on this design, a pervasive Organizational RM program can be established, one that is part of each and every Operational Activity, or acts wherever records exist. Due to the complexity of Record Creating Technologies in today’s organizations and the lack of tools that are able to integrate Record Creating Technology and Record Maintaining Technology in a cost-effective way, digital records may need to be decentralized, i.e., exist physically\(^{188}\) in the technological environments of Operational Activities as opposed to being within a Central Organizational Records Management System. Decentralization of records, however, does not imply decentralized RM. When Unit RM is in place, RM Application-Oriented Work (i.e., capturing,\(^{188}\)

\(^{188}\) This means that the servers and/or drives where the records are kept are in different units.
classifying, retrieving, etc.) can be either conducted or supervised by dedicated RM Personnel. As a Unit RM would be administratively part of the Organizational RM and the Unit Digital Records Management System under its control would be managerially (and perhaps also technologically) integrated with the Central Digital Records Management System, the management of decentralized records would be centralized.

Centralized RM aims at the control of individual records, not simply of the repository. To enable such centralized RM, RM Capacity needs to be determined with adequacy, that is, with sufficient number of personnel and necessary deployment of technologies. When adequate RM Capacity is in place, the design for RM Activities can be fully implemented. RM Requirement-Oriented Work can offer sufficient support to RM Application-Oriented Work, and RM Application-oriented Work can realize the goal of managing records at the item level and provide input to Central RM for refining the products of its RM Requirement-Oriented Work (i.e., the development of policies, standards, and tool).

When RM Personnel assigned for RM Application-Oriented Work possess RM Functioning Ability, they are able to identify records among all kinds of information. The command of RM Core Knowledge allows conceptual recognition of records regardless of technological variations, and the grasp of RM Extended Knowledge permits clear, specific representations of record content, appearance, and metadata. The foundation laid by Record Identification then permits RM-assisted records creation and high quality conduct of RM Maintaining Activities. In cases where the necessity/benefits of Record Identification is not recognized at the stage of activity design, retrospectively

---

189 The study indeed observed that the design of activities may be an issue in the studied
identifying digital records could be resource-intensive and time-consuming, especially when the records exist in complex technological environments. For organizations with limited resources, retrospectively identifying records may be practically impossible. Although risk analysis can be applied to such situations to determine the scope and level of retrospective records identification, the decision not to identify records early on has serious consequences for records maintenance. It is therefore critical for organizations to understand that to identify records at the stage of activity design is both cost-effective in terms of resources and performance-indispensable, as it facilitates the realization of Record-Instrumental Value. To identify records at the stage of activity design eliminates the need for change management with respect to digital records management. Change management techniques may still be needed when the activity is being re-designed with dramatic modifications. However, they would be needed for the entire activity, not separately for RM initiatives. As records identification would be conducted by Unit RM, which administratively resides with the activity, the RM Personnel and other employees would form one team and work side-by-side. This mutually-dependent relationship makes environment. Although the Treasury Board requires institutions to develop Program Activity Architecture (PAA) for budget allocation, from the publically available information, the PAAs are all at very high level, far higher than the level at which records are created. See TBS, The Programs of the Secretariat, for an example. http://www.tbs-sct.gc.ca/tbs-sct/abu-ans/tbs-sct/paa-aap-eng.asp (accessed October 19, 2012).


191 Many IT initiated projects failed due to the lack of recognition of the necessity of change management.
buy-in from either side a non-issue.

With records being identified at the item level, RM Tools and Procedures can all be developed at a level of detail that would allow for a comprehensive representation and step-by-step execution. The design of a Records Classification Scheme can be truly functional – more accurately, activity-compliant – and systematic, presenting individual records and aggregations of records in metadata-assisted contexts, thus forming a coherent whole. Such a structure not only captures the relationships that records possess but also facilitates record(s) retrieval by search or navigation. All descriptive facets in the names of the aggregations and records could be used as access points for search and, being the structure highly consistent with the design of activities, finding records by navigation would not need to start with the whole scheme but only with the portions pointed by the specific tasks. Navigating by following specific tasks rather than records locations eases the difficulty of finding records and reduces (or, in other words, increases the usability of) the reliance on human memory. In addition, because all descriptive facets are determined by the Organizational RM, based on analyses of Operational Activities, these facets constitute a set of controlled vocabulary, and can be used for more than RM purposes. For example, when consistently used, they facilitate communications about the organization either internally (e.g., during employee orientations) or externally (i.e., during press conferences), thus contributing to a culture that values the organization as a whole.

When all operational activities are diligently designed, RM Appraisal can be conducted at the same time of Record Identification, because the needs for records use and reuse as
resources are known.\textsuperscript{192} Retention periods therefore can be established for every identified record, which allows the collective retention period for an aggregation to be determined with a high level of precision. Because the collective retention period typically follows the longest one for the records included in such aggregation, the condition of not filing transitory records (i.e., those with short retention periods) into the aggregation needs to be satisfied. Transitory records are created everyday and they should be allowed to be removed from the workspace when not needed (assuming the existence of a pertinent RDA). Relying on the analytical results of Record Identification, transitory records can be explicitly labeled as such within the context of the activity, and managed in a way that separates them from official records. The Organizational RM can designate spaces particularly for transitory records and attach to the spaces appropriate (typically much shorter) retentions periods. This way, transitory records can be removed on a timely basis from the corporate records maintenance system. This removing of transitory records on a daily basis constitutes routine maintenance, which is necessary to complement periodic maintenance, that is, to destroy or transfer records by aggregation. The conduct of routine maintenance requires the identification of records to be precise in terms of the authority and value (i.e., its non-transitory status) a particular a record possesses.

When step-by-step execution is designed, automation of RM Maintaining Activities can be enabled. Under the control of RM Personnel records can be captured as designed and

\textsuperscript{192} This is not to suggest that the design, identification, and retentions are established once for all. On the contrary, they are frequently changed. What is emphasized here is the process, the work model that recognizes the need/benefits of working together. Frequent organizational changes are indeed another reason for the establishment of Unit RM.
classification can be instantaneous. When a RCS and the records it describes are current, all information needed by Archival Appraisal becomes available and Records Disposition Authorities can be issued with pertinence and currency. When records are managed by an Organizational Digital Records Management System, their physical instantiations are known to both the Organizational RM and the Archival Institution – the designated custodian, which enables transfer. When records are maintained routinely, they can be easily located and, equally important, useful, both within their creating organization and the archival institution. A record that cannot be found does not really exist and a record holding no usability is not worth retrieving. Only by establishing an Organizational RM with RM Personnel possessing the RM Functioning Ability can both records retrievability and usability be achieved.

The complete set of hypotheses is presented in Appendix 6, where the conditional relationships are displayed not only as linier but also circular and/or interrelated.

Figure 3 displays the work model for RM informed by the generated grounded theory, labeled as the Records Management Penetrating Model.
The next chapter presents the explanations on the IM crisis in the Government of Canada utilizing the emergent grounded theory.
4. Explaining the Information Management Crisis

In discovering theory, one generates conceptual categories or their properties from evidence; then the evidence from which the category emerged is used to illustrate the concept.193

4.1. The Root Cause: Lack of Sufficient Understanding of Record Nature

An insufficient understanding of Record Nature has directly resulted in the underdevelopment of RM Functioning Ability in the Government of Canada. The most representative indicator of this is the treatment of records as part of information without distinguishing adequately between these two concepts. Specifically, information is not defined, but simply used as a colloquial term, and the definition of record – “records are information … for business purposes, legal obligations, or both, regardless of medium or form”194 – is unable to identify record with respect to organizational operation because information in an organization can only exist justifiably for “business purposes”. IM(RM) policies or guidelines have never explained with sufficient specificity and clarity the creation process of records, that is, how records are made or received and kept in the processes of conducting operational activities, and in which manner they play their roles. For example, records are typically not associated with performance management and reporting or decision making, for which is the terms information or data that are exclusively used. This conceptual confusion surrounding record and information is at the


root of the ineffective establishment and conduct of IM(RM) in the Government of Canada.

4.2. Representative Symptom: IM as a Single Discipline

The first issue is the employment of the strategy that treats the areas covered by the term IM as the sphere of a single discipline. IM is defined to include “records and document management, library services, archiving, data management, content management, business intelligence and decision support, information access, information protection and information privacy”.\(^{195}\) By this strategy, TBS policy instruments, guidelines, and evaluation mechanisms, and LAC tools, as well as CSPS training courses, are all developed under the umbrella term of information management or IM, without, however, further breakdowns for the constituent parts of this overarching “discipline”.\(^{196}\) Records and RM are basically invisible in this IM-as-a-whole strategy, at both the government and departmental levels. Specifications for each constituent part are absolutely necessary for individual government institutions to follow the government-wide policies and

\(^{195}\) Ibid.

\(^{196}\) One additional example can be the CGSB-192.2-2009 Competencies of the Federal Government Information Management Community, issued by the Canadian General Standards Board. This standard includes two types of competencies, one called Behavioral Competencies and the other called Functional Competencies (IM is a function in the government). Throughout the standard, it is only the term IM that is used (for example, 6.3 Application, Implementation and Use of IM Rules, Tools and Resources), without specific requirements for any of the IM components identified by the TBS Information Management Policy. The usefulness of this standard is certainly in doubt.
guidance, and for employees to discharge responsibilities or to fulfill job duties with effectiveness. In the case of RM, to create and maintain records require analysis and decision making, which, in turn, requires record-pertinent specifics. *Lack of specific directions for IM(RM) related work is a common/ubiquitous problem* in the Government of Canada. This problem is evident as revealed by both disclosed and online data (i.e., departmental IM strategic and implementation plans as well as TBS MAF assessments).

TBS requires all departments subject to its IM Policy to produce IM strategic and implementation plans, which are evaluated as one of the operational aspects of the IM function. All departments were able to produce high-level strategic plans but many were unable to produce implementation/action plans. Moreover, most of the produced implementation/action plans were evaluated as unsatisfactory. These plans typically lack clarity, that is, they address IM as a whole, making it difficult if not impossible to discern information about the constituent parts, in particular, RM. These plans were inexecutable due to the lack of specifics for carrying out the concrete work. Because of the absence of recognition pertaining to the root cause, the solution for this unsatisfactory performance is typically to produce new plans. Producing high-level strategic plans is thus at the center of IM work in the Government of Canada, and the majority of the studied departments were able to obtain a higher than Acceptable rating (inclusive).

4.3. Representative Symptom: Weak/Non-Existent Digital Records Management

The second issue is the extremely weak, almost non-existent management of electronic or digital records.\(^{197}\) Digital records and digital records management (DRM) have never

\(^{197}\) For a more detailed account of the weak digital records management, see Sherry L. Xie,
appeared to have an official status in the government, and the universal deployment of
digital technologies has only added to the IM function the responsibility of managing
“digital information” and/or “electronic documents”. Despite the all-encompassing
definition of record that includes information “regardless of medium or form”, only
emails are somehow discussed as electronic records. Digital records created using
applications such as the MS Office Suite are typically called electronic documents, and
complex digital records, such as dynamic databases or websites/systems supported by
such databases, are not considered in any relation to records, but as “digital information”
that requires data management and web content management. Complex digital systems,
such as dynamic databases and websites, do require specialized care other than records
management, for example, the attention on data quality and currency as well as the ability
of presenting relationships among different sets of data, etc.; however, it must be realized
that, regardless of how different these digital systems look, they are expected to and
should function as records systems. The entire second phase of the InterPARES project
was devoted to dynamic and interactive records, and, according to the project, specialized
care for systems producing such records constitutes part of the job of records creation,

“Digital Records Management in the Canadian Government: A Strategy for ‘Success’,” The RIM

198 In some departments, the IM guidelines issued to employees refer to “information in your
personal folders” as “electronic records”. For example, the Department of Human Resources and
Social Development Canada.

199 The term electronic document or document is rarely defined in departmental IM policies or
guidelines. Even the ready definition of electronic document provided by the Canada Evidence
Act is not cited.
which is conceptually not different from using a typewriter to write a letter. The only difference lies in the different levels of technological complexity and capability, which should not cause the disconnection between records created by these advanced technologies and their management. In fact, because of technological complexity, records management in today’s digital environment needs to participate in records creation in a proactive manner, working with database specialists and website developers/administrators to identify records in those systems at the time when activities/programs are being conceived.²⁰⁰ In this sense, digital records management starts with digital records creation – just as paper records management includes record forms design. As all operational activities in an organization are records creating activities, all of them, and the technologies utilized by them, should be analyzed for identifying relationships with records creation and management. However, this understanding does not exist in the Government of Canada. In the Government of Canada, the appreciation of records has largely remained linked to paper, and, as a result, the RM

²⁰⁰ This “participation-in-records-creation” idea may sound familiar as the notion of “intervention-in-records-creation” was proposed and advocated in the early 1990s when the unprecedented challenges of managing electronic/digital records were recognized by the archival community. The ideas are the same in the sense that both recognize the volatility of this type of records, which serves as the justification for intervention or participation. They, however, differ fundamentally in the method of implementing the idea. The “participation” idea emphasizes that it is the organizational RM program that should assume this task, yet the “intervention” idea relies on archivists. As the discussion on the role of LAC indicates, relying on the archives to identify records is impractical, which, according to the present study, underlies the unsatisfactory performance of digital records management in government institutions. For details on the archival intervention idea, see Alf Erlandsson, “Electronic Records Management: A Literature Review,” http://www.wien2004.ica.org/en/node/30028 (accessed October 19, 2012).
function has not advanced with the proliferation of digital records in departments. On the surface this has caused the weakness or absence of the function of RM in departmental organizational charts, but more seriously, it has resulted in the lack of linkages between records and operational activities, including the technology that supports these activities. Associated with this phenomenon is the reversed IM/IT relationship.  

Since the early stage of its IM journey, the Government of Canada has been promoting IM as the focus of work and IT as its enabler, and this explains why IM precedes IT in the expression IM/IT. Yet this exists only in written policies. In reality, IT is the only visible constituent part of IM in IM strategic plans and departmental performance reports, the sole representative in IM/IT or even IM audits, and the real focus of IM work when there is any. This reality renders the emphasized importance of records and RM in the TBS IM Policy simply an empty slogan.

4.4. Representative Symptom: Lack of Understanding of Record Creation Purpose & Record Instrumental Value

An insufficient understanding of Record Nature also contributed directly to the insufficient understanding of Record(s) Purpose. In the Government of Canada, the goal of “recordkeeping” is to create, capture, and manage records as “a vital business asset and knowledge resource”, and this overlooks the difference in purpose between creating and

---


202 See Appendix 2 for numerous examples.
maintaining records. To create records by making or receiving and keeping them is for the purpose of carrying out an activity, while to maintain records, regardless of how long, is for the purpose of further action, reference, or evidence. The recognition of Record Creation Purpose is largely absent in the study setting, as no data has indicated that considerations for record creation in relation to activity design and conduct were in place.\textsuperscript{203} Although IM policy instruments require information management to be “integrated” with business needs,\textsuperscript{204} none of the institution-specific data demonstrated the existence of a sufficient understanding of the inter-relationship between the creation of records and the conduct of an Operational Activity – at least not to the level that the necessity of Record Identification is adequately recognized.\textsuperscript{205} In fact, the IM integration requirements were vague, utilizing the general, collective term “information”, thus

\textsuperscript{203} The exception found is that, for projects in some departments (e.g., PWGSC), records in the form of deliverables may be pre-identified for project management purposes. This is however different still from what is advocated here because not all records produced by the projects are determined, nor are the management requirements associated with them.

\textsuperscript{204} The “integration” requirement is also frequently termed as “alignment”. For a more detailed description, see Sherry L. Xie, “Digital Records Management in the Canadian Government: A Strategy for ‘Success’,” : 50.

\textsuperscript{205} The action of identification is in fact currently going on in the Government of Canada, under the leadership of the Library and Archives of Canada. The identification, however, aims at “information resources of business value”, not records. The discussion on “information resources of business value” will be presented in the last chapter in association with the Directive on Recordkeeping, issued by the Treasury Board in 2009. Because of the recentness of this Directive, it is not coded as data in the research process, under the consideration that institutions need time to implement the Directive. From the released records, only three departments mentioned the Directive, all in the context of making future plans.
ignoring entirely the differences in a business unit’s “information need” for a journal article or an internal report. Moreover, the requirements emphasize that it is the business unit that should take the initiative to identify information needs and then “bring” them to the IM(RM) unit for suggestions/advice on solutions. There was no data, however, indicating that integration – understood as the activity of systematically analyzing, identifying, and designing records creation in relation to the completion of operational activities – had ever happened.

Associated with the insufficient understanding of Record(s) Purpose is the insufficient understanding of Record Value. In the Government of Canada, the emphasis is exclusively on Record Reuse-Resource Value, that is, the value of records as informational resources and, accordingly, the value of IM as a resource management function. The Record Instrumental Value is entirely left out. Sufficient understanding of the Record Instrumental Value would guide the recognition of the necessity of RM participation in records creation, that is, to conduct Record Identification. The participation in records creation permits RM to identify each and every record that the organization creates or should create for all Operational Activities, to develop RM Tools and RM Procedures with sufficient specifics for the operational steps by which records are created, and to switch on mechanisms for ensuring record quality at the moment of records creation. RM participation in records creation has been reduced to almost null after the wide deployment of personal computers in organizations, which permit employees unprecedented freedom for dealing with “their” records.  

206 It is now the time

---

206 It appears that the Government of Canada encourages employee ownership of records. In the
to re-emphasize that record identification is the indispensable first step of the records lifecycle management process, which impacts each and every subsequent step, as well as the overall results of RM. This recognition invalidates the notion of IM(RM) as a resource management function that is comparable to financial or human resource management. Unlike financial or human resource management, RM cannot afford to take any distance from records creating activities: it is part of each and all activities in an organization, including those concerning financial management or human resource management. RM concerns not only the management of records as reusable resources, but also, and more fundamentally, the management of records as instruments of Operational Activities. What is also absent (or at least only unclear) is the recognition that Record Instrumental Value is the foundation of all types of Record Reuse Value.

Except for the existence of an overall statement that records are “knowledge resources” or “business assets”, a clear understanding of the Record Reuse Value - in terms of the corresponding and transformative relationships between the different types of value and the different types of activities - does not exist in the Government of Canada. This has affected adversely the Organizational RM’s ability of realizing either Record Reuse Immediate Value or Record Reuse-Distant Value. Because the realization of the Reuse-Distant Value is outside the records creating institution, legislation has to be enacted to enable reuse activities. In other words, without legislative support, the realization of Record-Reuse-Distant Value could be difficult, due to the fact that it

__________________________________________
IM Basics developed by the Treasure Board (2009), the expressions “your records” and “your information” are excessively used.
requires close cooperation with records creating institutions and it relies on the work of Organizational RM, it, however, does not contribute directly to the institutions’ operation.

It must be pointed out that, depending on the formulation of the legislation, the legislative support for realizing Record Reuse-Distant-Value does not necessarily assist RM Activities.

4.5. Representative Symptom: Insufficient & Ineffective LAC Support

In the Government of Canada, archival legislation (i.e., the enabling act for LAC) focuses primarily on preventing unauthorized destruction (i.e., without the consent of the archivist) and stipulates on RM Activities in a nominal manner only (e.g., one provision in the entire act). RM Activities are left to the records creating institutions, which, however, do not have RM dedicated legislation to rely on. Although the TBS Information Management Policy mandates the operation of departmental IM functions, it relies on LAC for “functional guidance”, which it does not sufficiently provide for digital records management. When this is the case, the prevention of unauthorized destruction is practically meaningless because the poor quality of records hinders Archival Appraisal and the Reuse-Distant Value of transferred records is compromised. In light of this, the relationship between records creating organizations and the archival institution requires re-consideration.\textsuperscript{207} In a time when paper records predominated, the greatest help that an archival institution could provide to a records creating institution was to offer

\textsuperscript{207} For a discussion relevant to the role of national archives in digital records management, see Sherry L. Xie, “National Strategies for Digital Records: Comparing the Approaches of Canada and China,” \textit{International Journal of Information Management} (accepted).
management for its semi-active records (i.e., those less frequently used), allowing them to be removed from the office area and to be stored in an inexpensive repository. This helped the bottom line of the institution and was greatly appreciated. The archival institution also offered courses to departmental RM Personnel on the management of active records (those frequently used), including the provision for guidance on common RM Tools, which, to a certain degree, ensured that records were managed as expected by the archival institution in terms of records quality. This assistance was and is, however, inevitably limited. As stated by the LAC, with reference to the Legacy Business Records Project, “[t]he plan and costing templates are guides not answers. They help you think your way through the process. Only you can develop the answers that are right for your institution.”

The advent of digital records has further limited this assistance. The records creating organizations do not now have the same level of pressure as before regarding their paper records storage, and what they need are solutions – pertinent and effective ones – for addressing the challenges brought by the volume and complexity of digital records. LAC, however, is unable to provide such solutions because the technologies used by departments to create records are typically much more complex than those available to the archival institution. Therefore, for archivists to offer guidance on and provide tools for digital records management, they need to go into the departments and study their operations, including technologies. The traditional set up of an archival institution does not readily permit this, because its primary responsibility is not RM but the preservation and provision of access to “records with enduring value” under its

custody. This task has increasingly become impossible due to reduction in resources and growing system complexity. As a result, LAC now has neither the capacity (i.e., the time to be spent within the records creating organization) nor the ability (i.e., the archivists’ understanding of the record-making technological environment) to assist Organizational RM programs, despite the fact that this remains its legislated responsibility. Moreover, the management of digital records in LAC may be itself an example of poor quality: the operation of the digital records management system in LAC is the worst among the departments to which the author paid a physical visit. The conceptual confusion exhibited in TBS policy instruments are indeed originated from LAC guidance, which typically does not provide clear definitions for key concepts and does not differentiate their usages in application. For example, the LAC guidance to departments called “Records and Information Life Cycle Management” provides no definition for information and no explanations for the relationship between information and records, and uses the terms “classification for Records Management” and “classification for Information Management” without differentiation.\(^\text{209}\) Because IM in the GC includes library services, this indiscriminating usage seems to suggest a classification system for records can be equated with a classification for books. This Guidance also uses extensively the term “IM practitioners” in association with job fulfillment; without, however, making it clear to whom it refers or by what criteria they can be distinguished from “IM Specialists”. The effectiveness of such guidance is certainly in doubt. To confirm this observation, none of

the institution-specific data, including site visit data, demonstrated the reception of any effective assistance from the archives. As indicated by the records released by the Department of Natural Resources Canada, it is currently cooperating with LAC on a project called NRCan Recordkeeping and Disposition Authority Project, which required LAC to assist the identification of digital records produced by the Department. As stated earlier, the identification of digital records constitutes the most time-consuming task of RM work, as it requires an adequate understanding of both the Operational Activity and the technologies used by it. The time spent by the archivist onsite (i.e., in the Department), however, is two hours maximum per Branch.210 This is entirely inadequate. Perhaps, the relationship between the archival institution and the records creating institution should be reversed in today’s digital records environment. The archival institution should withdraw from the duty of assisting digital records management in institutions211 and, instead, should join forces with the organizational RM programs to raise the profile of RM and to advocate its importance. By the same token, the departmental RM programs should realize that they can no longer rely on the archives for assistance and that they can now

210 The project was indeed mainly conducted by a consulting company.

211 The idea of archival institutions in the public sector not to focus on “the entire spectrum of information management” in government organizations was expressed by John McDonald in 1993, who advocated for the archives to “consider focusing their energies on providing advice on those policies, standards and practices which address the management of corporate memory”. It is unfortunate that this advice seemed to have not made any influence on the IM/RM practices in the GC – both the TBS and individual departments still rely on LAC for guidance and assistance. See John McDonald, “Archives and Cooperation in the Information Age,” Archivaria 35 (Spring 1993): 110-118.
rely only on themselves – that is, on RM professionals that are equipped with renewed and advanced abilities.

4.6. Representative Symptom: Missing Part of Departmental RM Activities

Without the recognition of Record Instrumental Value, the RM Constant Value cannot be demonstrated, and this has caused, in turn, the limited establishment of the GC IM(RM). Without sufficient elaboration of the relationship between Record Value and RM Value, it is difficult to justify the establishment of an Organizational RM that presents a strong Governance Structure, an adequate RM Capacity, and a close collaboration with operational units. In the current GC IM situation, the establishment of departmental IM(RM) functions typically lacks authority, RM personnel, and necessary RM technologies; in other words, it is limited to the part of RM(IM) Requirement-Oriented Work and does not have the part of RM Application-Oriented Work. The establishment, therefore, is not in conformance with RM Nature, which requires an Organizational RM to be truly organizational (i.e., it manages records on behalf of and for the organization, not individual employees or units), dedicated (i.e., with a sufficient number of full-time RM Personnel), and professional (i.e., RM Personnel are all qualified RM Professional). The specific indicators are the imbalanced work division and the unreasonable responsibility arrangement between the IM(RM) program and the rest of the organization. With this model, the “IM Specialists” are unable to acquire sufficient RM Functioning Ability for accomplishing RM Activities\(^\text{212}\) and the part of the RM Application-Oriented

\(^{212}\) It is worth pointing out that the lack of knowledge and skills needed for managing digital records had long existed in departments. According to John McDonald in 1995, a senior manager
Work is left to operational managers and employees, including the most important task of Record Identification in the digital environment and the most time-consuming work of classification.\textsuperscript{213}

Digital records identification needs to be conducted in relation to Operational Activities and in a manner that is systematic and thorough. As such, it can only be conducted by Local RM as part of RM Application-Oriented Work as it is out of the reach of the RM(IM) Requirement-Oriented Work. The RM(IM) Requirement-Oriented Work in GC focuses on developing policies and guidelines, and, when sufficient resources are in place, some training. The non-existence of RM Application-Oriented Work by Organizational RM caused the lack of systematic identification of digital records, which, in turn, has made all the other aspects of RM groundless. As two most noticeable indicators, the

in one department “established parallel units of expertise to deal with the records and information access/retrieval issues because he could not rely on his own records management and library staff”. What this manager hoped for is that “the librarians concentrate on developing flexible and relevant access and retrieval strategies across all domains (records, information, data)” and “the records management staff could extend their knowledge of what it means to keep records (i.e., provide context) to help other communities (e.g., librarians, data managers, etc.) ensure that when information is provided to users, that it can be understood and authenticated in terms of the activities and circumstances (i.e., context) that gave rise to its existence”. This hope, unfortunately, remained largely still a hope, as confirmed by McDonald ten year later and by the present study, almost another ten years later. See, John McDonald, “Managing Records in the Modern Office: Taming the Wild Frontier” and John McDonald, “The wild frontier ten years on”, in McLeod, J. and Hare, C., \textit{Managing electronic records} (Facet, London. 2005), 1-17.

\textsuperscript{213} In the words of the IM Specialist of the Canada Revenue Agency, “we don’t manage operational records”. And in the case of the Correctional Service Canada, the EDRMS was implemented to be used by “the operational side”, to which the IM Division does not have access.
conduct of IM(RM) Requirement-Oriented Work has been ineffective and the implementation of RDIMS has been unsatisfactory. Without records being identified and the RM Application-Oriented Work being professionally/effectively conducted, the policies and guidelines produced by the IM(RM) Requirement-Oriented Work are only words: they produce no measurable value. It is common that the implemented RDIMSs – regardless of technological configurations – have failed the goals for which they were put in place. These costly initiatives typically resulted in low user take-up (i.e., the ratio of the times of user access to the system against the number of licences granted to system users), system abundance, and/or replacement with new systems.²¹⁴

Records Classification,²¹⁵ in most departments, is left to be carried out by employees

²¹⁴ The Department of Fisheries and Oceans Canada and the Department of Health Canada can be two examples of “spotty” or “poor” user take-up of the RDIMS implement. In the case of the DFO, the system was asked to be removed because employees considered the implementation had had a “negative impact on business effectiveness”.

²¹⁵ Records classification, including the development of an organizational RCS, is currently a serious problem in the Government of Canada. A summary of the aspects of the problem includes 1) no existence of a RCS, 2) out-of-date RCSs, 3) no implementation of a RCS, 4) inconsistence of RCS implementation, and 5) no integration with records retentions. The ineffectiveness of the RCS is also reflected by the issues with Info Source, which has been constantly rated by MAF as lacking comprehensiveness and accuracy in describing activities and the records associated with them. Even the Department of Public Safety Canada, which claims to have a PAA-based RCS, received in MAF VII an unsatisfactory rating regarding its Info Source. The TBS comment is that “A significant portion of the organization’s information holdings have not been appropriately identified or described in Class of Record descriptions”. Info Source can be both comprehensive and accurate when a comprehensive, detailed, and up to date RCS is in place as all the information required by Info Source can be supplied by the RCS.
who are not RM professionals. This is evident with digital records and in the environment of RDIMS. It is, however, not the type of work that should be assigned to employees because of the time and skills entailed. Classification is time consuming, due to the high volume of records and can be complex due to the nature of subject analysis. Regardless of how a Records Classification System/Scheme (RCS) is constructed (i.e., utilizing subject- or function-based methodology), the analysis of subject matter is always required to code a record for item level retrieval. The difference between a subject-based RCS and a function-based RCS lies only in how and when the subject analysis takes place: the former typically uses subjects at a higher level, and the latter uses subjects at the lowest level, that is, in the titles of the records. The function-based (or functional) RCS is thus considered easier for users to follow. Among all the departments investigated, only three stated that their RCSs were function-based, yet none of them relied on the methodology developed by LAC in 2006 for developing function-based RCSs. According to the released copies, however, none of the schemes went down to the level of workflow or the steps where records were created. Furthermore, the names of functions and activities are simply used at the higher levels of the scheme, without presenting relationships between the functions, activities, and transactions. In the process of obtaining records as data for

216 The methodology is termed as BASCS (Business Activity Structure Classification System) and was developed with input from the Australian DIRKS methodology. Informants in some department (e.g., Health Canada) indicated that the methodology for their departments’ construction of a function-based RCS would most likely be the DIRKS (through the hiring of RM consultants), not BASCS. For more information on these two methodologies, see Sherry L. Xie, “Function-based Records Classification Systems: A Comparative Study,” http://www.armaedfoundation.org/pdfs/Sherry_Xie_Study.pdf (accessed October 19, 2012).
the present study, the three departments, along with the absolute majority of the study sample, had difficulties in retrieving records. Only the Canadian Security Intelligence Service (CSIS) and the Privy Council Office (PCO) had no problems finding records because the CSIS classifies every record created, including emails, and the PCO relies on dedicated RM personnel for classifying records – even though neither of the two institutions claimed their RSCs were function-based. This confirms the premise that classifying records requires sufficient resources and qualified specialists, and this requirement is still valid in the situation where a digital records management system/ERMS is implemented.

Compared to the implementation of a RCS in the shared drive, an ERMS is able to implement a RCS in its hierarchic structure (which facilitates navigation) and to assist classification by providing a drop-down list with classification codes and scope notes explaining them. However, classifying records is still the biggest challenge affecting the effectiveness of such systems\(^\text{217}\) and the main reason for user resistance. User resistance causes a low rate of take-up (as mentioned above, this is the number of actual users of the system vs. the system capacity). In the case of the Department of Foreign Affairs and International Trade, the system implementation team invoked the measure of freezing the shared drives that had previously served as “recordkeeping repositories” to facilitate the use of the system. It was soon found out, however, that the number of records in the

system stopped growing shortly after the surge that occurred when the shared drives were first frozen. User resistance resurfaced due to the heavy workload. The most common, mainstream solution to the issue of user resistance is change management, which focuses on increasing employee buy-in through enhancing communications with users and engaging them in the planning phase (part of the regular IM work of IM awareness and training). These measures, however, are not pertinent to the issue of greatly increased workload, and even the award-wining training programs yielded little results in improving the quality of IM work conducted by employees. User buy-in does not produce more work time or the skills needed for professional classification; the agreement to participate is thus easily offset by everyday work pressure. The only apparent method for reducing user resistance when introducing new technologies is to allow users to do less (e.g., by offering powerful search tools) or to do what they are willing to do (e.g., tagging to their like), and this is the solution currently employed by the Department of Natural Resources Canada. The Department reported to the Office of Information Commissioner that it had a strong IM infrastructure, which enjoyed high employee take-up and greatly facilitated records retrieval. This “strong” infrastructure


219 The Department of Transport Canada and the Department of Natural Resources Canada had reported on their award-winning IM training programs. In fact, relying on employees’ IM awareness for improving IM work has long proven ineffective, as the IM audit conducted in 1998 by AANDC indicates.
features a wiki-style portal with Google style search. It is therefore easier for employees to find “records” because, compared with the situation where “records are all over the place” and “there are an unknown number of servers”, records are now centralized. In addition, as the portal was recently implemented, records saved into it are current, and being current means that they are still in the memories of the employees who saved them. Because of the existence of memories, records can be located even in situations where the tags that the employees created make sense only to them and not to anyone else. In fact, the more unique (or odd) a tag is, the higher the level of search precision will be. This, however, accommodates only the needs of these individuals and only for a short time period, which is not intended or desired by the institution. The issue is that when professional classification is not implemented, such portals are highly unlikely to be effective for information searches in the long run, let alone for performing authorized destruction and contextualized transfer. In fact, neither the Department’s ATI performance nor its MAF rating for IM Practice is strong.

To enable employee classification, time needs to be allocated in addition to employees’ regular work hours, and training needs to be offered. No justification was found in

---

220 The reliance on human memory – as opposed to memory enabled by records – is a common practice in departments, despite the long history of RM as a program in the Federal Government. The ATIP analyst in the Department of National Defence stated that “if an experienced employee (i.e., one who remembers where the records are) cannot find the records, then the records cannot be found”. The statement that “the person who worked with the file you are asking for has left the department/agency” appeared to be the second most frequently cited reason for institutions’ inability of finding the requested records. The first and the most frequently used one is that “you are asking for too many records”.

166
released records as to why employee classification is more economical than RM personnel classification, or on how the quality and effectiveness of employee classification can be ensured. In the case of the Department of Public Safety Canada, the implementation team (which also prohibited the continued use of shared drives) reported that there was a steady growth of records in the system, yet it did not report on any evaluations on the accuracy of records classification or even whether or not the records were classified. The account of records in the system was the only criterion for the after-implementation evaluation. The Government of Canada began its implementation of a digital records management system as early as the 1990s, yet, after these many years,

very few departments are proud of their RDIMS implementations. The requirement for employees to classify records proves to be the predominant reason. There may also be the reason of dysfunctional system configuration, as in the case of LAC, where the system crashes every time more than ten users try to log on, and where it works properly only when three users are active. However, this reason should not be considered as predominant for the failure of RDIMS implementation, since there will always be solutions for technological malfunction. The issue with LAC is that there is not even a classification scheme implemented in the system, and when asked whether there was a RCS established based on BASCS (Business Activity Structure Classification System), the methodology of constructing function-based RCSs that the institution developed and recommended to be used by all GC institutions, the answer was, “No. There isn’t one”.

Among the departments that the author visited (i.e., the Treasury Board of Canada, the Library and Archives of Canada, the Department of Public Works and Government Service Canada, and the Department of Agriculture and Agri-Food Canada, AAFC), only the AAFC proudly demonstrated its RDIMS. According to the informants, the success of their system is attributable to the support from the senior management, the administrative structure of the IM Division (which facilitates cooperation with IT), and the control over the system by the IM Division.

Employees in general enjoy many of the functionalities provided by the system such as search, creating their own workspaces, controlling versions, etc. When classification is carried out by RM personnel, the system may be quite successful. A case in point is the implementation of an EDRMS in the Canada Deposit Insurance Corporation, where employees enjoyed the convenience and autonomy that the Electronic Document Management System (i.e., Microsoft SharePoint) offers without being required to classify records according to RM rules. The records are declared, captured, and filed into the ERMS component by RM personnel, entirely invisible to employees.

The observation was gained in April, 2011, when the author was visiting the institution.
The released records showed that there were many discrete, piecemeal efforts toward the improvement of the system; yet, no records indicate that a comprehensive plan was being developed. According to the informants, the most feasible solution would be to abandon the existing system and purchase the MS SharePoint.

The argument that employees are the best candidates for carrying out classification because they are the ones that understand the work best does not in fact hold up. This is because first, depending on the nature of the work, records created by certain types of activities may contain a variety of subjects, which then requires time-consuming analysis and cross-referencing, and second, when high employee turnover is the norm, the required familiarity with the work for quick classification will be out of many employees’ reach. It is rather common that, due to the lack of professional RM, new or rotated employees cannot find or make sense of the records left to them by their predecessors and end up re-creating records from scratch. Despite the fact that even RM practitioners are now stating that, in the digital world (in particular the ERMS environment), “we are all filing clerks now”, and that employees seem to all have their own ways of handling “their records”, the quality of classification can only be ensured by dedicated RM Personnel who qualify as RM Professionals. The only method that may free RM personnel from daily, routine classification is auto-classification, an indicator of seamless

---

225 Employee rotation is a common practice in some departments such as the Department of Foreign Affairs and International Trade Canada.

integration between records creation and records maintenance. Its effectiveness, however, depends on the availability of detailed Operational Activity designs and in-depth RM analysis. The more specific the analysis is, the higher the automation level can be. Neither the intellectual analysis of the Operational Activities, including the identification of records, nor the technological capacity of integration, are however simple tasks.  

Nevertheless, this should be the direction towards which an Organizational RM should move. Records auto-classification cannot rely on computer analysis of subjects, at least not with the currently available technologies.  

The issue associated with ineffective classification is the out of date Records Disposition Authorities. To have pertinent and current RDAs is currently one of the most challenging tasks facing both the GC institutions and LAC. To appraise records for issuing a RDA, the archivist needs to understand the records in terms of their origins and the services they offer to the organization. The most effective method of obtaining such an  

\footnote{The complexity associated with the analysis of operational activities including the identification of records are exemplified by the research of the InterPARES project, and the complexity associated with integration technologies for business process management is evident in the IT literature, see, for example, James. F. Chang, Business Process Management Systems: Strategy and Implementation.}  

understanding is to access a comprehensive and activity-compliant RCS, as well as the
decisions of RM Appraisal that are reached based on a sufficient understanding of
Operational Activities. Such quality RCSs and appraisal decisions do not exist in the GC
institutions, where records are largely under the control of employees, including the many
institutions where an RDIMS or RDIMS is implemented. Records are thus “all over the
place”. 229 In the case of the Department of Health Canada, records (both paper and
digital ones) were found in all possible places, including washrooms, because, according
to the Department, it cannot find any more storage for records, and it does not have all
necessary RDAs for records destruction. Another example comes from the Canada
Revenue Agency where a search for the keyword “RDIMS” by employees, identified as
relevant for responding to the ATI request, returned “18 thousands” hits due to the lack of
timely disposition. LAC blames the records creating institutions for not providing a
sufficient foundation for its archival work, and the records creating institutions complain
about the archival institution for too long a waiting period for them to receive a renewed
or new RDA. 230 The lack of current RDAs is also reflective of the fact that the legitimate
reason that “the records that you are requesting were destroyed in xxx year under xxx
RDA” was not used in responding to the author’s ATI requests by any of the institutions
except the Privy Council Office.

229 This expression occurred numerous times during the conversations that the author had with
ATIP analysts or IM personnel.

230 According to the records released by the Department of Natural Resources Canada, the
memorandum between the Department and LAC for renewing its RDAs cost more than six
months for preparation.
The transfer of digital records, in particular the complex ones, is currently not happening in the Government of Canada. As the same with destruction, the transfer of records requires quality RM as its foundation, that is, records (at least) need to be known to the RM program and the archivists in order to be selected and transferred. As revealed by the Office of the Information Commissioner of Canada, institutions do not know what records they have and where they are, which causes difficulties in responding to Access to Information requests. This observation is confirmed by the present study, which requested records from the IM(RM) institutional units concerning their activities and experienced difficulties in receiving records. The IM(RM) units are mandated to manage (or to provide guidance for other units to manage) records, yet they learned that locating and retrieving records of their own were no easy tasks. According to the informants, it is getting harder and taking longer to find records, and sometimes records that are still useful to the creating institution cannot be found. The issue of losing control over records was also confirmed by the most recent round of MAF assessments, which revealed that many institutions did not have a complete “inventory of structured or unstructured repositories”. In fact, among the twenty-one institutions assessed by this round of MAF, and to which the author sent ATI requests, only two (i.e., the Department of Transport Canada and the Canadian Security Intelligence Service) satisfied this requirement.

4.7. Representative Symptom: RM(IM) Distant/Passive Work Model

Accompanying this reliance on operational employees for RM Application-Oriented Work is the notion that IM is an internal service (hence the expression “IM and its clients”). This work model makes departmental IM(RM) programs excessively passive in...
that they only provide assistance to managers and employees for their conduct of RM related work, and the services are provided only when the “IM Specialists” are being asked. In an environment where records are predominately under the control of individual employees or business units, it is not considered necessary for them to ask for guidance or assistance, as this is, in their opinion, irrelevant to their methods of managing information. These non-“IM Specialists” are unwilling to spend time on work that they do not consider to be theirs, which results in classifying/profiling records being the primary source of user resistance. To reduce user resistance, many departments removed the mandatory classification requirement, including the TBS, while others never established one as they learned “best practices” from other departments. Without standardized, consistent classification, RM Maintaining Activities, such as destruction and transfer, suffer, and search and retrieval are ineffective. This distant, passive work model fundamentally violates the nature of records and contradicts the TBS’s own assertion that IM is integral – therefore not external – to departmental activities. As the provision of services relies on initiatives taken by business units or employees, the IM(RM) function adds no value at all to departments when business units or employees do not require any services, which is typically the case. An example in point is the non-participation of RM(IM) in the ATI administration. In handling ATI requests, the ATI unit is responsible for identifying request relevance with the “program area”, and the program area, called OPI (Office of Primary Interest) in the Government of Canada, is responsible for finding records capable of responding to the inquiry. The IM(RM) function is not part of the process. In the words of the ATI analysts who answered the question “does the IM unit help with the ATI unit in handling requests?”, “No. The IM people don’t help. They never
have”. Because of this passive work model, the internal service status of IM has become a source of budgeting challenge for many IM(RM) programs. IM(RM) initiatives typically need to require a special budget, which is outside the regular budget allocation for operational activities. To request a special budget requires a business case to be made demonstrating connections with operational activities and with the “strategic goals and outcomes” of the department. As internal service functions are not considered mission critical, IM projects can be delayed, even though the business case may be adequately built. In situations where a budget cut is inevitable, the IM(RM) program is always the first function to be reduced or eliminated. It seems that it has never been able to compete with other internal services such as the financial management or human resources management, despite the fact that information is emphasized as the government “lifeblood”\footnote{TBS, “Information Management in the Government of Canada: The Business Problem Assessment,” http://www.tbs-sct.gc.ca/im-gi/resources/bpa-epo/bpa-epo02-eng.asp (accessed October 19, 2012).} and “strategic asset”.\footnote{TBS, “Information Management in the Government of Canada: The Vision,” http://www.tbs-sct.gc.ca/im-gi/resources/tv-lv/tv-lv02-eng.asp (accessed October 19, 2012).}

From another angle, the current IM(RM) work model is inappropriate for operational managers and employees, who are required to take on an apparently very heavy RM(IM) workload. The IM policies in some departments emphasize so excessively the IM responsibilities of the business managers and employees that the responsibilities assigned to the IM Specialists appear to be the fewest, as demonstrated by the records of the Canadian Food Inspection Agency and the Department of Human Resources and Social 

---


Development Canada. In the case of the Department of Canadian Heritage (PCH), the emphasis is that “IM must become a way of life for everyone who works for PCH” and in the case of the Canada Revenue Agency, the emphasis is on the entire organization except the “IM Specialist”. In other words, the increasingly complex RM work has been increasingly imposed on non-“IM Specialists”, who are not trained RM professionals and whose primary job is not to manage records but to be concerned with the content of records. If individual employees, rather than RM Professionals, were able to complete all the RM Application-Oriented Work, there would be no need for a RM program in departments. The RM Requirement-Oriented Work as it is currently completed in the Government of Canada can be easily accomplished by consultants. To further disable this work model, the guidelines and training developed for the employees’ conduct of RM related work are themselves unclear and insufficient, due to the lack of first-hand

233 One example at the GC level can be the LAC’s Email Management Guidelines. According to the Guidelines, employees are required to classify and manage emails, and in order to so, they need to “understand pertinent provisions of legislation, regulations, standards, guidelines, policies, and procedures related to email”. Managers “should monitor employee compliance with these Email Management Guidelines including arrival/departure and orientation/exit protocols, the proper classification and storage of records and information, and the application of appropriate retention periods”, and “should ensure that employees have at their disposal any pertinent reference materials on the subject of email management, or that they know where and how to obtain such materials when needed”.

234 CRA’s Information Management Policy 2003. The policy specifies requirements for the Commissioner, all Assistant Commissioners, the Senior General Counsel of the Legal Services, and all employees, not, however, for IM Specialists.
understanding of the complexity of digital records management on the part of the IM(RM) program. As introduced above, the IM(RM) program in GC features only RM Requirement-Oriented Work and does not perform any RM Application-Oriented Work. When RM Application-Oriented Work is not conducted in the context of Organizational RM, the harm to the organization increases: RM function is unable to achieve RM objectives (including the completion of RM Requirement-Oriented Work), and employees avoid RM, perceiving even training and awareness communications burdens, let alone the actual fulfillment of the series of responsibilities assigned to them.\textsuperscript{235} This is one reason that accounts for the common difficulty of executing policy requirements and implementing plans in departments, which has been consistently revealed by MAF assessments.

If RM Application-Oriented Work is established as part of RM Function, non-RM employees can be ensured that their retrieval of record(s) is always assisted by the Unit RM, that is, whenever they cannot find records, the Unit RM will find records for them. In the Government of Canada, however, retrieval of records is solely the responsibility of the employees or sometimes their managers (including retrieving records for responding to ATI requests), and if they cannot find the records, the IM(RM) program will not find them either. This reality, in addition to indicating the IM(RM) program’s inability of adding value to the organization through records retrieval, accounts for also employees’

\textsuperscript{235} According to the Policy on Information Management (TBS, 2007), employees are required to be responsible for “applying information management principles, standards, and practices as expressed in Treasury Board and departmental frameworks, policies, directives, and guidelines”.

176
resistance to classifying records according to an organizational RCS, because they benefit little from this time-consuming task. Since retrieving records is the sole responsibility of employees, why should not they follow their own “filing rules” to organize records, which they typically consider more convenient than a RCS? When human memories exist, employees’ own “filing rules” permit records to be located even if sometimes they were saved into a folder called “File Me”. Classifying records in a consistent, standardized manner, that is, according to RM rules, benefits the RM program, which requires classification as the foundation for disposition, and the organization, which needs to retrieve records long after the fading of human memories. The shifting of this professional job to non-professionals (advocated in the Government of Canada as responsibility-sharing IM) has resulted in prolonged search processes and imprecise search results (i.e., the return of incomplete and irrelevant records), all of which contribute to the delay in records release. In other words, non-professional RM work compromises the development of Record(s) Retrievability as the quality of record(s) metadata (including access points and location information) is not ensured.

To achieve RM Control, that is, to enable Record(s) Retrievability, RM must be centralized. Computers and networks can be deployed to every employee’s desk with a set of straightforward rules requiring non-violation, yet RM cannot. In today’s digital

---

236 These problems were evident with the author’s ATI requests experience. Many institutions asked for narrowing down the scope of the request and for extensions to the 30 days timeline. Irrelevant records were not released in large numbers, which is, however, due to clarifications and reviews, not to search precision.
environment, records can be decentralized, but records management should not. The decentralized RM as encouraged by the current GC IM(RM) regime underlies, as one more factor, the ineffective conduct of RM Application-Oriented Work, which contributed directly to the overall performance of the IM(RM) program. This inadequate, passive IM(RM) work model has reduced the value of RM to departmental operation, distanced organizational RM function from lines of business, made useless the strong IM governance-accountability establishment, and caused the chaotic, incomplete, and difficult-to-retrieve status of records, that is, the RM(IM) crisis.

Figure 4 below illustrates the current RM(IM) Model that has caused the IM crisis, labeled as the RM(IM) Distant/Passive Model.

\[237\] For legitimizing decentralized RM, see, for example, The National Archives, Business classification scheme design. Decentralized RM is currently the mode of work in the Government of Canada and is constantly cited as the source of inconsistence for Branch/Directorate/Region RM practices and as one major problem for implementing the ERMS (e.g., the Canadian International Development Agency and the Department of Fisheries and Oceans Canada). It is worth pointing out that records regarding the decentralized RM are difficult to find (or do not exist), which includes not only those documenting the justification, but also the structure of the decentralization, e.g., the number of RM positions throughout the entire department.
The next chapter presents the prediction on the outcome of the GC’s latest improvement measure to the RM(IM) crisis, which is currently being undertaken by the government. As the last chapter of the dissertation, it identifies as well future studies and concludes the dissertation.
5. Prediction, Future Studies & Conclusion

5.1. Prediction of Outcomes of the GC IM Improvement Measure

This process [of grounded theory study] generates theory that fits the real world, works in predictions and explanations, is relevant to the people concerned and is readily modifiable.238

Although it is the reporting on the IM crisis in 2009 that inspired the present study, the issues surrounding RM or IM in the Government of Canada had existed long before 2009. In the 1983 Report of the Auditor General of Canada,239 the Auditor General noted that “The records management function was not receiving recognition or full top level management support in departments”, and as a result, “the records management program in many departments was incomplete”.240 It concluded that “the present quality of

238 Glaser Barney, Theoretical Sensitivity, 142.

239 There were RM issues before 1983 and in fact, since the inception of RM as one type of work in the Canadian Federal Government after it was founded. There are, however, no systematic studies found on RM in the government. For some details on the RM situation in the early years, see Bill Russell, “The White Man’s Paper Burden: Aspects of Records Keeping in the Department of Indian Affairs, 1860-19141,” Archivaria 19 (Winter 1984-85): 50-72. Jay Atherton, “The Origins of the Public Archives Records Centre, 1897-1956,” Archivaria, 8 (Summer 1979): 35-59. This early time period was not included as one part of the detailed analysis due to the dramatic changes that had taken place after the introduction of personal computers into the workplace. This is not to suggest that the early time period of RM does not bear any relevance to the investigation of the current RM status, but simply that it is out of the scope of the current study.

records management in departments and the low importance attached to it will not assure the systematic flow of valuable records to the Archives, facilitation of public access to government records or the intended economy and efficiency in government operations”. In 1989, TBS issued the Policy on the Management of Government Information Holdings (MGIH), outlining the objectives of the policy in correspondence with the areas criticized by the Auditor General, including access to information. This policy went through a number of revisions and its last revision of 1994 remained in effect until 2003, when the new Policy on Management of Government Information was issued. In 2003, the Office of the Auditor General published its report on the protection of cultural heritage in the Government of Canada, which included a section on Archival Heritage. According to this report, the “records disposition authorities regime”, administered by the then National Archives, was in a “crisis situation”: disposition authorities (RDAs) were “limited”, “obsolete”, and failed to “transfer records at the time prescribed in the authorities”. Although the MGIH was not assessed for its impact


241 One example of the RM quality is the situation regarding “records retention and disposal scheduling”, which, as the OAG noted, had worsened considerably since 1973.


243 The Access to Information Act was enacted in 1985.

on the management of records/information, the issues surrounding the records
dispositions authorities reflect sufficiently the unsatisfactory status of information
management in departments. The Office of the Information Commissioner regularly
included in its annual reports from 1996 to 2005 the unsatisfactory performance of
IM/RM in departments, utilizing the expressions “poor records management” and
“information management crisis”. The reporting of unsatisfactory performance
continued after 2005 in the special reports to Parliament (i.e., the report cards).

In 2006, the TBS conducted an assessment on the IM problem, asking the question,
“What is wrong with IM today?” Aiming at finding root causes, this exercise brought
together over one hundred individuals from fourteen departments and agencies
“representing IM and its clients”, who participated in more than twenty workshops and
working sessions, and consulted forty documents considered both authoritative and
representative. Among the documents discussing the serious problems with IM are the
reports of the Office of the Auditor General and the Office of the Information
Commissioner. The products of this assessment included “IM-related problem
statements” and the “root causes” of these problems. The IM-related problem statements,
more than four hundred and eighty of them, were subsequently summarized into fifty

245 See, for example, OIC Annual Report 2005-2006, 22.

246 TBS, “Information Management in the Government of Canada: The Business Problem
(accessed October 19, 2012).
and the root causes were categorized as five areas, including the IM program management, IM rules and practices, IM capability and capacity, information handling, and IM community and culture. The problem statements and the root causes are comprehensive; all of them, however, are general, that is, referring only to “information” or “IM”, and vague, that is, without specifics in terms of reasoning and identification. Based on this analysis, the TBS proposed a vision for IM that, “In the Government of Canada, information is safeguarded as a public trust and managed as a strategic asset to maximize its value in the service of Canadians”.

To materialize this vision, a new policy on information management was issued in 2007, replacing the 2003 Management of Government Information Policy. Accompanying this new policy were the Directive on Information Management Roles and Responsibilities, issued also in 2007, and the Directive on Recordkeeping, issued in 2009.

The continued reporting on the “poor records management”/“information management crisis” indicates that the government improvement strategy has been unsuccessful, and this is confirmed by the difficulties experienced by this thesis research when the author was requesting records of departmental IM(RM) functions. There is much hope now

---

Some examples of the problems are: information cannot be found; departments often do not know what they have or what records contain; poor IM causes personal stress; difficulty aligning information and business processes amongst service delivery partners; governance frameworks for the IM program are weak, inconsistent and fragmented across government; and IM Program design and planning are inadequate.

TBS, “Information Management in the Government of Canada: The Vision.”.

Both the policy and the directive issued in 2007 were coded in the research process.
focused on the 2009 Directive on Recordkeeping, the GC’s latest measure of improvement, which is required to be implemented in the departments subject to it by June 2014. The Directive was not coded as data in the research process of the present study under the consideration that it would take time for its impact on departmental IM programs to be observable. It is analyzed in this section for the purpose of predicting the outcomes of its implementation in departments, utilizing the generated grounded theory. When comparing the Directive with the previous unsuccessful improvement measures, a prediction can be made that \textit{it will be unable to deliver the expected results or fundamentally improve the grave situation of RM in the government.}

The Directive continues the confusing conceptual framework of the previous TBS policy instruments, and, in fact, it further derails from the guidance offered by foundational RM concepts. The Directive utilizes a new term called “information resource of business value” and avoids entirely the use of the term record. Except for being listed as one term in the definitions appendix and for appearing in the term recordkeeping as a part of it, the term record is invisible in the text of the Directive. Recordkeeping is indeed about “information resources” and it is defined as “A framework of accountability and stewardship in which information resources are created or acquired, captured, and managed as a vital business asset and knowledge resource to support effective decision-making and achieve results for Canadians”. When comparing this definition


with the one included in the 2007 Information Management Policy, one finds that the two definitions of recordkeeping are almost identical: the only difference is that the term “information resources” now replaces the term “records”. Information resources in this context refers to “Any documentary material produced in published and unpublished form regardless of communications source, information format, production mode or recording medium … includ[ing] textual records (memos, reports, invoices, contracts, etc.), electronic records (e-mails, databases, internet, intranet, data, etc.), new communication media (instant messages, wikis, blogs, podcasts, etc.), publications (reports, books, magazines), films, sound recordings, photographs, documentary art, graphics, maps, and artefacts”. However, the conceptual relationships among the various types of “information resources” are not provided, and this raises questions. For example, what is the difference between the types “electronic records” and “new communication media”? Blogs are listed as one example of the “new communication media” type, however, they qualify also as “electronic records”, because the “electronic records” category includes “internet” as one example and blogs exist on the Internet. Also, “reports” are used as one example of two different types, “textual records” and “publications”, then how should one distinguish them? Again, when, for convenient access, a contract (one example of “textual


252 The definition reads as “A framework of accountability and stewardship in which records are created, captured, and managed as a vital business asset and knowledge resource to support effective decision making and achieve results for Canadians”. TBS, Policy on Information Management.

253 TBS, Policy on Information Management.
records”) is placed on the organization’s “intranet” (one example of “electronic records”), to which type does it belong? Finally, since the definition of recordkeeping centers on information resources (their creation, management, and significance to the government operation) rather than records (which are only a type of information resources), why is the Directive not entitled “Directive on Information Resources”?

Furthermore, the text of the Directive focuses on “information resources of business value”. The Objective, Expected results, and many requirements utilize this term, not simply “information resources.”

Information resources of business value are defined as “published and unpublished materials, regardless of medium or form, that are created or acquired because they enable and document decision-making in support of programs, services and ongoing operations, and support departmental reporting, performance and accountability requirements”. Despite the different wording, it is difficult, if not impossible, to discern the difference between information resources of business value and the meaning implied by the definition of recordkeeping for information resources (not the definition of information resources). It is also difficult, if not impossible, to distinguish information resources of business value from record, which is defined in the 2007

---

254 The details of the objective and one exemplar requirement are: Objective. Ensure effective recordkeeping practices that enable departments to create, acquire, capture, manage and protect the integrity of information resources of business value in the delivery of Government of Canada programs and services. Requirements. The departmental IM senior official designated by the deputy head is responsible for ensuring the following: Establishing, implementing and maintaining retention periods for information resources of business value, as appropriate, according to format. (italics mine). TBS, “Directive on Recordkeeping,“.

255 TBS, “Directive on Recordkeeping,”.
Information Management Policy as “information created, received, and maintained by an organization or person for business purposes, legal obligations, or both, regardless of medium or form”. Two problems can be identified with this situation. First, there are no justifications for the replacement of records with information resources of business value. This appears to continue the tradition in GC’s IM/RM policy development as the replacement of RM with the management of “information holdings” in 1989 happened without sufficient justification, so did the replacement of “information holdings” with “government information” in 2003 and the replacement of “government information” with “information” in 2007. Changing policy constantly may be itself justifiable (e.g., to respond to environmental impact), but changing without sufficient justifications is hardly so. As the nature of the subject regulated by these policies remained unchanged, the constant changing of terms in policies is a sign of the policy makers’ lacking of firm understanding of the subject. Furthermore, these changes only cause difficulties/confusions for departments, rather than guiding and assisting them in their daily, routine IM(RM) jobs. Second, the definition of the new term information resources of business value (as well as the entire Directive) fails again to sufficiently capture the meaning/implications of the nature of the subject the Directive intends to regulate, because it does not convey the transformative relationship between information

256 TBS, “Information Management Policy,”.

resources and information resources of business value and does not differentiate the purposes of records (or information resources or information resources of business value, to use the Directive’s term) creation and maintenance. With respect to the departments’ implementation of the Directive, in particular the first task of identifying information resources of business value, therefore, questions need to be asked regarding effectiveness. If the identification of records in the past was one of the biggest challenges of managing digital records, then how can the identification of information resources of business value—which are required to be entirely in digital format by 2017—be any easier?

The confusion has already started to show. In the guidelines developed by the TBS for all GC Employees regarding their IM responsibilities, information is equated to information resource, and information resource and information resource of business value are used without differentiation.258 In disclosed records, departments equate information resources

---

258 For example, “Every day, we create, collect, use and share information resources that provide evidence of our business activities” and “These information resources help us to make informed decisions that support our managers, our peers, and our clients and ultimately provide results for Canadians”. “A repository is a preservation environment for information resources of business value” and “Organize, file, and store information resources within repositories, ensuring easy access when needed to make decisions and to support program and service delivery”. “File or save records information resources in a repository”. (Italics mine). See many other examples in the Guideline for GC Employees: IM Basics (Date modified 2009-06-01), where records, information resources, information resources of business value, record of enduring value, and information resources of enduring value cannot be effectively distinguished.
of business value to “records of business value” or “business records”. Furthermore, the Directive maintains the distant, passive IM(RM) work model and continues relying on non-RM employees and when a project is in place, consultants, for carrying out the part of RM work that should not be assigned to non-RM professionals or temporary help. RM professional work such as Record Identification and Record Classification requires in-house RM Functioning Ability on a continuous basis and, as such, cannot be accomplished by non-professionals and is not suitable for projects that feature temporary consultants for a limited time period. As stated in the previous chapter, to identify and classify records necessitates both Core and Extended RM Knowledge, which can only be enabled by formally establishing close work relationships between the RM program and all other non-RM units, and by permitting its existence as part of the organization’s operation. With only limited on-site time, it will be difficult for consultants to acquire the needed knowledge and in cases where consultants are able to complete the initial phase of the project, the quality of RM work will be unable to be maintained or continued. Without addressing the fundamental issues/root causes, the Directive will be unable to make any substantial improvements to the current grave situation. Ultimately, the performance of information management, information resources management, records

259 For example, the Department of Citizenship and Immigration Canada.

260 For example, the Department of Aboriginal Affairs and Northern Development Canada.

261 As revealed by the disclosed records regarding the pilot project on implementing the Recordkeeping Directive between the Department of Natural Resources Canada and LAC (e.g., the document entitled Current State Overview, by a consulting company commissioned by LAC), there are already difficulties reported on “collecting data”.

189
management, or the management of information resources of business value – regardless of the choice of term – will remain unsatisfactory. The expected outcome, that is, “Effective recordkeeping practices that ensure transparency and accountability of government programs and services”\textsuperscript{262} will not be satisfactorily delivered, and the objective, that is, “to enable departments to create, acquire, capture, manage and protect the integrity of information resources of business value in the delivery of Government of Canada programs and services”\textsuperscript{263} will not be fully achieved.

5.2. Future Studies

\begin{quote}
Since substantive theory is grounded in research on one particular substantive area, it might be taken to apply only to that specific area. A theory at such a conceptual level ... become[s] almost automatically a springboard or stepping stone to the development of a grounded formal theory. Substantive theory is the strategic link in the formulation and generation of grounded formal theory. The linkage between research data and formal theory occurs when a particular substantive theory is extended and raised to formal theory by the comparative analysis of it with other research data.\textsuperscript{264}
\end{quote}

Future studies inspired by the present research that are relevant to the further development of the emergent grounded theory can be categorized in relation to the Government of Canada, other governmental settings, and non-governmental settings.

Future studies in the context of the Government of Canada were identified directly by the

\textsuperscript{262} TBS, “Directive on Recordkeeping.”

\textsuperscript{263} Ibid.

\textsuperscript{264} Glaser G. Barney, \textit{Discovery of Grounded Theory}, 79; 33-35; and \textit{Theoretical Sensitivity}, 146.
field data and/or data coding as encompassing five areas. The first area centers on the implementation of the Directive on Recordkeeping in the government. The following departments emerged in the research process as potential study subjects:

- The Department of Citizenship and Immigration Canada, which set the goal of identifying and defining its “records of business value” by March 31st, 2012;
- The Department of Environment Canada, which, in responding to the Round VII (2009-10) MAF assessment, stated that “the Department will finalize its communication and implementation plans on the TBS Recordkeeping Directive by developing IM-awareness products: training, advice, guidance, presentations, communication of best practices, and guidelines and procedures”,
- The Department of Natural Resources Canada, the Department of Public Safety Canada, and the Department of Aboriginal Affairs and Northern Development Canada, which were selected as testbed institutions by LAC and are working with the On Second Thought Advisor consulting company for implementing the Directive.

The second area focuses on records creation, which is indicated as significant by the observation of the quality of disclosed records of both the ATI function and the


\footnote{In addition to records relating to the IM/RM function, the present study requested also records relating to the ATI function in the institutions.}
IM/RM function,\textsuperscript{268} as well as the lack of procedures for creating adequate records pointed out by the OIC’s report cards. Moreover, this focus is motivated by the Documentation Standards for Government Programs, Services and Results: A Developmental Framework and Guide for Business Managers and Information Resource Specialists (draft),\textsuperscript{269} developed by LAC, which emphasizes the importance of the creation of records and the connections between the creation and the TBS’s requirements on the establishment/identification of the Program Activity Architecture by the departments.\textsuperscript{270} Three departments participated in LAC’s pathfinder projects:

- The Department of Human Resources and Social Development Canada:

\textsuperscript{268} Many released records do not have a date, have no version control, or cite rescinded acts or policies. Another example is the records released by PWGSC (in the form of reports produced by databases), which states that the Department of Natural Resources Canada has implemented RDIMS. According to the Director of the IM program in the Department, however, the department does not have any form of configuration of RDIMS.

\textsuperscript{269} This draft document was released in 2008 as part of the improvement effort for the IM crisis, in particular the conceiving of the “recordkeeping regime”. Although it is inadequate in recognizing the necessity of in-house RM functioning ability, its emphasis on records creation in tight relationship with the PAA is what the present study found strong agreement with. This document was not coded as data in the research process due to the fact that it has remained as a draft and the final product of all these improvement efforts is the Directive on Recordkeeping. For additional information, see Daniel J. Caron and Andreas Kellerhals, “Supporting Democratic Values through a Relevant Documentary Foundation - An Evolutionary Complex,” \textit{Archivaria} 71 (Spring 2011): 99-134, in particular, 100-117.

Documentation Standard development for departmental business records - Policy function;

- The Canada Public Service Agency: Documentation Standard development for departmental business records - Human Resources function;
- The Office of the Information Commissioner of Canada: Documentation Standard.\(^{271}\)

The third area focuses on selected departments for examining specific aspects as indicated by the disclosed records including:

- The Department of Industry Canada’s construction of a “Business-based Classification Structure”;
- The Department of Health Canada’s implementation of “an Enterprise Content Management Solution (ECMS) across the Department”;
- The Department of Canadian Heritage’s “Information Architecture/Classification Project”, which aims to “build an information architecture/classification structure for the Department, applicable not only to an eventual Electronic Document and Record Management System (EDRMS) implementation, but to other information repositories throughout the Department”.

The fourth area focuses on the GC’s IM/RM audits, which can be assessed according to

\(^{271}\) LAC, “Assessment Projects,”
three aspects: criteria selection/establishment, auditor qualifications with respect to the RM Requisite Knowledge, and the effectiveness of the recommendations made in audit reports, that is, their acceptance, execution, or rejection by institutions.

The fifth area should continue this study’s focus on the GC’s development of digital government and its impact on the management of digital records, which is considered at a higher level of technological complexity.

The other governmental settings identified as of immediate pertinence to the further development of the generated theory include the national/federal governments of the United States and Australia. Both governments have established a national archives with the responsibility of assisting records management in departments or agencies, similarly to the Government of Canada, and both have reported issues relating to records management in departments or agencies which are also similar to those encountered

---

272 The coding of the many IM audits revealed that the criteria for the audits were mainly based on IT standards.


by the Government of Canada. Besides the comparisons on the overall quality of records management, specific aspects can be studied as well. For example, it would be interesting to examine the application of the DIRKS Manual in the Australian setting as the National Archives had ceased the use of the methodology, which, however, continues to be recommended by the State Records New South Wales for use by government agencies.

Relying on the technique of theoretical sampling, future studies pertinent to governmental settings can be extended to include other levels of government, either using the same or different criteria. Similarly, relying on the technique of theoretical sampling, future studies can also be extended to include non-governmental settings such as private or not-for-profits organizations. By continuing theoretical sampling and constant comparative analysis, a substantive grounded theory can be raised to the rank of formal theory with a higher level of generality and a broader scope of applicability.

5.3. Conclusion

To manage a subject it is essential to understand it. This understanding may be widened, deepened, or adjusted, but should always focus on the nature of the subject. Only by a firm understanding of its nature can the subject be managed with effectiveness and not be influenced/confused by factors that are external to it. Because of the lack of a firm

---


understanding of the nature of records, the influence of the concepts of information or information resources in the Government of Canada has remained strong since 1989, when for the first time a policy replaced RM with the expression “management of information holdings.” 277 Not only have all TBS policy instruments focused on information but also the voices that have been in strong support of RM, such as the Canadian Auditor General and the Information Commissioner, do not distinguish RM and IM. This, according to the current study, is the root cause of the GC’s inability to develop mechanisms that are sufficiently pertinent and specific to all the components identified as parts of its IM regime. This lack of specifics made it difficult for the RM program to demonstrate value despite of a seemingly well constructed policy. The rescinded 2003 policy was, according to the TBS, “the result of several years of research and consultation across the federal government”, and for which, the TBS planned to “develop and manage a comprehensive and phased strategy implementation plan” including the implementation of “sound information management practices” 278. The policy, however, did not deliver any concrete results in improving the IM(RM) situation during the four years of its existence, and its successor, the 2007 IM Policy, proved to be no better. The most recent MAF assessments (2010) of departmental IM practices revealed an extremely weak performance - the weakest one indeed among all aspects assessed. Many departments received high and higher ratings in the aspects of establishing governance structure and

277 The term information holding has been exclusively used by TBS in relation to the administration of the Access to Information Act.

278 OAG, “2003 November Report,”.
developing strategic plans, but the daily practices have been commonly inadequate.\textsuperscript{279}

One may argue that the lack of specifics in developing plans and carrying out specific tasks is attributable to the lack of resources, but this, according to the present study, is only a symptom, not the root cause.

According to the findings of this research, a full understanding of the nature of record and a RM program equipped with adequate RM Functioning Ability should be able to address the issue of resources by requiring a sensible operation budget. More significantly, the understanding of Record Instrumental Value should be able to facilitate the proposal of embedding the RM Application-Oriented Work within operational activities; therefore, the budget required for RM would become a part of the budget of the operational activities. This way, even with program reviews,\textsuperscript{280} the RM work would be assessed along with the Operational Activity, not separately as a not-mission-critical, internal service function that can be reduced to a nominal existence. If the activity is to be eliminated, the RM work within it would be eliminated with the activity, and if the activity is retained, the RM work (including the RM personnel) would be retained as well. Either way, there would not be a chaotic situation due to records left behind. In addition,

\textsuperscript{279} Departments can be skillful in writing strategic plans, which permits them to receive a high MAF rating. When the strategy cannot be or is not implemented, a new strategy can always be drafted. The current development of the Department of the Canadian Heritage’s IM Strategy is such an example.

\textsuperscript{280} Program reviews in the Government of Canada is the mechanism utilized to cut budget and reduce services.
there are cases where resources are not the issue, yet the IM(RM) performance is still unsatisfactory and is even criticized as having not effectively utilized the allocated resources. This reinforces the deduction that it is the inadequacy of RM Functioning Ability that is the root cause. To avoid being marginalized or even completely replaced, the RM program in the Government of Canada needs first to be separated from the all-encompassing, thus practically useless, IM container and then, based on the RM Functioning Ability, promote a RM function that is able to deliver concrete results for the organization and demonstrate the value of the RM profession.

Compared with the sources of the relevant literature identified for coding in the research process (i.e., the InterPARES project, ARMA International, and ISO 15489), the present study has specified and extended them in the following ways:

- It codified the implications embedded in the definition of record, the development of digital diplomatic analysis, and the findings on interactive and dynamic records of the InterPARES project into the concepts of Record(s) Purpose, Record Value, and RM Nature;
- It further developed Record Value into a set of values distinguished first as being instrumental or reusable and then by different types of reusable value;

---

281 As showed by the disclosed records, the Department of Aboriginal Affairs and Northern Development Canada, the Department of Citizenship and Immigration Canada, and the Department of Public Safety Canada mentioned that resources were adequately allocated.

282 This is an extension to ISO 15489’s emphasis on records as evidence. The standard’s emphasis on evidence is excessive and imbalanced as it ignores the other types of value. Moreover, the use of the term evidence does not differentiate between the implied meanings of
• It specified the relationships between the different types of Operational Activity and the different types of Record Value;

• It specified the guidance offered by Record Nature to establish RM Nature;

• It specified the relationships between RM Value and Record Value and established that RM Constant Value, the value that is most visible to organizations, is demonstrable by realizing Record Instrumental Value;

• It elaborated on the design of Operational Activities as the foundation for organizational operations including the conduct of RM Activities;

• It analyzed the role of Record Identification in completing RM Activities with effectiveness (i.e., satisfactory performance) and emphasized the importance and necessity of managing digital records at individual level (in addition to class level, which has been long established); \(^{283}\)

---

\(^{283}\) It may be useful to point out that the idea of managing individual records is not as the same as “item level control” as proposed by David Bearman in “Item Level Control and Electronic Recordkeeping,” http://www.archimuse.com/papers/nhprc/item-lvl.htm (accessed October 19, 2012). Although the former encompasses the creation of metadata for individual records (i.e., at the item level), which is the focus of the latter, differently from it, it emphasizes the identification of records in the process of designing/re-designing operational activities/programs and considers it the foundation of all subsequent RM activities, including, but not limited to, metadata creation at item level. The emphasis on records identification also extends the ISO 15489’s requirement...
• It specified the establishment of Organizational RM with a focus on RM Application-Oriented Work;

• It specified a design of RM Function that includes Governance Structure, Responsibility Arrangement, and the integration of Central Digital Records Management System and Unit Digital Records Management Systems in compliance with RM Nature;

• It extended the RM Requisite Knowledge & Skill to include knowledge of all Operational Activities and knowledge of all technologies supporting the activities in qualifying RM Professional/RM Personnel, including the method of determining the required level of the extend knowledge.²⁸⁴

²⁸⁴ For records creation, which focuses on the creation of evidence. For example, on page 6, the Standard requires that, “Rules for creating and capturing records and metadata about records should be incorporated into the procedures governing all business processes for which there is a requirement for evidence of activity”. Record Identification emphasizes the analysis of each and every record that an Operational Activity requires, not only those considered evidence.

²⁸⁴ The RM Extended Knowledge goes beyond the ARMA’s requirement for the development of its members’ RM ability. In its Records and Information Management Core Competencies, there are two domains, Business Function and Information Technology, which appear to most possibly encompass the Non-RM Activity Knowledge and the Non-RM Technology Knowledge. These two domains, however, focus only on the operation of RM as the domain examples indicate. Examples of business functions include (at Level 4) “the supervision of RIM staff, budgeting, providing customer service, identifying and mapping work processes, providing input to management, and strategic planning”; and examples of information technology tasks (at level 4) include “the RIM software application selection process, reprographics and imaging equipment, establishing requirements for IT related to managing electronic repositories, and the identification of emerging technologies”. ARMA International, “Records and Information Management Core
When generation of theory is the aim, one is constantly alert to emergent perspectives that will change and help develop his theory ... the published word is not the final one, but only a pause in the never-ending process of generating theory.\textsuperscript{285}

Bibliography

Accenture. “Value Realization: Service Overview.”
x (accessed June 26, 2011).

ARMA. “Glossary of Records and Information Management Terms.”
http://www arma.org/standards/glossary/index.cfm?id_term=369 (accessed June 26,
2011).


Archivaria, 8 (Summer 1979): 35-59.


Bearman, David. “Item Level Control and Electronic Recordkeeping.”


Bunch, Eli Haugen. “Commentary on the Application of Grounded Theory and Symbolic

Caron, Daniel J. and Andreas Kellerhals. “Supporting Democratic Values through a
Relevant Documentary Foundation - An Evolutionary Complex.” Archivaria 71 (Spring
2011): 99-134, in particular, 100-117.

CBSA. Audit of Information Management. 2011.

CFIA. Audit of IM/IT Governance.

CFIA. Departmental Performance Reports.
CFIA. Departmental Performance Reports. 


CIDA. Departmental Performance Reports. 2008-09. 

CIDA. Departmental Performance Reports. 2009-10. 

CRA. Departmental Performance Reports. 2008-09. 

CRA. Departmental Performance Reports. 2009-10. 

CSC. Audit of Environmental Management System. 2006. 

CSC. Audit of Logical Access Controls. 

CSC. Audit of Safeguarding of Physical Offender and Staff Records. 2010. 


Environment Canada. Departmental Performance Reports. 2009-10.


EU. MoReq (Model Requirements for the Management of Electronic Records) 2.


Government of Canada. Access to Information Regulations. SOR/83-507, s. 3.
Government of Canada. “Canada Health Infoway.”

Government of Canada. Canada School of Public Service Act.


HCan. Audit of Information Management. 2010,


LAC. “New Service Model and the Directive on Recordkeeping.”

LAC. “Records and Information Life Cycle Management.”


McDonald, John. “Archives and Cooperation in the Information Age,” Archivaria 35
(Spring 1993): 110-118.

McDonald, John. “Managing Records in the Modern Office: Taming the Wild Frontier”,

McDonald, John. “Record Keeping Systems - Lessons Learned from the Experience of

McDonald, John. “The wild frontier ten years on,” McLeod, J. and Hare, C., ed.

Marleau, Robert. “A Dire Diagnosis for Access to Information in Canada.” Speech at the
2011).

Mjoset, Lars. “Challenges to Grounded Theory,”

NAA. “Publications and Tools.”
June 26, 2011).

NARA. Functional Requirements and Attributes for Records Management Services, 2005.

National Defence. “Audit Reports.”
http://www.crs-csex.forces.gc.ca/reports-rapports/rp-av-eng.aspx (accessed June 26,
2011).


OIC. “CSIS Report Card.”

OIC. “DFO Report Card.”

OIC. “IC Report Card.”

OIC. “INAC (AANDC) Report Card.”

OIC. “NRCan Report Card.”

OIC. “PCO Report Card.”

OIC. “Questionnaires.”


PCH. Information and Records Management Audit. 2011.


PCH. Departmental Performance Report 2008-09.

PCH. Departmental Performance Report 2009-10.

PCO. “Canadian Federalism.”


TBS. “Access to Information and Privacy Coordinators.”

TBS. Directive on Information Management Roles and Responsibilities.

TBS. Directive on Recordkeeping.


TBS. “Glossary of Terms.”

TBS. “Implementation Report No. 112 - Info Source 2009 Requirements.”

TBS. “Information Management.”

TBS. Information Management in the Government of Canada: The Business Problem Assessment.

TBS. Information Management in the Government of Canada: The Vision.

TBS. Policy on Information Management.

TBS. “Policy Instruments Approved to Date.”

TBS. Policy on Management of Information Technology.
2011).


TBS. “MAF VI. PCH.”


TBS. “Management Accountability Framework.”

TBS. “Info Source: Sources of Federal Government and Employee Information.”


TBS. “The Programs of the Secretariat.”

The National Archives. “Business classification scheme design.”


Appendices

Appendix 1 GC-Wide Data Open Coding & Memoing – TBS

<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbol</td>
<td>• → = contribute to or result in;</td>
</tr>
<tr>
<td></td>
<td>• TBS-#: data sourced by TBS;</td>
</tr>
<tr>
<td></td>
<td>• TBS#-i# = numbered indicator by numbered data;</td>
</tr>
<tr>
<td></td>
<td>• [M#( TBS-#-i#): …] = numbered memo based on one indicator;</td>
</tr>
<tr>
<td></td>
<td>• [M#(TBS-#-i#+TBS-#-i#+…): …] = numbered memo based on two or more indicators;</td>
</tr>
<tr>
<td></td>
<td>• [M#(TBS-#-i# ⇔ TBS-#-i#): …] = numbered memo based on a comparison between two indicators;</td>
</tr>
<tr>
<td></td>
<td>• [M#(TBS-#-i# ⇔ TBS-#-i# ⇔ TBS-#-i#): …] = numbered memo based on a comparison between more than two indicators;</td>
</tr>
<tr>
<td></td>
<td>• [SC←(M#): …] = substantive code based on one memo;</td>
</tr>
<tr>
<td></td>
<td>• [SC←(M#+M#+…): …] = substantive code based on two or more memos;</td>
</tr>
<tr>
<td></td>
<td>• [SC←(M#+…+TBS-#-i#+…): …] = substantive code based on both memos and indicators;</td>
</tr>
<tr>
<td></td>
<td>• [SC←(M#+…+TBS-#-i#+…+other-data-source#+…): …] = substantive code based on both memos and indicators;</td>
</tr>
</tbody>
</table>

1. TBS1-i1: Defines “Information Management”; 288
2. TBS1-i2: Does not define information, but qualifies it as “in an organization”; [M1(TBS1-i1+TBS1-i2): the IM is a discipline about a subject/thing in organization that does not have a definition];
3. TBS1-i3: Defines recordkeeping, for which the subject is “records”;

286 The substantive codes in this and other coding tables are only samples provided to illustrate the abstracting process that generated them. This abstracting process involved numerous back and forth coding, memoing, and comparing; therefore, to completely document this process is both unjustifiable and undesirable.

287 TBS, “Policy on Information Management,”.

288 A discipline that directs and supports effective and efficient management of information in an organization, from planning and systems development to disposal or long-term preservation.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>records are characterized as “vital business asset” and “knowledge source”; 289</td>
<td></td>
</tr>
</tbody>
</table>
4. TBS1-i4: Defines “records”, using the term “information” as the definiens, considered the genus of the definiendum; records are characterized as information for “business purposes” and/or “legal obligation”; 290 [M2(TBS1-i3 ⇔ TBS1-i4): the characterizations of records are different]; |
5. TBS1-i5: Lists IM components; 291 [M3(TBS1-i5 + TBS1-i1): *is this suggesting that all these components form one discipline?* yet none of the components is defined] ➔ [sc: lack of definition for key terms]; |
6. TBS1-i6: Emphasizes records and RM among IM components; 292 |
7. TBS1-i7: Lists 9 responsibilities for deputy heads; |
8. TBS1-i8: Points out employees’ IM responsibilities; |
9. TBS1-i9: Points out RM as one type of specialized expert services, providing support to departments; |
10. TBS1-i10: Expects GC to provide “convenient access to relevant, reliable, comprehensive and timely information”; |
11. TBS1-i11: Expects “information and records” to be managed as “valuable assets”; |
12. TBS1-i12: Expects governance structures, mechanisms and resources are in place for IM; |
13. TBS1-i13: Points out a “whole-of-government” approach to manage information and records; |

---

289 A framework of accountability and stewardship in which records are created, captured, and managed as a vital business asset and knowledge resource to support effective decision making and achieve results for Canadians.

290 Records are information created, received, and maintained by an organization or person for business purposes, legal obligations, or both, regardless of medium or form.

291 I]Information management encompasses records, as well as documents, data, library services, information architecture, etc..

292 [R]ecords and their management are mentioned at key points in the policy for the purpose of emphasis.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
</table>
| TBS2 | 1. TBS2-i1: Expects IM governance structure to ensure IM accountability; \[295\]  
2. TBS2-i2: Characterizes Information technology (IT) as a key enabler to IM; \[296\]  
3. TBS2-i3: Characterizes the relationship b/w IM and departmental activities as “identifiable and integral”; \[297\]  
4. TBS2-i4: Lists 10 requirements for the IM senior executive designated by the deputy head;  
5. TBS2-i5: Lists 6 requirements for managers;  
6. TBS2-i6: Lists 4 requirements for employees;  
7. TBS2-i7: Lists 5 requirements for IM functional specialists;  
8. TBS2-i8: Defines IM functional specialist; \[298\] the definition lists more IM components than TBS1-i5; \[M57(TBS2-i8)→M3(TBS1-i5+TBS1-i1)\] |

---

293 An employee who carries out roles and responsibilities that require function-specific knowledge, skills and attributes in the following priority areas: finances, human resources, internal audit, procurement, materiel management, real property, and information management.


295 Governance structures in departments ensure sound IM accountability.

296 Information technology (IT) is a key enabler to achieving well-managed information in support of policies, programs and services.

297 Information management is an identifiable and integral element of departmental programs and services.

298 Information Management Functional Specialist is an employee who carries out roles and responsibilities that require function-specific knowledge, skills and attributes related to managing information such as those found in records and document management, library services, archiving, data management, content management, business intelligence and decision support, information access, information protection and information privacy.
Data

Indicators ➔ Memos & Substantive Codes

(2)+TBS1-i9: what are the advantages/benefits of grouping all these different types of specialized expertises as one discipline? And, again, none of them is defined or explained];
9. TBS2-i9: All requirements refer to IM as a whole, i.e., they are not distinguished by IM components; [M4(TBS2-i9+TBS1-i5+TBS2-i8): lack of definitions or explanations for IM components that are not self-explanatory; will this be a problem for implementing these requirements?];
10. TBS2-i10: Identifies the role and responsibilities of CSPS;[TBS2-i11: Defines “information life cycle”;
11. TBS2-i11: Defines “information life cycle”;

Note: data Below are in or after 2009. They were coded here as part of TBS IM policy instruments. When coding institutional records, consider the issuing time here.

TBS-3

1. TBS3-i1: Defines recordkeeping in Appendix, for which “information resources” is the subject;[M5(TBS3-i1+TBS1-i3): the two definitions for recordkeeping are not exactly the same, and the difference is that one uses “records” and the other uses “information resources” as the genus of the definition respectively; is this suggesting that the two terms are considered synonyms?]
2. TBS3-i2: Defines “information resources”, listing “textual records”

---

299 The Canada School of Public Service is responsible for the development and delivery of a government wide core learning strategy and program for all public servants involved in the management of information.

300 The life cycle of information management encompasses the following: planning; the collection, creation, receipt, and capture of information; its organization, use and dissemination; its maintenance, protection and preservation; its disposition; and evaluation.

301 TBS, “Directive on Recordkeeping.”

302 A framework of accountability and stewardship in which information resources are created or acquired, captured, and managed as a vital business asset and knowledge resource to support effective decision-making and achieve results for Canadians.

303 Any documentary material produced in published and unpublished form regardless of communications source, information format, production mode or recording medium. Information resources include textual records (memos, reports, invoices, contracts, etc.), electronic records (e-mails, databases, internet, intranet, data etc.), new communication media (instant messages,
and “electronic records” as two types; [M6(TBS3-i2): this suggests that the concept of information resource is broader than that of record; then M5 contradicts M6];

3. TBS3-i3: Defines recordkeeping in Clause 3.1 \(^{304}\), for which “information resources of business values” is the subject; this is the third version of the definition for the term;

4. TBS3-i4: Defines “information resources of business value”, \(^{305}\) which is worded differently from that for “information resources”;

\[\text{M7(TBS3-i3+M5+M6): “records”, “information resources”, and “information resources of business value” are defined differently but used without differentiation in the definitions for recordkeeping. Will this cause confusion when applying the concept?};\]

\[\text{M8(TBS3-i4): does not define business value, which can be roughly inferred as relevant to “decision-making in support of programs, services and ongoing operations, and support departmental reporting, performance and accountability requirements” when compare the definitions for information resources and for information resources of business value. This suggests that the concept of information resources is broader than that of information resources of business values. [M9.1(M8+TBS1-i4): it is difficult to distinguish the concept of information resources of business value from that of record, as they are defined as relevant to organizational business purposes and legal obligations. [M9.2(M8+TBS1-i4): What’s the purpose of using “information resources of business values”?];}\]

5. TBS3-i5: Defines record in Appendix, same as TBS1-i4; \(^{306}\)

<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators</th>
<th>Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

wikis, blogs, podcasts, etc.), publications (reports, books, magazines), films, sound recordings, photographs, documentary art, graphics, maps, and artifacts.

\(^{304}\) Recordkeeping is a resource management function through which information resources of business value are created, acquired, captured, managed in departmental repositories and used as a strategic asset to support effective decision making and facilitate ongoing operations and the delivery of programs and services.

\(^{305}\) Are published and unpublished materials, regardless of medium or form, that are created or acquired because they enable and document decision-making in support of programs, services and ongoing operations, and support departmental reporting, performance and accountability requirements.

\(^{306}\) Records are information created, received, and maintained by an organization or person for
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>TBS3-i6: Characterizes recordkeeping as a “core resource management function”; [M10(TBS3-i6+TBS2-i3): <em>what’s the relationship b/w a resource management function and an integral element of business activities?</em>];</td>
</tr>
<tr>
<td>7.</td>
<td>TBS3-i7: identifies three key pieces of legislation for recordkeeping: the FAA Act re deputy head responsibility for “information”, the LAC Act re “disposition authorities” and disposition of “information resources”, and the ATI Act;</td>
</tr>
<tr>
<td>8.</td>
<td>TBS3-i8: Does not define “information”; [M11(TBS3-i7+TBS3-i8+TBS1-i2): <em>what’s the relationship b/w “information” and “information resources”?</em>]</td>
</tr>
<tr>
<td>9.</td>
<td>TBS3-i9: Defines disposition authorities in relation to “records”; [M12(TBS3-i9+TBS3-i7): <em>is this suggesting that information resources = records when it comes to disposition?</em> → [M16(12)];</td>
</tr>
<tr>
<td>10.</td>
<td>TBS3-i10: Lists 5 requirements for departmental IM senior official designated by the deputy head;</td>
</tr>
<tr>
<td>11.</td>
<td>TBS3-i11: Does not use the term record(s) but information resources of business value throughout the Directive; [M13(TBS3-i11+M9.1+M9.2: <em>is this suggesting to use the term “information resources of business value” to replace “records”? if yes, why?</em>)]</td>
</tr>
</tbody>
</table>

*business purposes, legal obligations, or both, regardless of medium or form.*

307 Under the management authority of the Financial Administration Act, deputy heads have the responsibility for the management and administration of information.

308 Under the Library and Archives of Canada Act, the Librarian and Archivist of Canada has the authority to issue disposition authorities and has the power to delegate this authority for the disposition of information resources.

309 Under the Access to Information Act, the President of the Treasury Board has responsibility for the general administration of the Act.

310 Disposition authorities are the instruments that enable government institutions to dispose of records which no longer have operational value, either by permitting their destruction (at the discretion of institutions), by requiring their transfer to Library and Archives of Canada, or by agreeing to their alienation from the control of the Government of Canada.
1. TBS4-i1: Defines EDRM solutions\textsuperscript{312} with both “information resources” and “records” as its subjects without any differentiation;
2. TBS4-i2: Defines information resources\textsuperscript{313}, same as TBS3-i2, which has a broad scope, including books, magazines, and databases;
3. TBS4-i3: Defines record, same as TBS1-i4;
4. TBS4-i4: Does not define document;
5. TBS4-i5: Uses the term records once in defining EDRM solutions; [TBS4-i5: there seems to be the tendency not to use the term record(s) \(\rightarrow\) M13(2)];
6. TBS4-i6: Defines information resources of business value, same as TBS3-i4;
7. TBS4-i7: Define recordkeeping, same as TBS3-i1;
8. TBS4-i8: Defines information life cycle, same as TBS2-i11;\textsuperscript{314} the definition refers to the life cycle of “information management”, which includes activities for information (e.g., “its maintenance”, “its disposition”) and activities for IM (e.g., “planning”): life cycle of


\textsuperscript{312} EDRM solutions are automated systems used to manage, protect and preserve information resources creation to disposition. These solutions maintain appropriate contextual information (metadata) and enable organizations to access, use and dispose of records (i.e., their retention, destruction or transfer) in a managed, systematic and auditable way in order to ensure accountability, transparency and meet departmental business objectives.

\textsuperscript{313} Any documentary material produced in published and unpublished form regardless of communications source, information format, production mode or recording medium. Information resources include textual records (memos, reports, invoices, contracts, etc.), electronic records (emails, databases, internet, intranet, data etc.), new communication media (instant messages, wikis, blogs, podcasts, etc.), publications (reports, books, magazines), films, sound recordings, photographs, documentary art, graphics, maps, and artefacts.

\textsuperscript{314} The life cycle of information management encompasses the following: planning; the collection, creation, receipt, and capture of information; its organization, use and dissemination; its maintenance, protection and preservation; its disposition; and its evaluation.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>information ≠ life cycle of IM; [SD←M14(TBS4-i8+M7): imprecise definition]</td>
</tr>
<tr>
<td>9.</td>
<td>TBS4-i9: Defines information technology(^{315}), using the terms “data” and “information”, yet neither of which is defined; [M15(TBS4-i9+TBS1-i2): lack of definitions for key terms];</td>
</tr>
<tr>
<td>10.</td>
<td>TBS4-i10: Defines metadata,(^{316}) using the term “information resources”;</td>
</tr>
<tr>
<td>11.</td>
<td>TBS4-i11: Lists 3 requirements for departmental IM Senior Official designated by the deputy head and CIO or equivalent;</td>
</tr>
<tr>
<td>12.</td>
<td>TBS4-i12: Applies concepts without differentiation: Clause 3.2 uses “information resources of business value”, Clause 3.3 uses “information resources”, and clauses 3.4 and 5.1.1 uses “information”; [SD←M16(TBS4-i12+ M7+M11: confusing concept application]</td>
</tr>
<tr>
<td>13.</td>
<td>TBS4-i13: Expects “increased … access to information”;(^{317}) [TBS4-i13+TBS4-i1 ➔M16(2)];</td>
</tr>
<tr>
<td>14.</td>
<td>TBS4-i14: Identifies the role and responsibilities of PWGSC;(^{318})</td>
</tr>
<tr>
<td>15.</td>
<td>TBS4-i15: Requires to follow the <em>Principles and Functional Requirements for Records in Electronic Office Environments - Module 2: Guidelines and Functional Requirements for Electronic Records</em></td>
</tr>
</tbody>
</table>

\(^{315}\) Includes any equipment or system that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. It includes all matters concerned with the design, development, installation and implementation of information systems and applications to meet business requirements.

\(^{316}\) The definition and description of the structure and meaning of information resources, and the context and systems in which they exist.

\(^{317}\) 5.2.1 Increased government-wide access to information within and across departments to enable increased employee productivity and the efficiency and effectiveness of program and service delivery to Canadians.

\(^{318}\) The Department of Public Works and Government Services Canada is responsible for providing common government-wide solutions to meet IM requirements of departments and agencies for delivering services such as document management, Web content management, portal and collaboration, and enterprise search management.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. TBS4-i16: Uses “information resources of business value” in Clause 3.7, which discusses the functionality of EDRM solutions; 320 [TBS4-i16+TBS4-i1 → M16(3)];</td>
<td></td>
</tr>
</tbody>
</table>

| TBS-5 321 | 1. TBS5-i1: Defines metadata, same as TBS4-i10;  
2. TBS5-i2: Uses definitions by TBS-1, TBS-2, TBS-3, and Dublin Core Metadata Initiative Glossary;  
3. TBS5-i3: Uses “information” and “information resources” without differentiation, and it’s difficult to distinguish them from records or information resources of business value, 322 [TBS5-i3 → M16(4)];  
4. TBS5-i4: Lists 3 types of metadata: recordkeeping metadata, Web resource discovery metadata, Web content management system metadata;  
5. TBS5-i5: Associates recordkeeping metadata with “information resources of business value”, 323 web resource discovery metadata with |

319 Their concepts of retention period and disposition authorities are different from the Canadian ones.

320 3.7 EDRM solutions enable GC employees to find, share and collaboratively develop information resources of business value, therefore increasing their productivity, and the efficiency and effectiveness of their departments.

321 TBS, “2010 Standard on Metadata,”  

322 3.3 The consistent creation, capture and use of metadata contribute to the objectives of the Policy on Information Management and the Directive on Recordkeeping to manage information as a strategic asset by supporting the capture, description, retrieval, use, re-use, accessibility, sharing, authenticity, reliability, integrity, and maintenance of information resources to facilitate decision-making, accountability, and the efficient delivery of Government programs and services.

323 3.6.1 Recordkeeping metadata supports recordkeeping as a management function through which information resources of business value are created, acquired, captured, and managed in departmental repositories over time, and used as a strategic asset to support effective decision making and facilitate ongoing operations and the delivery of programs and services.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7. TBS5-i7: Requires the application of Web resource discovery metadata and Web content management systems metadata to use Dublin Core Metadata Initiative (DCMI) Metadata Terms;</td>
</tr>
<tr>
<td></td>
<td>8. TBS5-i8: Indicates implicitly in Appendixes C and D the relationship b/w “Web resources”, “information resources within Web content management systems”, and “information resources of business value”: the former two can be identified as the later; [M17 (TBS5-i8+TBS5-i1+M13): why manage information resources of no business value (those not identified as information resources of business value?)];</td>
</tr>
<tr>
<td></td>
<td>9. TBS5-i9: Lists 4 responsibilities for the departmental IM Senior Official designated by the deputy head;</td>
</tr>
<tr>
<td></td>
<td>10. TBS5-i10: Lists 1 responsibility for The departmental CIO or equivalent;</td>
</tr>
<tr>
<td></td>
<td>11. TBS5-i11: Lists 4 responsibilities for IM functional specialists;</td>
</tr>
<tr>
<td></td>
<td>12. TBS5-i12: Lists 3 responsibilities for all employees;</td>
</tr>
<tr>
<td></td>
<td>13. TBS5-i14: Uses “information resources” as key term in the body of the standard; [TBS5-i14 ➔ M17(2)];</td>
</tr>
</tbody>
</table>

---

324 3.6.2 Web resource discovery metadata supports the navigation, searching, display and sharing of Web information resources.

325 3.6.3 Web content management system (WCMS) metadata supports business and technical processes for authoring, managing and publishing Web content in Web content management systems.

326 Applying recordkeeping metadata as outlined in Appendix B to Web resources that are determined to be information resources of business value, and Applying recordkeeping metadata as outlined in Appendix B to information resources within Web content management systems that are determined to be information resources of business value.

327 5.1, 5.2.1, 6.1.3.
### Data Indicators → Memos & Substantive Codes

<table>
<thead>
<tr>
<th>Common to all the above</th>
<th>TBS-6(^{229})</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TBSc-i1: Point out relevant laws;</td>
<td>1. TBS6-i1: designed for “all GC employees” (whose institutions are subject to TBS-1); (it can be inferred from the text that) the “all employees” are those who are not “managers” or “IM specialists”;(^ {328})</td>
</tr>
<tr>
<td>2. TBSc-i2: Identify roles and responsibilities of other GC departments (TBS, LAC, Statistic Canada, PWGSC, and Canada School of Public Service);</td>
<td>2. TBS6-i2: there are times when information is under employees’ care and control;(^ {331})</td>
</tr>
<tr>
<td>3. TBSc-i3: Includes monitoring and reporting requirements and consequences;</td>
<td>3. TBS6-i3: is intended to be a base that “can be added to and customized to reflect institutional policies, procedures, directives, guidelines, tools, and best practices”;</td>
</tr>
<tr>
<td></td>
<td>4. TBS6-i4: focuses on concepts and their applications;(^ {332})</td>
</tr>
</tbody>
</table>

---

\(^{228}\) During one teleconference, the IM Specialist said, regarding the unsatisfactory IM performance, “we are all in the same place’.


\(^{328}\) “Your IM specialists are available to help you with these responsibilities, as needed”; “so we encourage you to consult your manager and information management (IM) specialists, as needed.”

\(^{331}\) “The following is an overview of some of the practices recommended for you to apply to all information while it’s in your care and control”.

\(^{332}\) “designed to help you gain a basic understanding of information and records management concepts”.

---

226
<table>
<thead>
<tr>
<th></th>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>TBS6-i5: Equates &quot;information&quot; to &quot;information resource(s)&quot; “For the purposes of this guideline**,333  **(M18(TBS6-i5): none of the previous higher level policy instruments states about this, then, how can this guideline do this? - As a lower level policy instrument, the guideline applies other than defines concepts. If information is equal to information resources, then the definition of information resources of business value means exactly records; +TBS6-i6+ TBS6-i7 = it’s difficult for TBS’ own guideline to make clear of these concepts, which can also be bypassed)</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>TBS6-i6: Uses the term “information resources” in a way that does not distinguish it from information resources of business values or records; [⇒M16(5)]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Every day, we create, collect, use and share information resources that provide evidence of our business activities;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. These information resources help us to make informed decisions that support our managers, our peers, and our clients and ultimately provide results for Canadians;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Organize, file, and store information resources within repositories, ensuring easy access when needed to make decisions and to support program and service delivery;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Be informed of and apply retention periods for information resources;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. Classification systems are designed to manage information resources according to their business value, ensuring their proper retention and disposition;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>f. as you go about your normal business activities each day, you generate and collect paper and electronic information resources. These information resources provide an important record of the actions you’ve taken, the decisions you’ve made, and the reasons for both, allowing for transparency and accountability. In order to ensure the ongoing value of these information resources of business value, capture them along with any relevant metadata to ensure that they are complete, authentic, and reliable. Retain information resources of business value in accordance with institutional records management standards and procedures, stored or profiled within a repository, if available, and protected</td>
<td></td>
</tr>
</tbody>
</table>

---

333 For the purposes of this guideline, “information” is equivalent to “information resource(s)” and these are the broadest of all terms – including any documentary material produced both in published and unpublished form regardless of communications source, information format, production mode or recording medium. The term "information resource" is introduced through the Directive on Recordkeeping.
Data Indicators → Memos & Substantive Codes

against damage and loss;
g. Ensure information resources of enduring business value are properly preserved;
h. File or save records information resources in a repository;
i. Provide definition of “transitory records” by LAC, then use “transitory information resources”;

7. TBS6-i7: difficult to distinguish “information resources of business value” from “records”; [⇒M16(6)]
   a. cooperate with information specialists to properly transfer digital or paper copies of information resources of business value through the Library and Archives Canada regulations and disposition authorities;
b. Information resources of enduring value will be transferred to Library and Archives Canada (LAC);
c. In the section of “Document your business activities and decisions”, lists examples of “the types of information resources that are of business value”, all of which also qualifies the definition of record;
d. Email messages that pertain to GC business are considered information resources of business value;
e. Use “inactive information resources of business value”; 334

8. TBS6-i8.1: “information resources” appears 53 times, “information” 30 times; [M19(TBS6-i8.1+TBS6-i5): 53+30=83 times in total; the most frequent usage is information or information resource]; ⇒M17(3);
   TBS6-i8.2: “records” 43 times and “information resources of business value” 17 times; [M20(TBS6-i8.2): the fact that the term “records” appears more than “information resources of business value” is because the reference sources the guideline rely on use the term “records” (e.g., the ATI Act and LAC documentation)]; [M21{M20⇒M13(3)}: will this cause a gap b/w legal requirements and the TBS policy instruments?];

9. TBS6-i9: The information contained on these sites (social networks) may or may not be considered information resources of business value but may nonetheless be subject to federal or provincial access to information legislation (which governs records); [M22(TBS6-i9): This suggests the scope of record is larger than information resources of business value ⇒M16(7)]; adversely affected applications of concepts by the introduction of this new term]

10. TBS6-i10: A repository is a preservation environment for information resources of business value. Business rules for the management of the information resources captured in a repository(ies) need to be

334 Storage of inactive information resources of business value.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>established, and there must be sufficient control for the resources to be authentic, reliable, accessible and usable on a continuing basis (from Directive on Recordkeeping);</td>
</tr>
<tr>
<td></td>
<td>11. TBS6-i11: Capture those information resources of business value by saving them within a repository; [M23(TBS6-i10+TBS6-i11)]: information resources of business value = information resources captured in a repository(ies); <em>how to capture?</em> If the awareness is to only tell employees there is the need for capture, then this kind of awareness will not yield any concrete results];</td>
</tr>
<tr>
<td></td>
<td>12. TBS6-i12: Uses “electronic information” “electronic information resources”; uses “electronic records” only in relation to the system;[335] [TBS6-i11→M19(2)];</td>
</tr>
<tr>
<td></td>
<td>13. TBS6-i13: Lists what employees are asked to do;[336] [SD←M24(TBS6-i12): this displays a rather heavy workload]; [SD←M25(TBS6-i12): and at the same time a great level of individual control]</td>
</tr>
<tr>
<td></td>
<td>a. 8 responsibilities including classification and application of retention schedules;</td>
</tr>
<tr>
<td></td>
<td>b. Employees to make a “sound IM plan” for their work; managers and IM specialists are for “further assistance”; no existing information for the job?</td>
</tr>
<tr>
<td></td>
<td>c. As you create and collect information, identify its value to your institution and manage it accordingly, making sure that it’s accessible to those who need it.</td>
</tr>
<tr>
<td></td>
<td>d. Preserve the integrity and value of information resources of business value by keeping the structure, context, and content intact to facilitate future searching and use.</td>
</tr>
<tr>
<td></td>
<td>e. Organize your information in a logical and systematic way so that it's easy to find and share. Where possible, use standards, rules, and procedures established or adopted by your institution.</td>
</tr>
<tr>
<td></td>
<td>i. Information that is well organized will help you to work better and also supports your need to respond efficiently and effectively to requests regarding access to</td>
</tr>
</tbody>
</table>

---

335 If your organization doesn't have an electronic records and document management system or repository(ies), speak to your manager and consult with the appropriate specialist (e.g. the records or library functional specialist) to find out more about your internal policies on filing electronic information.

336 The only indication of the existence of an organizational RM function is the existence of IM specialists.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>information, privacy, and legal discovery.</td>
</tr>
<tr>
<td></td>
<td>ii. Organize all <strong>published</strong> material according to the classification system of your institution's library. <strong>Why even ask employees to organization library materials?</strong></td>
</tr>
<tr>
<td></td>
<td>f. Starting a new job provides <strong>you</strong> with an ideal opportunity to <strong>establish</strong> good practices for managing government information resources right from the start;</td>
</tr>
<tr>
<td></td>
<td>g. Protect information against loss, damage, unauthorized access, alteration, or destruction;</td>
</tr>
<tr>
<td></td>
<td>h. <strong>you have procedures in place</strong> to properly manage it. <strong>Name, inventory, and organize</strong> the electronic documents according to, or linking to, the institutional classification system if one is in place;</td>
</tr>
<tr>
<td></td>
<td>i. Provide pertinent information about everything you leave for your successor, explaining why it will be needed; <strong>[how can this be guaranteed?]</strong> if this is true, then there won’t be complaint about loss of corporate memory when discussing the ATI requests;</td>
</tr>
<tr>
<td></td>
<td>j. Ensure that information resources of business value, in all media, are organized and filed according to the policies, standards, and procedures established or adopted by your institution so that the information continues to be accessible to other employees. <strong>[How to ensure?]</strong>;</td>
</tr>
<tr>
<td></td>
<td>k. Managing information to the way <strong>you work</strong> has many advantages. <strong>[What about others’ ways to work?]</strong>;</td>
</tr>
<tr>
<td></td>
<td>l. It saves you time. <strong>[How? Managing information (if only emails are considered) cost time];</strong></td>
</tr>
<tr>
<td></td>
<td>m. Employees to be IM advocate: If you notice ways that these practices can help your organization to be more effective, communicate them to your manager. <strong>Why should employees do this?</strong> This is not their job];</td>
</tr>
</tbody>
</table>
### Appendix 2 Institution-Specific Online Data Open Coding & Memoing – sG

<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
</table>
| Symbol | • IS-1 = organizational structure;  
| | • IS-2 year = annual report;  
| | • IS-3 = MAF assessment VII (the most recent one at the time of coding);  
| | • IS-4.# = audit report(s);  
| | • Others see Appendix 2.1 |

#### sG: CFIA

| IS-1 | 1. CFIA-IS1-i1: VP, Information Management & Information Technology -> Business Information Management -> Information Management -> Information Holdings -> E-Document Management; Records and Information Services: 4 positions;  
| | 1.1. CFIA-IS1-i1.1: only one with “records” in title;  
| | [M200(CFIA-IS1-i1.1): few “records” positions in org. chart];  
| | 1.2. CFIA-IS1-i1.2: called “Records Management Assistant;  
| | [M201(CFIA-IS1-i1.2): no management positions for records in org. chart];  
| | 2. CFIA-IS1-i2: positions under E-Document Management all have “Information Management” in titles;  
| | [M202(CFIA-IS1-i2): presence of E-Document Management in IM];  
| | 3. CFIA-IS1-i3: No subdivision or position under Information Management has electronic record(s) in title; [M203(CFIA-IS1-i3): no presence of electronic/digital records]; |

| IS-2 2008-09 | 1. CFIA-IS2(08)-i1: Identifies “Information for Decision-Making” one risk area and the Information Management Way Forward as one key |

---

337 GEDS, “CFIA,”
http://sage-geds.tpsgc-pwgsc.gc.ca/cgi-bin/direct500/eng/XEou%3dCFIA-%2co%3dGC%2cc%3dCA (accessed October 19, 2012). Organization chart changes frequently. The last time coding these charts were in 2012-05 because of the attempt to use most recent data. Many changes have happened since the Fall of 2011.

338 I asked about this during teleconference with HCan and others and site visit.

339 CFIA, “Departmental Performance Reports,”
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>initiative for the risk;</td>
</tr>
<tr>
<td></td>
<td>2. CFIA-IS2(08)-i2: RM (or records management) have no appearance; M204(CFIA-IS2(08)-i2): no presence of RM in DPR;</td>
</tr>
<tr>
<td>2009-10</td>
<td>1. CFIA-IS2(09)-i1: “Information Management Way Forward” has no appearance;</td>
</tr>
<tr>
<td></td>
<td>2. CFIA-IS2(09)-i2: uses “IM/IT”; M205(CFIA-IS2(09)-i2): When IM/IT is used in DPR, the content is typically about IT;</td>
</tr>
<tr>
<td></td>
<td>3. CFIA-IS2(09)-i3: IM/IT is one of the “Internal Services”;</td>
</tr>
<tr>
<td></td>
<td>4. CFIA-IS2(09)-i4: RM (or records management) has no appearance; CFIA-IS2(09)-i4 ➔ M204(2);</td>
</tr>
<tr>
<td></td>
<td>5. CFIA-IS2(10-11)-i0: The “IM environment” features “regular communications to employees, employee education and training courses” ➔ what IM does: no actual RM work ➔ [M71];</td>
</tr>
<tr>
<td>IS-3</td>
<td>1. CFIA-IS3-i1: 12.1 Governance: Acceptable;</td>
</tr>
</tbody>
</table>

October 19, 2012).


341 e.g., These strategies include the development of the Performance Management and Reporting Solution and related key IM/IT initiatives such as the implementation of a data centre that houses mission-critical computer systems and associated components.

342 Internal services are groups of related activities and resources that are administered to support the needs of programs and other corporate obligations of an organization. These groups include Management and Oversight Services, Communications Services, Legal Services, Human Resources Management Services, Financial Management Services, IM/IT Services, Real Property Services, Security Management Services, Environmental Management Services, Materiel Management Services, Procurement Services, and Travel and Other Administrative Services.

<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1. CFIA-IS3-i1.1: an <em>adequate</em> governance and accountability structure (including IM presence in organization-wide committees);</td>
<td>1.1. CFIA-IS3-i1.1: an <em>adequate</em> governance and accountability structure (including IM presence in organization-wide committees);</td>
</tr>
<tr>
<td>1.2. CFIA-IS3-i1.2: roles and responsibilities for management are only <em>somewhat</em> identified;</td>
<td>1.2. CFIA-IS3-i1.2: roles and responsibilities for management are only <em>somewhat</em> identified;</td>
</tr>
<tr>
<td>1.3. CFIA-IS3-i1.3: participation in GC-wide IM approaches and initiatives;</td>
<td>1.3. CFIA-IS3-i1.3: participation in GC-wide IM approaches and initiatives;</td>
</tr>
<tr>
<td>2. CFIA-IS3-i2: 12.2 Strategy Planning and Implementation: <em>Opportunity for Improvement</em>;</td>
<td>2. CFIA-IS3-i2: 12.2 Strategy Planning and Implementation: <em>Opportunity for Improvement</em>;</td>
</tr>
<tr>
<td>2.1. CFIA-IS3-i2.1: has an IM strategy;</td>
<td>2.1. CFIA-IS3-i2.1: has an IM strategy;</td>
</tr>
<tr>
<td>2.2. CFIA-IS3-i2.2: implementation is underway and there is evidence of progress;</td>
<td>2.2. CFIA-IS3-i2.2: implementation is underway and there is evidence of progress;</td>
</tr>
<tr>
<td>2.3. CFIA-IS3-i2.3: <em>some</em> IM awareness and training activities exist but are <em>not</em> linked to an overall awareness strategy/plan and do <em>not</em> reflect current policy requirements; 345</td>
<td>2.3. CFIA-IS3-i2.3: <em>some</em> IM awareness and training activities exist but are <em>not</em> linked to an overall awareness strategy/plan and do <em>not</em> reflect current policy requirements; 345</td>
</tr>
<tr>
<td>3.1. CFIA-IS3-i3.1: <em>most</em> of the functions, programs, and activities have been appropriately identified and described in Info Source;</td>
<td>3.1. CFIA-IS3-i3.1: <em>most</em> of the functions, programs, and activities have been appropriately identified and described in Info Source;</td>
</tr>
<tr>
<td>3.2. CFIA-IS3-i3.2: <em>some</em> institution-specific “Classes of Records” need improvement; [TS₂-TBS₁(CFIA-IS3-i3.1+CFIA-IS3-i3.2): Info Source was identified as one extended source for coding]; [M₂₀₆(CFIA-IS3-i3): the assessing criterion here is different from that of the OIC: TBS MAF assesses the production of Info Source, yet the OIC assesses the time of finding responsive records];</td>
<td>3.2. CFIA-IS3-i3.2: <em>some</em> institution-specific “Classes of Records” need improvement; [TS₂-TBS₁(CFIA-IS3-i3.1+CFIA-IS3-i3.2): Info Source was identified as one extended source for coding]; [M₂₀₆(CFIA-IS3-i3): the assessing criterion here is different from that of the OIC: TBS MAF assesses the production of Info Source, yet the OIC assesses the time of finding responsive records];</td>
</tr>
<tr>
<td>4. CFIA-IS3-i4: TBS identified opportunities:</td>
<td>4. CFIA-IS3-i4: TBS identified opportunities:</td>
</tr>
<tr>
<td>4.1. CFIA-IS3-i4.1: Ensure IM governance and strategic planning address, where possible, all activities described in the IM Internal Services Profile; [M₂₀₇(CFIA-IS3-i4.1): this means that</td>
<td>4.1. CFIA-IS3-i4.1: Ensure IM governance and strategic planning address, where possible, all activities described in the IM Internal Services Profile; [M₂₀₇(CFIA-IS3-i4.1): this means that</td>
</tr>
</tbody>
</table>

344 There is evidence that adequate IM governance and accountability structures are in place, including representation of IM in organization-wide governance and/or approval committees; IM roles and responsibilities for senior executives and managers are only somewhat defined; Participation is evident in GC-wide approaches and initiatives related to developing, implementing, sharing, and leveraging IM policies and practices.

345 Organization has an IM strategy; IM strategy implementation is underway and there is evidence of progress against plans; Organization has some IM awareness and training activities, but they are not linked to an overall awareness strategy/plan and do not reflect current policy requirements.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in a departmental IM governance and strategic plan all IM components need to be specifically identified as activities; i.e., treating IM as a whole ((e.g., TBS1-i7.2; TBS2-i9; LAC2-i5) would fail this requirement);³⁴⁶</td>
</tr>
<tr>
<td>4.2. CFIA-IS3-i4.2:</td>
<td>More wholly integrate IM requirements into planning, approval, management, operational, and evaluation activities; [M208(CFIA-IS3-i4.2): integration of IM requirements into other organizational activities needs improvement];</td>
</tr>
<tr>
<td>4.3. CFIA-IS3-i4.3:</td>
<td>More detailed reporting and monitoring on the IM strategy, e.g. timelines, results to date, resourcing, etc. [M209(CFIA-IS3-i4.3): insufficient details on IM strategy implementation];</td>
</tr>
<tr>
<td>4.4. CFIA-IS3-i4.4:</td>
<td>Ensure that the locations of all information holdings are documented and that retention plans are in place; [M210(CFIA-IS3-i4.4): the MAF methodology for 2009-10 does not define “information holding”, which is however inferable from TS2-TBS1; see TS2-TBS1-i2]; [M211(CFIA-IS3-i4.4): documentation of locations of all “information holdings” needs improvement]; [M212(CFIA-IS3-i4.4): retention plans for all “information holdings” need improvement];</td>
</tr>
<tr>
<td>4.5. CFIA-IS3-i4.5:</td>
<td>Develop consistent metadata that can be applied to all information holdings; [M213(CFIA-IS3-i4.5): MAF methodology for 2009-10 does not define “metadata”; the definition by TBS4-i10³⁴⁷ cannot be applied here because it is defined in relation to “information resources”, unless information holdings = information resources]; [M214(CFIA-IS3-i4.5): MAF methodology for 2009-10 does not define “consistent”]⇒[M40(11)];</td>
</tr>
<tr>
<td>4.6. CFIA-IS3-i4.6:</td>
<td>Ensure that all Class of Record descriptions are complete, up-to-date, and comply with Treasury Board Secretariat requirements; [M215(CFIA-IS3-i4.6): the completeness and currency of records description need improvement];</td>
</tr>
</tbody>
</table>

³⁴⁶ From where the knowledge about all the components can be obtained to develop the plan? Only from the professionals doing the work.

³⁴⁷ The definition and description of the structure and meaning of information resources, and the context and systems in which they exist.
1. TS₂-TBS₁-i₁: defines “Classes of Records” as “Descriptions of the records created, collected and maintained by a government institution as evidence of and information about a particular institutional program or activity”;

2. TS₂-TBS₁-i₂: does not define “information holding”; its meaning, however, can be inferred as information relating to functions, programs, activities;

[TS₂-GC₁(TS₂-TBS₁-i₂): the Access to Information Act was identified as an extended source due to its relation to the term information holding];

1. TS₂-GC₁-i₁: stipulates that the purpose of the Act is “to provide a right of access to information in records under the control of a government institution”; [M₂₁₆(TS₂-GC₁-i₁): the ATI Act governs access to records; ]; [M₂₁₇{M₂₁₆(TS₂-GC₁-i₁)+TS₂-TBS₁-i₂}: information holdings therefore = records of “functions, programs, activities”; consequently M₂₁₁ and M₂₁₂ are RM issues]; (M₂₁₇+M₂₁₃) → M₄₀(12); [M₂₁₈: TBS requirement (CFIA-IS₃-i₄.5) cannot be satisfied];

1. CFIA-IS₄-i₁: uses “IM/IT”;

2. CFIA-IS₄-i₂: all findings are general statements;

---


350 Info Source “provides information about the functions, programs, activities and related information holdings of government institutions subject to the Access to Information Act.

351 GC, “Access to Information Act. s2. (1),”.


353 e.g., “The existing governance committee structure does not provide comprehensive oversight for the IM/IT function” and “A full suite of IM/IT policies and procedures has not been established, approved and communicated”.

235
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[M219(CFIA-IS4-i2): treats IM/IT as a whole; unclear how the work of IM and IT was distinguished]; [M220(CFIA-IS4-i2): treats IM/IT as a whole; no presence of records or RM]; 3. CFIA-IS4-i3: The audit methodology uses “COBIT as a basis for audit objectives and criteria”; COBIT stands for Control Objectives for Information Technology and is “an industry standard that is widely accepted as a baseline of best practices”; [M221(CFIA-IS4-i3): although IM/IT is used, the audit is about the management of IT projects or information systems];</td>
</tr>
</tbody>
</table>

sG: CIDA

| IS-1³⁵⁴ | 1. CIDA-IS1-i1: Information Management and Technology Branch ➔ Information Management and Business Management Division ➔ Corporate Information Management Section (CIMS) ➔ Agency Records Center: 8 positions; 2. CIDA-IS1-i2: 1 among the 8 position titles contains “records”: Senior Corporate Records Management Analyst; CIDA-IS1-i2 ➔ M200(2); CIDA-IS1-i2 ➔ M201(2); 3. CIDA-IS1-i3: all the titles of other positions including those in the other two subdivisions (about 20) under CIMS use the terms “information”, “information management”, “IM/IT”, or “enterprise content management”; CIDA-IS1-i3 ➔ M203(2); |

| IS-2 2008-09³⁵⁵ | 1. CIDA-IS2(08)-i1: “records” appears once in “paper records”;³⁵⁶ 2. CIDA-IS2(08)-i2: no IM (or information management); 3. CIDA-IS2(08)-i3: RM (or records management) has no appearance; CIDA-IS2(08)-i3 ➔ M204(3); |


³⁵⁶ Also, more than 2,500 Haitian civil registrars were trained in adapting new technologies to their work, including digitizing more than 14 million paper records as electronic files in order to allow wider access and use, which resulted in broader and better access to government services.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
</table>
| 2009-10<sup>357</sup> | 1. CIDA-IS2(09)-i1: “information management” appears once as one internal service;  
2. CIDA-IS2(09)-i2: RM (or records management) has no appearance; CIDA-IS2(09)-i2 ➔ M204(4); |
| IS-3<sup>358</sup> | 1. CIDA-IS3-i1: 12.1 Governance: *Acceptable*;  
1.1. CIDA-IS3-i1.1: same as CFIA-IS3-i1.1;  
1.2. CIDA-IS3-i1.2: IM roles and responsibilities for senior executives and managers *are* defined;  
1.3. CIDA-IS3-i1.3: *Extensive* participation is evident in GC-wide approaches and initiatives related to developing, implementing, sharing, and leveraging IM policies and practices;  
2. CIDA-IS3-i2: 12.2 Strategy Planning and Implementation: *Acceptable*;  
2.1. CIDA-IS3-i2.1: IM strategy is *current, active, and formally approved*;  
2.2. CIDA-IS3-i2.2: same as CFIA-IS3-i2.2;  
2.3. CIDA-IS3-i2.3: IM awareness and training activities are included as part of an overall awareness strategy/program;  
3. CIDA-IS3-i3: 12.4 Access to Information Act: *Opportunity for Improvement*;  
3.1. CIDA-IS3-i3.1: *some* of the information holdings are *not* appropriately identified or described;  
3.2. CIDA-IS3-i3.2: A *significant* number of institution-specific Classes of Records do *not* comply with Treasury Board Secretariat requirements; [TS2-TBS2(CIDA-IS3-i3.2): the document on TBS requirements was identified as one extended source]);  
4. CIDA-IS3-i4: TBS identified opportunities: same as [M207(CFIA-IS3-i4.1)]; [M208(CFIA-IS3-i4.2)]; [M209(CFIA-IS3-i4.3)]; [M211(CFIA-IS3-i4.4)]; [M212(CFIA-IS3-i4.4)]; [M215(CFIA-IS3-i4.6)]; and CFIA-IS3-i4.5; |

---

<sup>357</sup> CIDA, “DPR 2009-10,”  

<sup>358</sup> TBS, “MAF VII CIDA,”  
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5. CIDA-IS3-i5: TBS identified opportunities: [M222(CIDA-IS3-i5): the identification and description of “all institutional functions, programs, activities and related information holdings” in Info Source need improvement];</td>
</tr>
</tbody>
</table>

| TS₂-TBS₂³⁵⁹ | 1. TS₂-TBS₂-i1: Requirements on institution-specific Classes of Records;  
1.1. TS₂-TBS₂-i1.1: Title (mandatory)-Reflects the records being described;  
1.2. TS₂-TBS₂-i1.2: Description (mandatory)-  
1.2.1. TS₂-TBS₂-i1.2.1: Identifies the records created, collected and maintained by the institution as evidence of and information about a particular institutional program/activity;  
1.2.2. TS₂-TBS₂-i1.2.2: The Description must provide sufficient information for the general public to understand the program/activity to which the records relate;  
1.3. TS₂-TBS₂-i1.3: Document Types (mandatory) - Identifies specific document types contained in the files; for example: contracts, statements of work, proposals, evaluation criteria, memoranda, procedures, policies, legal opinions, project plans, surveys, statistical reports, agendas, minutes of meetings, etc.; [confirms M222(TS₂-TBS₂-i1.2.1+ TS₂-TBS₂-i1.2.2+ TS₂-TBS₂-i1.3+CIDA-IS3-i3.2): the identification and description of records are problematic]  
2. TS₂-TBS₂-i1-i2: Requires descriptions of the institution’s main functions, programs and activities; |

| IS-⁴³⁶⁰ | 1. CIDA-IS4-i1: uses the term IM/IT (400 appearances in the 72 pages document); CIDA-IS4-i1 ➔ M221(2): when it’s used the content is typically about IT³⁶¹; [TS₂-TBS₃(CIDA-IS4-i1): the document Strategic Directions for Information Management and Information |


³⁶¹ Examples include p.1, paragraph 2, p.3, both sections.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology: Enabling 21st Century Service to Canadians was identified as one extended source for the purpose of understanding the usage of “IM/IT”;</td>
<td></td>
</tr>
<tr>
<td>2. CIDA-IS4-i2: Audit criteria were taken from COBIT (Control Objectives for Information Technology); because the obvious focus of COBIT on IT, the report states that “the term IT is used in the broader sense of IM/IT in line with TBS and COBIT on organizational or enterprise information and the technology investments made to manage and control that information”; [M223(CIDA-IS4-i2): audit criteria were based on IT industry standard and the report suggests that the term IT can represent IM];</td>
<td></td>
</tr>
<tr>
<td>3. CIDA-IS4-i3: “data” appears 139 times, which is in line with the COBIT audit framework; [M224(CIDA-IS4-i3): the discussions about data are mainly on technology such as data warehouse and database consolidation; even those on data quality are in fact about technological issues];</td>
<td></td>
</tr>
<tr>
<td>4. CIDA-IS4-i4: “IM” and “information management” each appears once (excluding a couple of times in titles); [M225(CIDA-IS4-i4): “IM” or “information management” is typically associated with “IM policies, trainings”, and “governance for information management”];</td>
<td></td>
</tr>
<tr>
<td>5. CIDA-IS4-i5: “records management” appears once in the full name of EDRMS; CIDA-IS4-i5→M220(2);</td>
<td></td>
</tr>
<tr>
<td>6. CIDA-IS4-i6: “electronic records” appears once with no details; weak appearance of electronic records];</td>
<td></td>
</tr>
<tr>
<td>7. CIDA-IS4-i7: “records” appears 12 times, all in titles such as EDRMS, Agency Records Schema, and Agency Records Center; “records” has no appearance in discussion];</td>
<td></td>
</tr>
<tr>
<td>8. CIDA-IS4-i8: when discussing EDRMS (Enterprise Document and Records Management System) implementation, 8.1. CIDA-IS4-i8.1: the report states that “the decentralization and independence of records management across branches made the implementation of EDRMS more difficult for branches”; [M226(CIDA-IS4-i8.1): in CIDA RM is decentralized, branch-based, which is considered as hindrance to EDRMS implementation];</td>
<td></td>
</tr>
<tr>
<td>8.2. CIDA-IS4-i8.2: “a major impediment to the successful implementation of the EDRMS was the lack of effective application of the Agency Records Schema and the optimized Agency master index as the foundations of an Agency data classification schema for its electronic records”; [M227(CIDA-IS4-i8.2): considered lack of records classification</td>
<td></td>
</tr>
</tbody>
</table>

362 P4., section Information Quality for Reporting, in particular paragraph 2.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>application “major impediment” of EDRMS implementation]; [SD➞M228(CIDA-IS4-i8.2): suggests that data classification = electronic records classification; ➔M89(1)]; [M229(CIDA-IS4-i8.2): no connection with LAC BASCS methodology or function-based records classification schema ➔ ineffective LAC guidance];</td>
</tr>
</tbody>
</table>

TS₂-TBS₃³⁶³

1. TS₂-TBS₃-i1: a strategic document aiming at supporting eGov development;
2. TS₂-TBS₃-i2: Uses “IM/IT” for 100 times; [M230(TS₂-TBS₃-i2): when IM/IT was used, typically about IT];³⁶⁵
3. TS₂-TBS₃-i3: “IM” appears twice, both used in “IM standards, techniques and tools” without details;
4. TS₂-TBS₃-i4: “IT” appears 15 times, used in “IT procurement”, “IT reform”, “using IT to mechanize programs and processes”, etc.;
5. TS₂-TBS₃-i5: “a common set of IM standards, techniques and tools” is “also an emerging priority”; [M231(TS₂-TBS₃-i5+ TS₂-TBS₃-i4+ TS₂-TBS₃-i3+ TS₂-TBS₃-i2): Although IM is put before IT, the focus of the document is apparently on IT];
6. TS₂-TBS₃-i6: “records” appears once without details;³⁶⁶
7. TS₂-TBS₃-i7: “records management” or “RM” has no appearance; [SD➞M232(TS₂-TBS₃-i6+ TS₂-TBS₃-i7): weak (one time) appearance of records; no RM appearance];

sG: CRA

| IS-1 | 1. CRA-IS1-i1: Headquarters ➔ Strategy and Integration Branch ➔ Statistics and Information Management Directorate ➔ Information |

³⁶³ TBS, “Strategic Directions for Information Management and Information Technology: Enabling 21st Century Service to Canadians 1999,”

³⁶⁴ “The IM/IT strategy will advance the federal government's citizen-centred service delivery vision collaboratively across departments and with other levels of government”. “Getting government on-line requires a new approach to our IM/IT infrastructure.”

³⁶⁵ Examples include s1.4,

³⁶⁶ “Government must lever enterprise-wide IM/IT initiatives to manage records, information and knowledge resources”.

240
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Policy and Governance Division;</td>
</tr>
<tr>
<td></td>
<td>2. CRA-IS1-i2: None of the position</td>
</tr>
<tr>
<td></td>
<td>titles contains “record(s)”;</td>
</tr>
<tr>
<td></td>
<td>[M233(CRA-IS1-i1+CRA-IS1-i2): no</td>
</tr>
<tr>
<td></td>
<td>appearance of record(s) or RM in IM</td>
</tr>
<tr>
<td></td>
<td>org. chart];</td>
</tr>
<tr>
<td></td>
<td>3. CRA-IS1-i3: cannot discern IM/RM</td>
</tr>
<tr>
<td></td>
<td>on the charts of regional offices</td>
</tr>
<tr>
<td></td>
<td>either;</td>
</tr>
<tr>
<td>IS-2</td>
<td>1. CRA-IS2(08)-i1: “records” appears</td>
</tr>
<tr>
<td>2008-09³⁶⁷</td>
<td>in relation to financial</td>
</tr>
<tr>
<td></td>
<td>transactions;</td>
</tr>
<tr>
<td></td>
<td>2. CRA-IS2(08)-i2: IM (or information</td>
</tr>
<tr>
<td></td>
<td>management) has no appearance;</td>
</tr>
<tr>
<td></td>
<td>3. CRA-IS2(08)-i3: RM (or records</td>
</tr>
<tr>
<td></td>
<td>management) has no appearance;</td>
</tr>
<tr>
<td></td>
<td>4. CRA-IS2(08)-i4: the emphasis is on</td>
</tr>
<tr>
<td></td>
<td>data;</td>
</tr>
<tr>
<td>2009-10³⁶⁹</td>
<td>1. CRA-IS2(09)-i1: same as</td>
</tr>
<tr>
<td></td>
<td>CRA-IS2(08)-i1;</td>
</tr>
<tr>
<td></td>
<td>2. CRA-IS2(09)-i2: “information</td>
</tr>
<tr>
<td></td>
<td>management” appears in “Information</td>
</tr>
<tr>
<td></td>
<td>Management Strategy”, which treats</td>
</tr>
<tr>
<td></td>
<td>information as a whole;³⁷⁰</td>
</tr>
<tr>
<td></td>
<td>3. CRA-IS2(09)-i3: RM (or records</td>
</tr>
<tr>
<td></td>
<td>management) has no appearance;</td>
</tr>
<tr>
<td></td>
<td>4. CRA-IS2(09)-i4: the emphasis is on</td>
</tr>
<tr>
<td></td>
<td>data;</td>
</tr>
<tr>
<td></td>
<td>{CRA-IS2(08)-i3+CRA-IS2(09)-i3} ➔ M204</td>
</tr>
</tbody>
</table>


³⁶⁸ To fulfill its accounting and reporting responsibilities, management maintains sets of accounts which provide records of the Agency’s financial transactions.

³⁶⁹ CRA, “DPR 2009-10,”

³⁷⁰ We developed the CRA Information Management Strategy 2010-2011 to 2012-2013. Developed in consideration of program and service information requirements, as well as legislation and policies governing the management of information, the strategy identifies areas where the CRA’s information management practices are less mature and sets a collaborative change agenda across the CRA to address those areas.
## Data

### Indicators ➔ Memos & Substantive Codes

| IS-3 | 1. CRA-IS3-i1: 12.1 Governance: Strong;  
1.1. CRA-IS3-i1.1: IM governance and accountability structures are in place throughout the organization, including representation of IM in organization-wide governance and/or approval committees;  
1.2. CRA-IS3-i1.2: same as CIDA-IS3-i1.2;  
1.3. CRA-IS3-i1.3: same as CIDA-IS3-i1.3;  
2. CRA-IS3-i2: 12.2 Strategy Planning and Implementation: Acceptable  
2.1. CRA-IS3-i2.1: same as CFIA-IS3-i2.1;  
2.2. CRA-IS3-i2.2: implementation is underway and there is significant evidence of progress;  
2.3. CRA-IS3-i2.3: same as CIDA-IS3-i2.3;  
3. CRA-IS3-i3: 12.4 Access to Information Act: Acceptable;  
3.1. CRA-IS3-i3.1: same as CFIA-IS3-i3.1;  
3.2. CRA-IS3-i3.2: Response to TBS feedback is usually fully addressed;  
3.3. CRA-IS3-i3.3: significant efforts made to improve and revise its 2009 Info Source chapter;  
4. CRA-IS3-i4: TBS identified opportunities; same as [M207(CFIA-IS3-i4.1)]; [M209(CFIA-IS3-i4.3)]; [M211(CFIA-IS3-i4.4)]; [M212(CFIA-IS3-i4.4)]; [M215(CFIA-IS3-i4.6)] and CFIA-IS3-i4.5;  
5. CRA-IS3-i5: TBS identified opportunities; Finalize and approve the IM strategy; |

| IS-1 | 1. CSC-IS1-i1: National Headquarters ➔ Senior Deputy Commissioner's Office ➔ Information Management Services ➔ Information Management: 34 positions;  
2. CSC-IS1-i2: 11 contains “record(s)”; ➔ M200;  
2.1. CSC-IS1-i2.1: 9 “Record Clerk”, 1 “Senior Clerk, Offender Records”; [M234(CSC-IS1-i2.1): most are assistant/clerk positions for RM];  
2.2. CSC-IS1-i2.2: 1 “Supervisor, Records Management”; [M235(CSC-IS1-i2.2): RM low management position];  
3. CSC-IS1-i3: cannot discern IM/RM on the charts of regional offices; |

| IS-2 | 1. CSC-IS2(08)-i1: “information management” appears as one internal services; |

---

371 TBS. MAF VII CRA.


242
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
</table>
| 2008-09\(^{372}\) | 2. CSC-IS2(08)-i2: Activities to enhance “Information Management/Information Technology” infrastructure include:  
|            | 2.1. CSC-IS2(08)-i2.1: The installation of a Security Intelligence Network in all institutions; The development of a process to test and monitor CSC’s Information Technology disaster recovery capacity for mission-critical applications; CSC-IS2(08)-i2.1→M205 apparent IT activities;  
|            | 2.2. CSC-IS2(08)-i2.2: The implementation of an integrated and risk-based business planning process; The implementation of a revised Program Activity Architecture to assist with improved resource allocation, activities-based reporting, accountabilities and corporate evaluations; [M236( CSC-IS2(08)-i2.2): not apparent IT activities but also unclear how they are related IM];  
|            | 3. CSC-IS2(08)-i3: RM (or records management) have no appearance; |
| 2009-10\(^{373}\) | 1. CSC-IS2(09)-i1: “Information Management” appears in “Information Management Branch” and “Performance Analysis”;  
|            | 1.1. CSC-IS2(09)-i1.1: the Information Management Branch undertook initiatives to improve efficiency: implementation of a business plan to improve information technology planning and governance processes; finalized the System Development Life Cycle model and conducted an initial functional review of all areas within Application Services and Infrastructure Services and Operations; reduced the number of corporate applications by 50 percent and implemented application lifecycle procedures; revamped the coding structure to improve financial analysis and reporting, visibility and transparency; [M237(CSC-IS2(09)-i1.1): all apparent IT initiatives when discussing IM Branch];  
|            | 1.2. CSC-IS2(09)-i1.2: Information technology is crucial to CSC’s operations at all levels, and the relationship between the Information Management Branch and the rest of the organization can either facilitate or hinder operations; [M238(CSC-IS2(09)-i1.2): IT represents completely the IM |

\(^{372}\) CSC, “DPR,”  

\(^{373}\) CSC, “DPR,”  
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch</td>
<td>1.3. CSC-IS2(09)-i1.3: In October 2009, the Police and Court Information Management Module was implemented across the country. This is a shared electronic access system whereby police reports, judges’ reasons for sentence and other official documents can be easily accessed by CSC staff. As a result of this initiative, documents are accessible immediately after scanning and are available to all authorized users simultaneously. As well, users can search for a particular type of report by date and by sentence and once captured, documents cannot be lost or misplaced; [M239(CSC-IS2(09)-i1.3): IM and document were used when discussing electronic systems, but not records or electronic records];</td>
</tr>
<tr>
<td>2. CSC-IS2(09)-i2: RM (or records management) have no appearance;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IS-3374</th>
<th>1. CSC-IS3-i1: 12.1 Governance: Acceptable;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1. CSC-IS3-i1.1: IM requirements are somewhat integrated as a part of the approval, development, implementation, evaluation, and reporting of departmental policies, programs, services, or projects;</td>
<td></td>
</tr>
<tr>
<td>1.2. CSC-IS3-i1.2: IM is somewhat represented in the corporate-wide governance or approval committee(s);</td>
<td></td>
</tr>
<tr>
<td>1.3. CSC-IS3-i1.3: Some responsibilities are identified for IM policy development/ implementation; [M240(CSC-IS3-i1 CFIA-IS3-i1; CIDA-IS3-i1;): CSC-IS3-i1 should be Opportunity for Improvement];</td>
<td></td>
</tr>
<tr>
<td>2. CSC-IS3-i2: 12.2 Strategy: Acceptable;</td>
<td></td>
</tr>
<tr>
<td>2.1. CSC-IS3-i2.1: strategy is in development but it is not clear how it supports departmental business priorities and operations nor how it integrates with other corporate strategies, plans, and planning cycles;</td>
<td></td>
</tr>
<tr>
<td>2.2. CSC-IS3-i2.2: strategy implementation plan, including some timelines and resources, is underway and some achievements to date are identified;</td>
<td></td>
</tr>
<tr>
<td>2.3. CSC-IS3-i2.3: Minimal IM awareness activities are underway to help staff and executives understand their IM roles, responsibilities and accountabilities; [M241(CSC-IS3-i2 CFIA-IS3-i2; CIDA-IS3-i2;): CSC-IS3-i2;</td>
<td></td>
</tr>
</tbody>
</table>

---

374 TBS, “MAF VI CSC,”
should be Opportunity for Improvement]
3. CSC-IS3-i3: 12.4 Access to Information Act: Opportunity for Improvement;
   3.1. CSC-IS3-i3.1: same as CIDA-IS3-i3.2;
   3.2. CSC-IS3-i3.2: A significant number of the organization’s functions, programs, activities and related information holdings have not been appropriately identified or described in its 2008 Chapter of Info Source: Sources of Federal Government Information; → M222;
4. CSC-IS3-i4: TBS identified opportunities; same as [M208(CFIA-IS3-i4.2)]; CRA-IS3-i5; [M222(CIDA-IS3-i5)]; [M215(CFIA-IS3-i4.6)];
5. CSC-IS3-i5: TBS identified opportunities; Increase awareness activities and develop an overall IM Awareness Strategy and Implementation plan to ensure employee awareness of IM responsibilities; [SD→M242(CSC-IS3-i5): even “employee awareness of IM responsibilities” is unsatisfactory, let alone apply all IM requirements + AANDC 1998 audit shows that awareness was a problem then, yet the current GC/TBS effort is still on awareness and training for employees → ineffective IM work model]

| IS-4.1375 | 1. CSC-IS4.1-i1: one objective is “to assess if required quality analysis of wastewater treatment is conducted and that records are properly maintained”; [M243(CSC-IS4.1-i1): the use of “records” is confusing; → M16(19)];376
2. CSC-IS4.1-i2: Only 2 of the nine institutions audited use the “filing system”;377 [M244(CSC-IS4.1-i2): classifying/filing records was a

375 CSC, “Audit of Environmental Management System 2006,”

376 e.g., “Ensure that all documents required in the Environmental Guidelines (audits, data, records) are kept on site for five years following the date of issue”; “Confirm that all documents required by the Environmental Guidelines (records, service logs, reports, and notices) are kept on site”; “all documents required by Environmental Guidelines (audits, measurement data, records, register) are kept on site of at least 5 years following the date of issue”.

377 Finding #2 - A permanent filing system was in place in only two of the nine institutions visited.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators</th>
<th>Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS-4.2&lt;sup&gt;378&lt;/sup&gt;</td>
<td>1. CSC-IS4.2-i1: uses “information” and “data” for performance management/reporting; the term record(s) has no appearance; [M245(CSC-IS4.2-i1): records is not associated with performance management or reporting]; M245 ⇔ TBS definition of records];</td>
<td></td>
</tr>
<tr>
<td>IS-4.3&lt;sup&gt;379&lt;/sup&gt;</td>
<td>1. CSC-IS4.3-i1: uses “Information Management”; [M246(CSC-IS4.3-i1): when IM is used, it’s about IT project management]; 2. CSC-IS4.3-i2: “records” appears in “medical records”; no details;</td>
<td></td>
</tr>
<tr>
<td>IS-4.4&lt;sup&gt;380&lt;/sup&gt;</td>
<td>1. CSC-IS4.4-i1: is about “physical offender and staff records”; 2. CSC-IS4.4-i2: “records” used 100 times; [M247(CSC-IS4.4-i1+CSC-IS4.4-i2): records are used in association with “physical records”]; 3. CSC-IS4.4-i3: areas audited include “policies and procedures”, “roles and responsibilities”, “training”, and “monitoring &amp; reporting”, “classifying and filing records”, “maintaining official files”, “access to records”, and “disposal of records”; 4. CSC-IS4.4-i4: The Information Management Division 4.1. CSC-IS4.4-i4.1: is responsible for the management of corporate information at National Headquarters; [M248(CSC-IS4.4-i4.1): no definition for information]; 4.2. CSC-IS4.4-i4.2: creates information management standards, policies and programs in accordance with all Federal Government policies; 4.3. is also responsible for management of the Offender Records; 4.4. CSC-IS4.4-i4.4: also provides functional direction to both</td>
<td></td>
</tr>
</tbody>
</table>


Data | Indicators ➔ Memos & Substantive Codes
---|---
regions and institutions with regards to physical offender files; [M249(CSC-IS4.4-i4.2+CSC-IS4.4-i4.4): what IM does: standards, policies; functional direction];
4.5. CSC-IS4.4-i4.5: has minimal involvement with the management of physical staff records as this falls under the responsibility of the Human Resource Management Sector; [M250(CSC-IS4.4-i4.5): incomplete/weak control over records];
5. CSC-IS4.4-i5: procedures and user’s manuals for offender records are comprehensive; [M251(CSC-IS4.4-i5): issues are related to application of procedures];
6. CSC-IS4.4-i6: Safeguarding of electronic files was examined in the Audit of Logical Access Controls; [TS2-CSC1(CSC-IS4.4-i7): the Audit of Logical Access Controls (CSCe-1) was identified as one extended source];

TS2-CSC1 | TS2-CSC1.1: logical access controls means “user ids and passwords giving users’ access to the corporate network or corporate applications”; [M251(TS2-CSC1.1): Safeguarding of electronic files = IT security = user ids and passwords];
2. TS2-CSC1.2: electronic/digital records management has no appearance; [M252(TS2-CSC1.2): even in audit relating to “electronic files”, E/DRM has no appearance];

sG: EC

IS-1 | 1. EC-IS1-i1: Deputy Ministers’ Office -> Corporate Services Branch -> Information Management Directorate -> Library and Records Management Services - > (Library Services); Electronic Documents Management Services; Records Management Services -> 6 regions; EC-IS1-i1➔M202;
2. EC-IS1-i2: Titles under Records Management Services include: Records Administrator; RM Assistant; Head, IM Services; Supervisor, Records Office; Records Specialist; EC-IS1-i2➔M200; EC-IS1-i2➔M203; EC-IS1-i2➔M235;

IS-2 | 1. EC-IS2(08)-i1: “information management” appears once in the

---

381 For example, Records are not always being classified when the information is sensitive; *Files being used outside of the institution are not always appropriately safeguarded;* Documents given to offenders by CSC are not always properly identified;

382 CSC, “Audit of Logical Access Controls,”
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
</table>
| 2008-09$^{383}$      | development of the “business and information management processes within resource and policy constraints” of the Environmental Assessment Management System;  
2. EC-IS2(08)-i2: RM (or records management) has no appearance;$\rightarrow$M204;  
| IS-2 2009-10$^{384}$ | 1. EC-IS2(09)-i1: “information management” appears 7 times;  
1.1. EC-IS2(09)-i1.1: information management “emerged in 2009-2010” as one of the “key risks” “that could affect the Department’s capacity to meet its priorities in subsequent years”;  
1.2. EC-IS2(09)-i1.2: under Risk Analysis  
1.2.1. EC-IS2(09)-i1.2.1: To improve data quality and availability, the Department is implementing an integrated information management (IM) plan by establishing key IM services and products, promoting policies and best practices for the management of information; [M253(EC-IS2(09)-i1.2.1): IM = data quality and availability];  
1.2.2. EC-IS2(09)-i1.2.2: implementing new technologies to support information management;  
1.3. EC-IS2(09)-i1.3: Lessons Learned (under Performance Analysis for Strategic Outcome 3: Canadians and their environment are protected from the effects of pollution and waste);$^{385}$  

$^{383}$ EC, “DPR 2008-09,”  

$^{384}$ EC, “DPR, 2009-10,”  

$^{385}$ Greater integration and cooperation among the various Environment Canada data collection programs would better enable information that is more simplified, streamlined and aligned with departmental priorities. Lessons learned from the design and implementation of electronic submission tools to support data gathering under the Chemicals Management Plan, the National Pollutant Release Inventory and the Greenhouse Gas Emissions Reporting Program were integrated in the Single Window Reporting Initiative. More specifically, the lessons learned included the importance of the coordination and communication of clear and valid business rules, tools to manage data, and the involvement of information management specialists and key
program staff to promote alignment of data requirements across programs while ensuring that reporting obligations can be met in response to provisions under CEPA 1999.

Implementation of Environment Canada’s three-year Information Management and Information Technology (IM & IT) Plan (i.e. the 2009-12 IM & IT Plan) continued, along with enhancement of client engagement to align funding, design process and delivery of IM and IT services and projects to the Department’s Strategic Outcomes.

Progress has been made on integrated planning by improving linkages across financial, human resources, information technology/management, and communications planning components. Specifically, during the operational planning process, financial resource requirements (salary, Operation and Maintenance, Grants and Contributions and Capital) and non-financial planning components (HR, IM/IT, Communications) were solicited from line managers through a single department-wide call letter and common templates. This effort was assisted by the participation of enabler portfolio managers (e.g., HR, Communications, IM/IT) who worked with line managers in defining these resource requirements.

“7- Strengthening the support to Program Activities through enhancement of key enabling functions” under “Management Priorities for 2009–2010” under “Contribution of Department’s Priorities to Strategic Outcomes”.
Environment Canada has complementary mechanisms to ensure that both the funding and the design process align IM & IT projects with departmental and program objectives; EC-IS2(09)-i2.2: unclear how the work of IM and IT is distinguished; → M219(CFIA-IS4-i2);

2.4. EC-IS2(09)-i2.3: Environment Canada’s IM & IT Services advanced in the areas of process standardization and the use of best practices; EC-IS2(09)-i2.3: unclear how the work of IM and IT is distinguished → M219(CFIA-IS4-i2);

3. EC-IS2(09)-i3: RM (or records management) has no appearance; → M204;

| IS-3<sup>389</sup> | 1. EC-IS3-i1: 12.1 Governance: Acceptable;  
1.1. EC-IS3-i1.1: same as CFIA-IS3-i1.1;  
1.2. EC-IS3-i1.2: same as CIDA-IS3-i1.2;  
1.3. EC-IS3-i1.3: same as CFIA-IS3-i1.3;  
2. EC-IS3-i2: 12.2 Strategy Planning and Implementation: Acceptable;  
2.1. EC-IS3-i2.1: same as CIDA-IS3-i2.1;  
2.2. EC-IS3-i2.2: same as CRA-IS3-i2.2;  
2.3. EC-IS3-i2.3: same as CIDA-IS3-i2.3;  
3. EC-IS3-i3: 12.4 Access to Information Act: Acceptable  
3.1. EC-IS3-i3.1: Organization submitted an Annual Report to Parliament and addressed all of the mandatory reporting requirements;  
3.2. EC-IS3-i3.2: CRA-IS3-i3.2;  
3.3. EC-IS3-i3.3: CRA-IS3-i3.3;  
4. EC-IS3-i4: TBS identified opportunities: same as [[M207(CFIA-IS3-i4.1)]]; [M209(CFIA-IS3-i4.3)]; [M211(CFIA-IS3-i4.4)]; [M212(CFIA-IS3-i4.4)]; CFIA-IS3-i4.5; [M215(CFIA-IS3-i4.6)]; |

| IS-3.1<sup>390</sup> | 1. EC-IS3.1-i1: To comply with the TBS Recordkeeping Directive on Institution-Specific Classes of Records, EC will continue working on |

---

<sup>389</sup> TBS, “MAF VII EC,”

<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>revising the classes of records created for the 2009 <em>Info Source Chapter</em>, focusing on activities; [M256(EC-IS3.1-i1): the department still uses “records” in relation to the TBS Recordkeeping Directive]; 2. EC-IS3.1-i2: The Department will finalize its communication and implementation plans on the TBS Recordkeeping Directive by developing IM-awareness products: training, advice, guidance, presentations, communication of best practices, and guidelines and procedures; [M257(EC-IS3.1-i2): the department also uses “IM” in relation to the TBS Recordkeeping Directive]; [M258(EC-IS3.1-i2): the plan to implement the TBS Recordkeeping Directive is to develop “awareness products”: “training, advice, guidance, presentations, communication”];</td>
<td></td>
</tr>
<tr>
<td>IS-4 [superscript 391](found out in 2012)</td>
<td>1. EC-IS4-i1: Information management involves the management of information (that has business value) throughout the information’s entire life cycle – [M600: confusing use of terms]; 2. EC-IS4-i2: The Government of Canada’s Policy on Information Management assigns roles and responsibilities generally to managers and employees … [M601: No mentioning of IM specialists – went beyond the TBS R&amp;R model; same with CRA 2003. Information Management Policy, which did not mention IM specialists either; CFIA as well]; 3. EC-IS4-i3: This concern has been addressed in the TB Directive on Recordkeeping …; [M602: all terms, i.e., “information”, “information (that has business value)”, “records”, “corporate memory”) used without differentiation]; 4. EC-IS4-i4: Access to timely, accurate and reliable information is an essential component for decision making and overall performance; [M603: records are not associated with decision making or performance]; 5. EC-IS4-i5: Information management issues have plagued departments across government for many years, so it is not surprising to find that EC has also been experiencing many seemingly intractable issues of its own. A number of the recommendations arising from the Review of Information Management conducted in 2001 are still outstanding 10 years later. [M604: a lingering problem]; 6. EC-IS4-i6: Audit scope: The management of all records related to the business of the Department, regardless of format, was included; records definition uses the LAC one; the audit then is in fact about records including electronic records; [M605: yet electronic records](superscript 391) EC, “Audit of Governance of Information Management. Nov. 2, 2011,” <a href="http://www.ec.gc.ca/ae-ve/default.asp?lang=En&amp;n=A44BE2CD-1">http://www.ec.gc.ca/ae-ve/default.asp?lang=En&amp;n=A44BE2CD-1</a> (accessed October 19, 2012).</td>
</tr>
<tr>
<td>Data</td>
<td>Indicators ➔ Memos &amp; Substantive Codes</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td></td>
<td>did not appear because the criteria sources (below) do not talk about ER;</td>
</tr>
<tr>
<td>7.</td>
<td>EC-IS4-i7: Audit criteria were based on: the TB Directive on Information Management Roles and Responsibilities; the TB Policy on Information Management; the TB Directive on Recordkeeping; and the Library and Archives of Canada Act; [M606(EC-IS4-i6+ EC-IS4-i7): ineffective legal/regulatory framework ➔ ineffective audit];</td>
</tr>
</tbody>
</table>
|  8.  | EC-IS4-i8: An IM strategic plan was created in 2007 and approved; little evidence of implementing its recommendations; [M607: non-execution]  
<p>|  8.1. Then, a new IM strategic plan is currently under development; [M608: will developing a new one be the solution? Ineffective solution]; |
|  9.  | EC-IS4-i9: The Information Management Steering Committee (IMSC) … was set up [M609: easy part of MAF assessment, thus is done] to provide strategic direction to the IMD on the impact of information management practices on business; specific responses to IM issues have yet to be developed into actionable plans that can be implemented across the organization; [M609: this is the difficult part: lack of specifics for implementation]; |
| 10.  | EC-IS4-i10: In the absence of relationships between these managers and IMD key contacts, the various areas within EC conduct IM practices as they see fit, seeking only limited guidance from the IM Directorate [M610: ineffective IM guidance, “area”-independent IM; a passive IM service function]; |
| 11.  | EC-IS4-i11: IM training is not delivered consistently across the department. There is no training plan for IM in the Department ([M611: training is comparatively simple when compared to e.g., integration IM requirements with business processes, yet it’s a problem); training is provided only when requested ([M612: a passive IM service function]); |
| 12.  | EC-IS4-i12: Recordkeeping requirements and standards, such as the need to identify information resources of business value, to protect that data and the need to carry out activities that support good recordkeeping, are not consistently understood by managers [M613: need for RM professionals] across the Department; |
| 13.  | EC-IS4-i13: Each directorate’s recordkeeping practices are different, and [M614: directorate-independent “recordkeeping”]; |
| 14.  | EC-IS4-i14: are influenced by the tools they have at hand, such as SharePoint, shared drives, Microsoft Exchange Server, etc.; [[M615: IT influences “recordkeeping practices”]]; |
| 15.  | EC-IS4-i15: An inconsistent understanding of disposition authorities; [M616: issues caused by lack/insufficient understanding of records]; |</p>
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. EC-IS4-i6: Guidance is available to employees through best</td>
<td>16. EC-IS4-i6: Guidance is available to employees through best practices on how to dispose of</td>
</tr>
<tr>
<td>practices on how to dispose of administrative, operational and</td>
<td>administrative, operational and transitory records, but such guidance is not actively promoted;</td>
</tr>
<tr>
<td>transitory records, but such guidance is not actively promoted;</td>
<td>[M617: the issue is not about promoting guidance, but its executability];</td>
</tr>
<tr>
<td>17. EC-IS4-i7: For the most part, the treatment of hard-copy</td>
<td>17. EC-IS4-i7: For the most part, the treatment of hard-copy information is well understood;</td>
</tr>
<tr>
<td>information is well understood; however, there is no central</td>
<td>however, there is no central inventory of these information holdings [M618: need for central control];</td>
</tr>
<tr>
<td>inventory of these information holdings [M618: need for central</td>
<td></td>
</tr>
<tr>
<td>control]; 18. EC-IS4-i8: the issues is the lack of “a common</td>
<td>18. EC-IS4-i8: the issues is the lack of “a common departmental approach”; [M619: need for central</td>
</tr>
<tr>
<td>departmental approach”; [M619: need for central control]; 19.</td>
<td>control];</td>
</tr>
<tr>
<td>EC-IS4-i9: The lack of a consistent EC approach to IM limits the</td>
<td>19. EC-IS4-i9: The lack of a consistent EC approach to IM limits the ability to share, leverage and</td>
</tr>
<tr>
<td>ability to share, leverage and find information; [M620: need for</td>
<td>find information; [M620: need for central control];</td>
</tr>
<tr>
<td>central control]; 20. EC-IS4-i20: Recommendations from prior audit</td>
<td>20. EC-IS4-i20: Recommendations from prior audit work (in 2001, no online copy)</td>
</tr>
<tr>
<td>work (in 2001, no online copy) 20.1. development of tools and</td>
<td>20.1. development of tools and processes for IM; [M621: this tells about the IM ability)</td>
</tr>
<tr>
<td>processes for IM; [M621: this tells about the IM ability) 20.2.</td>
<td>20.2. on-going efforts to communicate IM responsibilities and increasing overall IM awareness;</td>
</tr>
<tr>
<td>on-going efforts to communicate IM responsibilities and increasing</td>
<td>[M622: the ineffectiveness of increasing employee awareness may be caused by resistance, due to the</td>
</tr>
<tr>
<td>overall IM awareness; [M622: the ineffectiveness of increasing</td>
<td>heavy workload imposed on them);</td>
</tr>
<tr>
<td>employee awareness may be caused by resistance, due to the heavy</td>
<td></td>
</tr>
<tr>
<td>workload imposed on them); 21. 3 recommendations: finalize strategic</td>
<td></td>
</tr>
<tr>
<td>plan, ensure compliance with TB requirements, make communication</td>
<td>plan, etc., [M623: same areas as those MAF assesses; none of them addresses the root causes, will be</td>
</tr>
<tr>
<td>plan, etc., [M623: same areas as those MAF assesses; none of them</td>
<td>ineffective];</td>
</tr>
<tr>
<td>addresses the root causes, will be ineffective];</td>
<td></td>
</tr>
<tr>
<td>sG: HCan</td>
<td></td>
</tr>
<tr>
<td>IS-1</td>
<td>22. HC-IS1-i1: Corporate Services Branch -&gt; Information Management Services Directorate; Business</td>
</tr>
<tr>
<td></td>
<td>Management Services Division; CIO and Director General’s Office; Client Engagement and Governance</td>
</tr>
<tr>
<td></td>
<td>Centre; Computing and Network Services Centre; Solutions Centre; HC-IS1-i1 → M233;</td>
</tr>
<tr>
<td>IS-2</td>
<td>1. HC-IS2(08)-i1: “information management” appears in Operational Priorities: “The information</td>
</tr>
<tr>
<td>2008-09392</td>
<td>management agenda advanced through implementation of a Proof of Concept project and the subsequent</td>
</tr>
<tr>
<td></td>
<td>rollout of an electronic document management system in a limited number of Health Canada branches;</td>
</tr>
</tbody>
</table>
|                                                                     | [M259(HC-IS2(08)-i1): information management = IT project (electronic document

392 HCan, “DPR,”

1. HC-IS2(08)-i1: Uses IM; →M246: is apparently about IT];
2. HC-IS2(08)-i2: “records” used in “electronic health records”; no details;  
3. HC-IS2(08)-i3: RM (or records management) have no appearance; →M204;

1. HC-IS2(09)-i1: Uses IM; →M246: is apparently about IT];  
2. HC-IS2(09)-i2: Uses IM/IT; →M205: is apparently about IT];  
3. HC-IS2(09)-i3: records used in “Electronic Health Records”;
   3.1. HC-IS2(09)-i3.1: Canada's Economic Action Plan allocated $500 million to Canada Health Infoway (Infoway) to support the goal of establishing Electronic Health Records for Canadians, to speed up the implementation of Electronic Medical Records in physicians' offices, and to integrate points of service, such as hospitals, pharmacies and community care facilities;  
   3.2. HC-IS2(09)-i3.2: The Department is accelerating the implementation of Health Information Systems, via Canada Health Infoway, to support the continued implementation of electronic health records and other electronic health technologies.

Together with provinces and territories we made progress on common goals such as patient wait times and the transition to electronic health records.

HCan, “DPR,”

PeopleSoft will replace the current outdated HR IM system in order to improve enterprise information, enhance services to support program delivery, streamline processes and reduce cost.

IM/IT- Health Canada (HC), in partnership with PWGSC IT Shared Services, is the first federal department to adopt a new innovative interoperable Web 2.0 tool called Oracle Beehive. The Business Enterprise Enabler (BEE) initiative provides Health Canada users with access to collaboration tools such as wiki's and blogs, team workspaces and instant messaging. This will enable HC to use industry leading services for enterprise collaboration, while aligning with the Government of Canada IT Shared Services initiative. Health Canada will continue to roll-out Web 2.0 tools, in response the Clerk's directions regarding increased use of wikis and blogs in government.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators  ➔  Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(e.g. telehealth and public health surveillance); [TS₂-GC²(HC-IS²(09)-i3.1+HC-IS²(09)-i3): Canada Health Infoway was identified as one extended source]; 4. HC-IS²(09)-i4: RM (or records management) have no appearance;</td>
</tr>
<tr>
<td>TS₂-GC²³⁹⁷</td>
<td>1. TS₂-GC²-i1: Infoway is about “transforming health care through health information technology”; all items under What We Do are about IT; [M₂₆₀(HC-IS²(09)-i3+TS₂-GC²-i1): even though “records” is used, the content is about IT];</td>
</tr>
<tr>
<td>IS-³³⁹⁸</td>
<td>1. HC-IS³-i¹: Governance: Acceptable; 1.1. HC-IS³-i¹.¹: same as CFIA-IS³-i¹.¹; 1.2. HC-IS³-i¹.²: CFIA-IS³-i¹.²; 1.3. HC-IS³-i¹.³: CFIA-IS³-i¹.³; 1.4. HC-IS³-i¹.⁴: IMSO is not formally designated; 2. HC-IS³-i²: 12.2 Strategy Planning and Implementation: Opportunity for Improvement; 2.1. HC-IS³-i².¹: same as CFIA-IS³-i².¹; 2.2. HC-IS³-i².²: implementation is nominally underway and there is little evidence of progress against plans. 2.3. HC-IS³-i².³: same as CIDA-IS³-i².³; 3. HC-IS³-i³: 12.4 Access to Information Act: Opportunity for Improvement; 3.1. HC-IS³-i³.¹: A significant portion of the organization's functions, programs, and activities have not been appropriately identified or described in its 2009 Chapter of Info Source; 3.2. HC-IS³-i³.²: CIDA-IS³-i³.²; 4. HC-IS³-i⁴: TBS identified opportunities: same as [M₂₀₇(CFIA-IS³-i⁴.¹)]; [M₂₀₉(CFIA-IS³-i⁴.³)]; [M₂₁₁(CFIA-IS³-i⁴.⁴)]; [M₂₁₂(CFIA-IS³-i⁴.⁴)]; CFIA-IS³-i⁴.⁵; [M₂₂₂(CIDA-IS³-i⁵)];</td>
</tr>
<tr>
<td>IS-⁴.¹³⁹⁹</td>
<td>1. HC-IS⁴.¹-i¹: Audit of IM/IT Governance;  ➔  M₂₂₁: completely</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators</th>
<th>Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS-4.2&lt;sup&gt;400&lt;/sup&gt;</td>
<td>1. HC-IS4.2-i1: The Government of Canada has an information management strategy that is followed by departments and agencies; Yet, the Information Commissioner of Canada has identified that across government there remains systemic issues affecting the way in which departments manage information;</td>
<td>about IT];</td>
</tr>
<tr>
<td></td>
<td>2. HC-IS4.2-i2: The objective of this audit is to assess Health Canada's information management practices in relation to roles and responsibilities, systems, record classification structure, and disposition authorities;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. HC-IS4.2-i3: The audit relied on the Treasury Board of Canada Secretariat core management control criteria to assess management controls and stewardship;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. HC-IS4.2-i4: Roles and responsibility;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.1. HC-IS4.2-i4.1: audit criteria: IM is a shared responsibility;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[M261(HC-IS4.2-i4.1): the “roles and responsibility” structure follows TBS-1 and TBS-2];</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.1.1. HC-IS4.2-i4.1.1: Within the Information Management Services Directorate, the Information Knowledge Management Division (IKMD) provides department-wide functional leadership and guidance for information management (IM); more specifically, the Division is responsible for the development and maintenance of information management strategies, policies, information architecture, standards and guidelines;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.1.2. HC-IS4.2-i4.1.2: The Division is also accountable for the development and support of a records management solution in all media types, development and deployment of training and awareness strategies, and coordinating, to develop IM communication products; delivery of records disposition; services to facilitate access to knowledge; library services; research and mail services; [M262( HC-IS4.2-i4.1.1+ HC-IS4.2-i4.1.2): what IM does: provides department-wide functional leadership and guidance (=development and maintenance of IM strategies, policies, standards and guidelines) and “also” the development and</td>
<td></td>
</tr>
</tbody>
</table>

October 19, 2012).

<sup>400</sup> HCan, “Audit of Information Management. 2010,”
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>support of a RM solution in all media types, development and deployment of training and awareness strategies, IM communication products; delivery of records disposition;</td>
</tr>
<tr>
<td>4.1.3.</td>
<td>HC-IS4.2-i4.1.3: Health Canada managers are responsible for managing information as an integral part of programs, service delivery and as a strategic business resource; Branches are responsible for managing corporate information which consists of documents pertaining to the delivery of programs and services, records of decisions made, and evidence of financial and legal transactions;</td>
</tr>
<tr>
<td>4.1.4.</td>
<td>HC-IS4.2-i4.1.4: all employees are responsible for managing the information they collect, create and use to support not only the outcomes of the programs and services, but also the Department’s operations and legislated accountabilities; [M263( HC-IS4.2-i4.1.3+ HC-IS4.2-i4.1.4): “managers” and “all employees” do the actual work];</td>
</tr>
<tr>
<td>4.1.5.</td>
<td>HC-IS4.2-i4.1.5: Branch Information Management Advisor (BIMA) and the Regional Information Management Advisor (RIMA); Advisors support department-wide information management initiatives by implementing policies, directives and standards; Advisors also develop and deliver information management services such as providing routine advice, training and awareness sessions; In addition, they are responsible for supporting integration of information management requirements into departmental business and information technology strategies; Lastly, they collaborate with all managers to address information lifecycle requirements; further investigation! – they are equivalents of the IM Division at the headquarters, still not</td>
</tr>
<tr>
<td>Data</td>
<td>Indicators ➔ Memos &amp; Substantive Codes</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>doing the actual work]</td>
<td>4.2. HC-IS4.2-i4.2: Issue: While the Department has in place a structure to manage its information, there are (thus) still roles and responsibility gaps with respect to how information is managed and monitored for both integrity and completeness; [M264( HC-IS4.2-i4.2): the problem is actual work for execution/implementation]; 4.3. HC-IS4.2-i4.3: Recommendation; [M265(HC-IS4.2-i4.3): recommendations do not address causes: recommend to update, to implement; to apply, etc., but nothing on “how”]; 4.3.1. CIO update information management policies/guidelines and directives to reflect current roles and responsibilities for managing information in the Department; 4.3.2. all Branches apply information management principles, standards, and practices; 4.3.3. CIO conduct annual assessments on the effectiveness of Branch information management practices and report annually to the Senior Management Board – Policy; 4.4. HC-IS4.2-i4.4: Management Response: numerous actions have been undertaken; [M266(HC-IS4.2-i4.4): Management Response addresses the part of the solution that is easier and quicker to be</td>
</tr>
</tbody>
</table>

---

401 Information Management Advisors have a broad knowledge of information management disciplines and provide guidance and support to program and staff functions on all aspects of managing the information resource. TBS-CIOB. Glossary - Subject: Information Management. http://www.tbs-sct.gc.ca/cioscripts/gloss/gloss-alpha_e.asp?SubjectID=28&who=/im-gi/.

402 ATI request released record: Situation Report on Records Improvement Project. 2005. IKMD assumed an advisory role with an emphasis on consensus building and collaboration. The Branches and the Regions were responsible to complete the work. Under the direction of IKMD and through the Portfolio Managers, RIP developed direct links, with its counterparts in the branches and regions through the Branch Information Management Advisors (BIMAs) and the Regional Information Management Advisors (RIMAs). These members worked together collaboratively on the implementation of common tools, processes, and standards for RM in the Department. - The linkage is comparatively strong but still it remains as an advisory role and collaborative relationship, which does not solve the problems of needing to carry out RM work professionally and of monitoring the RM performance with sufficient authority.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.4.1.</td>
<td>updated the Departmental IM policies, guidelines and directives to reflect current roles and responsibilities for managing information and posted them to the Health Canada intranet;</td>
</tr>
<tr>
<td>4.4.2.</td>
<td>reviewed and updated the IM/IT governance structure;</td>
</tr>
<tr>
<td>4.4.3.</td>
<td>has also been creating Department-wide generic IM position descriptions to further strengthen the IM role within the Department;</td>
</tr>
<tr>
<td>4.4.4.</td>
<td>An IM Strategy is being developed including awareness and communications; learning and training; engagement and commitment;</td>
</tr>
<tr>
<td>4.4.5.</td>
<td>Branches are committed to developing and implementing IM action plans;</td>
</tr>
<tr>
<td>5.</td>
<td>HC-IS4.2-i5: Records Management, Standards and Classification</td>
</tr>
<tr>
<td>5.1.</td>
<td>HC-IS4.2-i5.1: Audit Criterion; [M267(HC-IS4.2-i5.1): “records” and “information” are used without differentiation];</td>
</tr>
<tr>
<td>5.2.</td>
<td>HC-IS4.2-i5.2: Issue:</td>
</tr>
<tr>
<td>5.2.1.</td>
<td>HC-IS4.2-i5.2.1: Records classification systems (a function-based IM classification standard(^{403})) are developed but not all Branches have adopted the same classification system;</td>
</tr>
<tr>
<td>5.2.2.</td>
<td>HC-IS4.2-i5.2.2: The IM Division has been providing training but the responsibility for adopting such a system ultimately lies with the Branches; [M268(HC-IS4.2-i5.2.2): Branch does the actual work]; [M269(HC-IS4.2-i5.2.2): no institutional RM control over branch records];</td>
</tr>
<tr>
<td>5.3.</td>
<td>HC-IS4.2-i5.3: Recommendation: ➔ M265(HC-IS4.2-i4.3): recommendations do not address causes: recommend to monitor, to implement, but nothing on “how”];</td>
</tr>
<tr>
<td>5.3.1.</td>
<td>CIO monitor compliance to the departmental current classification standard for managing information;</td>
</tr>
<tr>
<td>5.3.2.</td>
<td>all Branches implement the Department’s current classification standard for managing information as identified in the Directive on the Management and Storage of Information on Health Canada’s Network Servers;</td>
</tr>
<tr>
<td>5.4.</td>
<td>Management Response:</td>
</tr>
<tr>
<td>5.4.1.</td>
<td>HC-IS4.2-i5.4.1: Corporate level:</td>
</tr>
</tbody>
</table>

\(^{403}\) In 2007/08 a second generation functional classification structure (aXsv2) was implemented by Corporate Services Branch to manage information holdings to ensure that records are managed in accordance with the approved Departmental classification structure.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[M270(HC-IS4.2-i5.4.1): management responses at corporate level address those that are easy to be developed and/or implemented (to promote the classification structure, to provide training]; 5.4.1.1. continues to promote the current Departmental Classification structure, 5.4.1.2. continues to provide training sessions; 5.4.2. branch level: [M271(HC-IS4.2-i5.4.2): management responses at branch level address those that are NOT easy to be developed and/or implemented (e.g., ensure the “classification standard” is used by employees), thus the requirements are empty ones as there are only “to ensure” but no how to ensure] 5.4.2.1. all branches are to ensure Branch IM Specialists are sufficiently trained to provide support to end clients regarding the use of the department’s current classification standard; 5.4.2.2. all branches are to ensure the department’s current classification standard is used by its employees to classify/organize information in all media and document management solutions unless Business dictates otherwise; 6. HC-IS4.2-i6: Records Disposition Authority; 6.1. HC-IS4.2-i6.1: Audit Criterion; [M272(HC-IS4.2-i6.1): audit criterion uses “data” and “records” without distinguishing]; 6.2. Issue: 6.2.1. A review of Records Disposition Authorities within the Branches showed that they often did not exist, were incomplete, or were more suited as a guideline; 6.2.2. a high percentage of the Departmental business processes are not covered under a RDA; 6.3. Recommendation: 6.3.1. CIO coordinate the development and approval of the Records Disposition Authorities with all Branches; 6.3.2. all Branches, implement the Records Disposition Authorities in accordance with Health Canada’s Disposition Directive; 6.4. HC-IS4.2-i6.1: Management Response: CIO started a project and is currently coordinating the development of an MOU, negotiating with both LAC and HC’s Branches. Once the MOU is signed, Corporate Services Branch will co-ordinate the development and approval of Records Disposition Authorities (RDA) for all Branches; and, establish retention periods and application guidelines; [M273(HC-IS4.2-i6.1): obtaining RDAs]</td>
</tr>
<tr>
<td>Data</td>
<td>Indicators ➔ Memos &amp; Substantive Codes</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------</td>
</tr>
</tbody>
</table>
| is a long process];  
7. HC-IS4.2-i7: Enterprise Information Architecture Model;  
7.1. Audit criteria: Administration of an information systems function should include the maintenance of a business information model and establish the appropriate systems to manage the information holdings;  
7.2. HC-IS4.2-i7.2: Issue: [M274(HC-IS4.2-i7.2): finding the right (or responsive in the case of ATI requests) records is the most noticed problem];  
7.2.1. excessive time spent looking for documents; occurrences of lost documents; incomplete or inaccurate document audit trail; and difficulties in managing the “paper mountain”;  
7.2.2. Interviews were held with Branch Access to Information (ATI) coordinators, all of which commented on  
7.2.2.1. the excessive time required to find information in response to ATI requests;  
7.2.2.2. Branch ATI coordinators rely on the knowledge base of employees for locating and accessing required information;  
7.3. HC-IS4.2-i7.3: Existing strategies; [M275(HC-IS4.2-i7.3): existing strategies for HC-IS4.2-i7.2 are mainly IT];  
7.3.1. To address some of these challenges, IMSD has begun to develop an overarching information architecture model for managing the Department’s information holdings;  
7.3.2. In addition, it has developed and implemented an Application Software Registry that contains a list of software applications owned by the Department;  
7.3.3. Other building blocks include the implementation of the Records Information Classification Standard;  
7.3.4. and an electronic data management tool = Electronic Document Management System (EDMS);  
7.3.4.1. HC-IS4.2-i7.3.4.1: EDMS pilot has provided a number of benefits to users in HECSB, which include increased productivity and efficiency for program delivery, compliance on a number of key requirements such as ATIP business processes, ability to manage documents more effectively and efficiently throughout their lifecycle (conversion to the records classification structure), avoidance of document re-creation costs, avoidance of corporate memory loss due to employee |

---

404 As reported in the 2008 Project Charter for Electronic Management System.
turnover, promotion of information sharing, and protection and control of records;
[M276(HC-IS4.2-i7.3+ HC-IS4.2-i7.4): mentions the implementation of the Records Information Classification Standard, yet the focus is on benefits brought by technology];

7.3.4.2. At the end of the pilot, a client survey highlighted some areas of concerns;

7.3.4.2.1. In particular, staff indicated that the proposed system had some challenges in assisting them with their day-to-day business activities such as integrating EDMS with e-mail;

7.3.4.2.2. Employees noted the need for the Department to seek a national solution to integrate with other reporting systems;

7.3.4.3. It was also noted that there was no plan to identify resources to fund an enterprise content management solution across the Department;

7.4. HC-IS4.2-i7.4: Recommendation: [M277(HC-IS4.2-i7.4): recommendation is a larger scale IT system, Enterprise Content Management Solution (ECMS), than the current RDIMS];

7.4.1. CIO in collaboration with all Branches develop a three year plan to fund and implement an Enterprise Content Management Solution (ECMS) across the Department;

7.4.2. all Branches use the Department’s Enterprise Content Management Solution (ECMS) once it becomes available;

7.5. Management Response:

7.5.1. create a senior management Steering Committee with a mandate to develop a 3-5 year business plan to fund and effectively implement an Enterprise Content Management Solution (ECMS) across the Department;

7.5.2. HC-IS4.2-i7.5.2: In the absence of an ECMS, in the interim, Corporate Services Branch will continue with the limited implementation of Record Document Information Management System (RDIMS) to Corporate Services Branch Executive Committee members as part of its commitment to enhance management practices within existing budgets; [M278(HC-IS4.2-i7.5.2+PWGSC-i1): RDIMS is the recommended solution for GC-wide application ];

8. HC-IS4.2-i8: “electronic records “ appears once without details;\textsuperscript{405}

\textsuperscript{405} Audit interviews with various Branch and Regional Information Advisors (BIMA/RIMA)
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>sG</td>
<td>ND</td>
</tr>
<tr>
<td>IS-1</td>
<td>1. ND-IS1-i1: Deputy Minister -&gt; Assistant Deputy Minister (Information Management) -&gt; 10 divisions: 8 with “Information Management” -&gt; no further info; ND-IS1-i1 ➔ M233;</td>
</tr>
<tr>
<td>IS-2</td>
<td>1. ND-IS2(08)-i1: “information management” as one “essential support activities”; 2. ND-IS2(08)-i2: Uses “IM/IT” in “IM/IT Campaign plan” and “IM” in “enterprise IM system”; no details; 3. ND-IS2(08)-i3: records and RM have no appearance; ➔ M204;</td>
</tr>
<tr>
<td>IS-2 2008-09&lt;sup&gt;406&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>IS-2 2009-10&lt;sup&gt;407&lt;/sup&gt;</td>
<td>1. ND-IS2(09)-i1: “records management” used in “records management technology”; no details; 2. ND-IS2(09)-i2: “Information Management” as one of the “Internal Services”; 3. ND-IS2(09)-i3: uses “IM/IT”: 3.1. ND-IS2(09)-i3.1: With reference to “contributions to the Olympics”; ➔ M205: IM/IT is about an IT project;</td>
</tr>
</tbody>
</table>

confirmed the limited use of a records information classification standard to manage electronic records within the respective branches.


<sup>408</sup> (in the context of the Departmental IM/IT Campaign Plan) A departmental environmental scan of current collaboration and records management technology was completed and will inform the strategy going forward.

<sup>409</sup> Providing IM/IT support including deployment of unprecedented Joint Tactical Data Link capability providing other government departments and decision-makers with detailed common operating picture of all aircraft, surface vessels and radar operating in the Op PODIUM area of operations.
3.2. ND-IS2(09)-i3.2: With reference to Consolidate the Departmental Approach to IM/IT; → M205: is apparently about IT]; ⁴¹⁰
3.3. ND-IS2(09)-i3.3: With reference to the Departmental IM/IT Campaign Plan; → M205: the focus is on IT; ⁴¹¹ → M209(CFIA-IS4-i2)]; ⁴¹²
3.4. ND-IS2(09)-i3.4: With reference to Lessons Learned; → M205: is apparently about IT]; ⁴¹³ ND-IS2(09)-i3.4→M209(CFIA-IS4-i2)]; ⁴¹⁴
3.5. ND-IS2(09)-i3.5: Defence’s IM/IT responsibilities are wide-ranging and complex; → M219;
4. ND-IS2(09)-i4: “record keeping” appears; ⁴¹⁵ no details;

⁴¹⁰ Defence significantly improved capacity, capability and spending within the IT Program. This enabled Defence to support a whole-of-government approach to IM/IT Planning.

⁴¹¹ For example, Rationalization efforts include the development of an Enterprise Shared Service approach with other government departments; a departmental Enterprise resource planning strategy was established and financial and materiel support systems have been successfully integrated to improve accountability and resource stewardship.

⁴¹² IM/IT in-theatre capabilities have been enhanced to provide integrated command and control nationally with other government departments and internationally with our Allies;

⁴¹³ IM/IT security vulnerabilities and risks are on the rise, and Defence operations may be put at risk in light of the increased dependence on IM/IT systems, complexity in the environment and evolving cyber threats.

⁴¹⁴ Departmental strategic assessments and business plans commented on the inability to provide stakeholders with the IM/IT support needed, reflecting the criticality of establishing common IM/IT services/standards.

⁴¹⁵ (in the context of the Departmental IM/IT Campaign Plan) significant progress was made on the development of a departmental IM Collaboration strategy, the goal of which is to facilitate information sharing across Defence environments and support departmental obligations regarding record keeping, access to information, and privacy.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators &amp; Memos &amp; Substantive Codes</th>
</tr>
</thead>
</table>
| IS-3<sup>416</sup> | 1. ND-IS3-i1: 12.1 Governance: Acceptable;  
1.1. ND-IS3-i1.1: same as CFIA-IS3-i1.1;  
1.2. ND-IS3-i1.2: same as CIDA-IS3-i1.2;  
1.3. ND-IS3-i1.3: same as CIDA-IS3-i1.3;  
2. ND-IS3-i2: 12.2 Strategy Planning and Implementation: Acceptable;  
2.1. ND-IS3-i2.1: same as CIDA-IS3-i2.1;  
2.2. ND-IS3-i2.2: same as CFIA-IS3-i2.2;  
2.3. ND-IS3-i2.3: same as CIDA-IS3-i2.3;  
3. ND-IS3-i3: 12.4 Access to Information Act: Opportunity for Improvement;  
3.1. ND-IS3-i3.1: same as CIDA-IS3-i3.2;  
3.2. ND-IS3-i3.2: same as CRA-IS3-i3.2;  
3.3. ND-IS3-i3.3: same as CRA-IS3-i3.3;  
4. ND-IS3-i4: TBS identified opportunities: [M207(CFIA-IS3-i4.1)]; [M209(CFIA-IS3-i4.3)]; [M211(CFIA-IS3-i4.4)]; [M212(CFIA-IS3-i4.4)]; CFIA-IS3-i4.5; [M222(CIDA-IS3-i5)]; [M215(CFIA-IS3-i4.6)]; |
| IS-4<sup>417</sup> | 1. ND-IS4-i1: 4 audits/reviews found with IM in title: Management Review of IM Procurement 2004, Internal Audit and Assessment Reports Related to Contracted IM/IT Maintenance Support 2004, Review<sup>418</sup> of Contracting for Professional Services within the Information Management Group 2005, and Analysis of Information Management Projects 2009; ➔M221(ND-IS4-i1): IM/IT is about IT; ➔M246: IM is used but about IT (IT projects or software and hardware maintenance); (ND-IS1-i1+ND-IS2(08)-i2+ND-IS4-i1)➔M223: ND tends to use IM to represent IT]; |
| IS-1<sup>419</sup> | 1. PCH-IS1-i1: Strategic Policy, Planning and Corporate Affairs - > |


<sup>418</sup> The procedures for review and audit were similar to that of an audit, but without the same rigour of application.

<sup>419</sup> GEDS, “Department Listing,”
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS-2 2008-09</td>
<td>1. PCH-IS2(08)-i1: uses “IM”,422 [M279(PCH-IS2(08)-i1): when IM is used in DPR, it is about an IT project]; 2. PCH-IS2(08)-i2: uses “Information Management/Information Technology (IM/IT)”,423 PCH-IS2(08)-i2→M219(CFIA-IS4-i2); 3. PCH-IS2(08)-i3: “Records” appears once in the name of an IT system;424</td>
</tr>
<tr>
<td>IS-2 209-10</td>
<td>1. PCH-IS2(09)-i1: “IM” and “information management” have no appearance; 2. PCH-IS2(09)-i1: “record(s)” and “RM” have no appearance;→M204;</td>
</tr>
</tbody>
</table>


420 Supervisor, Information Holdings, Records Management Operations.

421 Canadian Heritage, “DPR 2008-09,”

422 The Department advanced on implementation of its multi-year IM Strategy with deployment of the Records, Document and Information Management System (RDIMS-InfoCentre) complete in 20 to 25 percent of the Department.

423 As part of integrated business planning and leveraging existing governance structures, the Department established an IM/IT project approval process offering greater transparency, clearly identifying decision-making authorities and facilitating the prioritization of IM/IT projects.

424 Records, Document and Information Management System (RDIMS-InfoCentre).

425 Canadian Heritage, “DPR 2009-10,”
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
</table>
| IS-3^{426} | 1. PCH-IS3-i1: 12.1 Governance: Acceptable;  
1.1. PCH-IS3-i1.1: same as CSC-IS3-i1.1;  
1.2. PCH-IS3-i1.2: Responsibilities are identified for IM policy development and implementation consistent with the GC IM Strategy and policy instruments;  
1.3. PCH-IS3-i1.3: Some participation is evident in GC-wide approaches and initiatives related to developing, implementing, sharing and leveraging IM policies and practices;  
2. PCH-IS3-i2: 12.2 Strategy: Acceptable;  
2.1. PCH-IS3-i2.1: A current and active IM strategy identifies support to business priorities and operations, information needs and accountabilities, IM policy considerations and is partially integrated with other corporate strategies, plans and planning cycles;  
2.2. PCH-IS3-i2.2: same as CSC-IS3-i2.2;  
2.3. PCH-IS3-i2.3: IM awareness activities are underway in the department to help staff and executives understand their IM roles, responsibilities and accountabilities;  
3. PCH-IS3-i3: 12.4 Access to Information Act: Acceptable;  
3.1. PCH-IS3-i3.1: same as CSC-IS3-i3.1;  
4. PCH-IS3-i4: TBS identified opportunities; same as [M208(CFIA-IS3-i4.2)];  
5. PCH-IS3-i5: TBS identified opportunities; Increase participation in GC IM activities in order to leverage and share IM best practices across the enterprise; |
| IS-4^{427} | 1. PCH-IS4-i1: done by the department’s own audit unit “With the assistance of external resources”;  
2. PCH-IS4-i2: Objective: to provide assurance on the adequacy and effectiveness of the control framework at PCH to manage and protect information in accordance with relevant acts, TBS and Departmental policies, procedures and practices;  
3. PCH-IS4-i3: Scope:  
3.1. PCH-IS4-i3.1: includes all information managed by PCH, regardless of format (i.e., paper, electronic) and  
3.2. PCH-IS4-i3.2: covers the management of information across the |

^{426} TBS, “MAF VI. Canadian Heritage,”  

^{427} Canadian Heritage, “Information and Records Management Audit. September, 2011,”  
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM lifecycle, as defined by Library and Archives Canada (LAC-3):</td>
<td></td>
</tr>
<tr>
<td>4. PCH-IS4-i4: The information managed by the Department is as varied as the initiatives and activities undertaken to meet the Department’s mandate; [M500: “information” here can include library materials] This includes information related to grants and contributions (e.g., correspondence, applications), corporate services (e.g., HR, policy development, analysis and research), and the operations of the Department (e.g., business plans, reports); [M501: “information” here = records];</td>
<td></td>
</tr>
<tr>
<td>5. PCH-IS4-i5: The Knowledge and Information Management Directorate (KIM) within the Chief Information Officer Branch (CIOB), has the mandate to provide the strategic direction, tools, and guidance related to the appropriate management of information within the Department, including the development of the Department’s Information Management (IM) Policy; [M502: what IM does];</td>
<td></td>
</tr>
<tr>
<td>6. All employees of the Department are responsible for applying IM principles, standards, and practices in the performance of their duties, and for documenting their activities and decisions; [M503: in line with TBS requirements, employees do the actual work];</td>
<td></td>
</tr>
<tr>
<td>7. IM resources outside of KIM vary across branches and sectors: in some branches, there is an assigned position that is responsible for IM, while in others, an individual may have part time IM responsibilities; [M504: IM responsibilities in branches or sectors are with either “an assigned” or “part time” position];</td>
<td></td>
</tr>
<tr>
<td>8. In general, staff with IM responsibilities outside of the KIM Directorate act in a ‘record management’ role focused on the managing of hardcopy records, than that of an IM Specialist; [M505: a ‘record management’ role in branches or sectors is one that focuses on the managing of hardcopy records, which is different from a role “of an IM Specialist”];</td>
<td></td>
</tr>
<tr>
<td>9. The majority of information at PCH resides and is managed at the program level, in both electronic and hardcopy form; [M506: weak institutional RM control];</td>
<td></td>
</tr>
<tr>
<td>10. PCH-IS4-i10: While active hardcopy records generally reside with the program areas, a corporate Records Office managed by KIM is used to store inactive and/or dormant files. The Directorate utilizes Integrated Recorded Information Management System (iRIMS) to manage hardcopy records within its corporate Records Office. The vast majority of program areas still retain paper records as they need signed copies, as PCH considers ‘signed originals’ as the official record, the process to manage this information is thus intensively manual; [M507: paper RM by program areas and Records Office];</td>
<td></td>
</tr>
</tbody>
</table>

268
### Data Indicators ➔ Memos & Substantive Codes

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. <strong>PCH-IS4-i11</strong>: The main electronic information repositories include:</td>
<td></td>
</tr>
<tr>
<td>M508: complex electronic environment</td>
<td></td>
</tr>
<tr>
<td>11.1. Email (Lotus Notes);</td>
<td></td>
</tr>
<tr>
<td>11.2. Corporate network drives (for example, the ‘G: drive’);</td>
<td></td>
</tr>
<tr>
<td>11.3. InfoCentre (Electronic Document and Record Management System (EDRMS));</td>
<td></td>
</tr>
<tr>
<td>11.4. Corporate applications such as PeopleSoft (HR system), Grants and Contributions Information Management System (GCIMS), and CCM Mercury; and,</td>
<td></td>
</tr>
<tr>
<td>11.5. Numerous program-specific applications.</td>
<td></td>
</tr>
<tr>
<td>12. <strong>PCH-IS4-i12</strong>: The PCH Intranet contains some IM resources that are available for staff to review:</td>
<td></td>
</tr>
<tr>
<td>M509: emphasize on employees for solving the problems;</td>
<td></td>
</tr>
<tr>
<td>13. <strong>PCH-IS4-i13</strong>: A new PCH IM Policy has been in effect since April 1, 2010. This policy outlines roles and responsibilities for IM within the Department, consistent with the TB Policy. A comprehensive suite of IM-related standards and guidelines to support the IM Policy has yet to be been developed;</td>
<td></td>
</tr>
<tr>
<td>M510: emphasis on policy development;</td>
<td></td>
</tr>
<tr>
<td>14. <strong>PCH-IS4-i14</strong>: The PCH Intranet contains some IM reference material available for staff to review. These resources are not well known and the content is not well understood by staff as IM awareness and/or guidance program to provide context and/or training on the use of these resources is not in place;</td>
<td></td>
</tr>
<tr>
<td>M511: ineffective IM/RM guidance; need for RM professionals</td>
<td></td>
</tr>
<tr>
<td>15. <strong>PCH-IS4-i15</strong>: The issue of inconsistence:</td>
<td></td>
</tr>
<tr>
<td>M512(PCH-IS4-i15): all tell the lack of RM control</td>
<td></td>
</tr>
<tr>
<td>15.1. Networks drives are inconsistently organized throughout the Department, and the information within these drives are inconsistently labelled (i.e., through naming conventions) or managed. There are no coherent standards for the naming of electronic documents;</td>
<td></td>
</tr>
<tr>
<td>15.2. A pilot EDRMS implementation (InfoCentre) has been in place within the Department since 2006, ... For InfoCentre users, there are no standard procedures provided and classification and naming conventions are not consistent between pilot areas;</td>
<td></td>
</tr>
<tr>
<td>15.3. The Department utilizes a classification system using iRIMs for hardcopy records. This classification system is not consistently used with hardcopy records throughout the Department. Regional offices visited have created their own ad hoc records classification systems;</td>
<td></td>
</tr>
<tr>
<td>15.4. The Grants and Contributions Information Management System (GCIMS) is not being consistently utilized by G&amp;C program areas. Each program area has developed their own standards for the information that may be placed in GCIMS and...</td>
<td></td>
</tr>
<tr>
<td>Data</td>
<td>Indicators &amp; Memos &amp; Substantive Codes</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td></td>
<td>how it may be organized;</td>
</tr>
<tr>
<td>16.</td>
<td>PCH-IS4-i16: The current expansion of</td>
</tr>
<tr>
<td></td>
<td>this pilot project (of InfoCentre)</td>
</tr>
<tr>
<td></td>
<td>has been stopped. CIOB is currently</td>
</tr>
<tr>
<td></td>
<td>developing a business case for the</td>
</tr>
<tr>
<td></td>
<td>corporate implementation of a new</td>
</tr>
<tr>
<td></td>
<td>EDRMS solution; [M513: the solution is</td>
</tr>
<tr>
<td></td>
<td>to implement new IT systems]</td>
</tr>
<tr>
<td>17.</td>
<td>PCH-IS4-i17: information of a more</td>
</tr>
<tr>
<td></td>
<td>transitory nature and/or not of</td>
</tr>
<tr>
<td></td>
<td>operational value is also being</td>
</tr>
<tr>
<td></td>
<td>collected at the same time, and</td>
</tr>
<tr>
<td></td>
<td>subsequently being retained and not</td>
</tr>
<tr>
<td></td>
<td>differentiated from the information</td>
</tr>
<tr>
<td></td>
<td>of business value [M514: evidence of</td>
</tr>
<tr>
<td></td>
<td>the ineffective LAC guidance on</td>
</tr>
<tr>
<td></td>
<td>identifying transitory records – if</td>
</tr>
<tr>
<td></td>
<td>transitory records are not identified,</td>
</tr>
<tr>
<td></td>
<td>how can transitory information resource</td>
</tr>
<tr>
<td></td>
<td>(of business value) be identified?]</td>
</tr>
</tbody>
</table>
Appendix 3 Institution-Specific ATI Data Open Coding & Memoing – sG (CFIA)

<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators → Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbol</td>
<td>• IS-ATI-1 = Request handling data (ATI-RH Data);</td>
</tr>
<tr>
<td></td>
<td>• IS-ATI-2 = Process responsive data (ATI-PR Data);</td>
</tr>
<tr>
<td></td>
<td>• IS-ATI-3.# = Disclosed records data (ATI-DR Data);</td>
</tr>
<tr>
<td></td>
<td>• Others see Appendix 2.</td>
</tr>
<tr>
<td>sG: CFIA</td>
<td></td>
</tr>
<tr>
<td>IS-ATI-1</td>
<td>4. CFIA-IS-ATI1-i1: The request is seeking a large amount of information;</td>
</tr>
<tr>
<td></td>
<td>5. CFIA-IS-ATI1-i2: Some records cannot be found(^{428}) (e.g., meeting minutes or resolutions on the establishment of the IM/RM program; records regarding RDIMS purchase and implementation);</td>
</tr>
<tr>
<td></td>
<td>6. CFIA-IS-ATI1-i3: Finding and retrieving(^{429}) records involves multiple OPI(^{430})s, i.e., job descriptions by Human Resource, RDIMS by IT;</td>
</tr>
<tr>
<td></td>
<td>7. CFIA-IS-ATI1-i4: IM/RM is not responsible for finding and retrieving records unless it’s the OPI; [M300(CFIA-IS-ATI1-i3+CFIA-IS-ATI1-i4): the IM/RM program does not assist ATI requests in providing(^{431}) responsive records];</td>
</tr>
<tr>
<td></td>
<td>8. CFIA-IS-ATI1-i5: Difficult to retrieve budgetary information specifically for the IM function;</td>
</tr>
<tr>
<td></td>
<td>9. CFIA-IS-ATI1-i6: Difficult to find and/or retrieve records that are older than “current”, i.e., 2 years ago; [M301(CFIA-IS-ATI1-i1+i2+i5+i6): it is difficult to find and/or retrieve records created by the function/program that is responsible for managing records, i.e., the IM/RM function];</td>
</tr>
<tr>
<td>IS-ATI-2</td>
<td>3. CFIA-IS-ATI2-i1: A Subject File Classification System exists and is used for both hard-copy records and for RDIMS; [M302(CFIA-IS-ATI2-i1): not a functional classification system</td>
</tr>
</tbody>
</table>

\(^{428}\) “to find” means to know if the records exist and where they are.

\(^{429}\) “to retrieve” means to be able to deliver records to ATI for review.

\(^{430}\) OPI stands for office of primary interest, referring to offices/units that have direct control over records.

\(^{431}\) Means to allow requester access to responsive records.
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS-ATI-3.1</td>
<td>432</td>
</tr>
<tr>
<td>1. CFIA-IS-ATI3.1-i1: released 2 copies of the same policy, i.e., same title and same date; a paragraph by paragraph comparison revealed that</td>
<td></td>
</tr>
<tr>
<td>1.1. CFIA-IS-ATI3.1-i1.1: One copy has a “date modified: 2011-03-24”</td>
<td></td>
</tr>
<tr>
<td>1.2. CFIA-IS-ATI3.1-i1.2: Only one difference exists in content, i.e., the copy without “date modified” cites the rescinded National Archives of Canada Act and the one with “date modified” cites the current Library and Archives Canada Act; [M303(CFIA-IS-ATI3.1-i1+CFIA-IS-ATI3.1-i1.1+CFIA-IS-ATI3.1-i1.2): version issue];</td>
<td></td>
</tr>
<tr>
<td>1.3. CFIA-IS-ATI3.1-i1.3: Both copies cite the outdated TBS “Management of Government Information Holdings Policy”; [M304(CFIA-IS-ATI3.1-i1.3): quality/accuracy issue]; [M305(CFIA-IS-ATI3.1-i1): the IM/RM function has record creation (= accuracy; quality) and management (= version distinguishing) issues];</td>
<td></td>
</tr>
<tr>
<td>2. CFIA-IS-ATI3.1-i2: Defines “record”, following the one provided by the rescinded National Archives of Canada Act, with the addition of “electro-magnetic medium – including electronic mail”; ➔[M305(2)]; [M306(CFIA-IS-ATI3.1-i2): presence of electronic records: emails];</td>
<td></td>
</tr>
</tbody>
</table>
| 3. CFIA-IS-ATI3.1-i3: Defines “Recorded Information Management”, for which the subject is definitively about “records”;


433 “any information contained in any physical medium which is capable of preserving such information and includes any information contained in the original and in any copy of correspondence, memoranda, forms, directives, reports, drawings, diagrams, cartographic and architectural items, …, working papers, and any other documentary materials or electro-magnetic medium – including electronic mail, regardless of physical form and characteristics”.

434 GC, National Archives of Canada Act, R.S.C., 1985, c. 1, s(2).

435 “is the planning, implementation and review of the function for administering the Agency’s records system. The term includes the identification, classification and retrieval, storage and
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. CFIA-IS-ATI3.1-i4:</td>
<td>Does not define “recorded information”; [M307(CFIA-IS-ATI3.1-i2+CFIA-IS-ATI3.1-i3+CFIA-IS-ATI3.1-i4): confusing conceptual framework: no explanation on relationships b/w concepts];</td>
</tr>
</tbody>
</table>
| 5. CFIA-IS-ATI3.1-i5: | Defines “transitory records”,

following LAC5-i2 and adds guidance such as no need to classify and can be deleted upon action completion, provided that they “are/will not be required for any pending or future access or legal actions”; 

[M308(CFIA-IS-ATI3.1-i5): see M103 (imprecise definition); the guidance here is problematic because an action may need a long time to be completed, thus not to classify the records means to rely on individual employees’ manners of placing the records somewhere when there is a manner, or when there isn’t, on their memories. And, the deletion here means to delete records individually (because no classification done), which in fact costs time, contrary to the assumption that not to classify records saves time. Moreover, how can individual employees know the records “are/will not be required for any pending or future access or legal actions”? ➔ ineffective guidance;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. CFIA-IS-ATI3.1-i6: | “all recorded information” received or created by an employee of the Agency in the course of their duties is “the property of the Agency”;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 7. CFIA-IS-ATI3.1-i7: | The responsibility to meet these Recorded Information Management obligations (= “identification, classification and retrieval, storage and protection, receipt and transmission, retention, and disposal or preservation of materials”) rests with all Agency employees and contractors; [M309(CFIA-IS-ATI3.1-i7): heavy workload for employees]; [M310(M309 ➔ CFIA-IS-ATI3.1-i6: protection, receipt and transmission, retention, and disposal or archival preservation of the records. It also encompasses the policies, procedures, systems, operations, space, equipment and Recorded Information Management staff required to administer the records”.

436 “in any media (i.e., email, images, electronic documents/spreadsheets, etc.), are those that are required for a limited time to ensure the completion of a routine action or for the preparation of a subsequent document. As transitory documents normally do not require filing to the Subject Classification Plan, they can be disposed of at the completion of the routine action or when the approval of the final document has been complete. However, care should be taken to ensure that prior to any disposal of transitory document/messages, that these are/will not be required for any pending or future access or legal actions”.

273
Data | Indicators ➔ Memos & Substantive Codes
--- | ---
seemingly illogical policy consideration: why put the majority responsibilities on the shoulders of individual employees? Both considered supporting function, IT does not require individual employees to manage the computers and software they use.  
[M311(M309): how practical are these requirements? Are they executable? no released records showing how to ensure and how to know if it’s ensured;]

8. CFIA-IS-ATI3.1-i8: “CFIA Employees /Contractors” is the first of the two subsections under the section Responsibilities/Accountabilities;
8.1. CFIA-IS-ATI3.1-i8.1: “Records are normally maintained by the employees who use them most often”;  
[M312(CFIA-IS-ATI3.1-i8.1): individual employee RM is the norm];
8.2. “All employees … must ensure that the applicable policies are followed at all times”;  
[M309: heavy workload for employees];  
[M311: “must ensure” executable?];
8.3. CFIA-IS-ATI3.1-i8.3: “Records (in electronic or paper format) [M306(CFIA-IS-ATI3.1-i8.3)]; presence of electronic records: in electronic format] in an employee’s possession are considered on temporary charge-out to that employee, even in cases where they are the author of that document”;  
[M313(CFIA-IS-ATI3.1-i8.3): are there any mechanisms for ensuring the record to be returned to the control of the institution?]
8.4. CFIA-IS-ATI3.1-i8.4: “Staff are responsible for contributing to the identification of the Agency’s vital records and the development of appropriate Retention and Disposal Schedules”;  
[M314(CFIA-IS-ATI3.1-i8.4): “responsible for contributing to” is reasonable];

9. CFIA-IS-ATI3.1-i9: The second subsection:
9.1. “The President is accountable for all records created and received by the Agency”;
9.2. The Manager, Recorded Information Management, will conduct random monitoring of staff to ensure that they are complying with the Agency’s policy;
9.3. The Information Management Division “will undertake periodic reviews and may request Corporate Audit and Review Directorate to conduct internal audits of the Recorded

---

437 TBS, “Policy on Management of Information Technology,”
Information program to ensure it is complying with the contents of the Policy as well as ensure the effectiveness and efficiency of its implementation”; [M315(CFIA-IS-ATI3.1-i9): IM/RM does “random monitoring” and “periodic reviews”, two mechanisms for ensuring the IM policy compliance including “the effectiveness and efficiency of its implementation”; no records telling how this is done + MAF data (M209(CFIA-IS3-i4.3)) show implementation is unsatisfactory; this may be caused by issues with IM/RM capacity (= resources as used in audit reports) or IM/RM capability/ability (D? possession and application of RM disciplinary knowledge and skills defined by the present project, or both); [M316(CFIA-IS-ATI3.1-i9): IM/RM does not perform any actual RM work; will this cause problems when providing guidance on employees’ performing of the actual RM work? No records telling employees’ opinions on this because no evaluations have been done for this purpose. Audit reports emphasized IM/RM capacity, i.e., unable to provide more training sessions due to resource constraints, yet here it is about IM/RM ability. One thing is factual that employees were unable to manage records to satisfaction, otherwise there would not be the IM crisis];

1. CFIA-IS-ATI3.2-i1: the first sentence is “Under the “Policy on Information Management” all employees of CFIA are responsible for managing Agency information, which they hold in trust, on behalf of Canadians”; [M317(CFIA-IS-ATI3.2-i1): emphasizes employees’ IM responsibility: to hold records “on behalf of Canadians”; yet, it’s difficult to obtain records through ATI request; an issue of policy requirements vs. the reality, and the latter has never satisfied the former, so the individual employee RM did not work, has never worked, and will not work];

2. CFIA-IS-ATI3.2-i2: The first section is for “All Employees”;

2.1. Every CFIA employee is responsible for the management of Agency information with the goals of ensuring: quality, accuracy, relevance, reliability, completeness, accessibility and security/protection; [M309: heavy workload for employees; unreasonable/inexecutable requirement];

2.2. In addition, employees are responsible for the life-cycle management of the information they hold in trust; [M309: heavy workload for employees; unreasonable/inexecutable requirement];

Information Management (IM) Roles and Responsibilities (date modified: 2010-12-20).
2.3. CFIA-IS-ATI3.2-i2.3: 5 “must” requirements; basically in line with TBS requirements;

3. CFIA-IS-ATI3.2-i3: The second section is for “Departing Employees”;
   3.1. Departing employees “must ensure that the information … is organized, classified, verified for access rights and transferred to the appropriate individuals for storage and ongoing lifecycle management”; [M309: heavy workload for employees; unreasonable/inexecutable requirement];

3.2. CFIA-IS-ATI3.2-i3.2: 7 “must” requirements; [M309: heavy workload for employees; unreasonable/inexecutable requirement];

4. CFIA-IS-ATI3.2-i4: The third section is for “Managers”;
   4.1. CFIA-IS-ATI3.2-i4.1: 6 responsibilities/accountabilities
   4.2. CFIA-IS-ATI3.2-i4.2: 5 “must” requirements; basically in line with TBS requirements; [M318(CFIA-IS-ATI3.2-i4.1+CFIA-IS-ATI3.2-i4.2): many responsibility and heavy workload for managers];

5. CFIA-IS-ATI3.2-i5: The last section is for “Information Management Program”; The IM Program at CFIA is responsible for:
   5.1. CFIA-IS-ATI3.2-i5.1: The development and implementation of IM policies, standards, practices and guidelines; [M319(CFIA-IS-ATI3.2-i5.1): what IM does: develop P-S-G; implement P-S-G, and “implementation” = the requiring of, in an explicit manner, employees and managers to do the actual RM work];
   5.2. CFIA-IS-ATI3.2-i5.2: Advice on the incorporating of IM practices and principles into Agency business processes; awareness and educational sessions and supporting materials on IM; [M320(CFIA-IS-ATI3.2-i5.2): what IM does: to advise “on the incorporating of IM practices and principles into Agency business processes”]; [M321(M320+all CFIA released records+CFIA-IS-ATI2-i1): subject classification system]: no records demonstrating the RM’s understanding of “Agency business processes”; besides, if IM/RM understands the business processes, should not it be more suitable to perform actual RM work such as classifying records?]; [M322(CFIA-IS-ATI3.2-i5.2): what IM does];
   5.3. CFIA-IS-ATI3.2-i5.3: Strategic advice and guidance regarding the introduction of innovative IM practices;
   5.4. CFIA-IS-ATI3.2-i5.4: delivery of IM solutions and services; [I sent follow up request on this];
   5.5. CFIA-IS-ATI3.2-i5.5: No “must” requirements; [M323(CFIA-IS-ATI3.2-i5.5⇒CFIA-IS-ATI3.2-i2.3: “must”]
<table>
<thead>
<tr>
<th>Data</th>
<th>Indicators ➔ Memos &amp; Substantive Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS-ATI-3.3</td>
<td>requirements for employees+ CFIA-IS-ATI3.2-i3.2: “must” requirements for employees; CFIA-IS-ATI3.2-i4.2: “must” requirements for managers): RM has the fewest obligatory responsibilities];</td>
</tr>
</tbody>
</table>

1. CFIA-IS-ATI3.3-i1: Defines record; the definition is different from CFIA-IS-ATI3.1-i2; [M324: confusing conceptual framework: inconsistent definition for record within the same institution];
2. CFIA-IS-ATI3.3-i2: Categorizes records as “either official or transitory”;
3. CFIA-IS-ATI3.3-i3: Defines “official record”; [M325(CFIA-IS-ATI3.3-i3 ☞ CFIA-IS-ATI3.1-i5: Defines “transitory records”): these two definitions are not mutually exclusive; see also M308];
4. CFIA-IS-ATI-3.3-i4: Points to the document “What to Keep, What not to Keep” (CFIA-IS-ATI-3.4) for “identifying official records”;
5. CFIA-IS-ATI3.3-i5: Defines/explains “transitory record”; [M326(CFIA-IS-ATI3.3-i5 ☞ CFIA-IS-ATI3.1-i5): inconsistent guidance; similar to CFIA-IS-ATI3.1-i5 but with a different emphasis; it emphasize the deletion of transitory records especially transitory email messages; CFIA-IS-ATI3.1-i5 emphasizes the caution needed for deletion;
6. CFIA-IS-ATI3.3-i1.6: Explains RDIMS but did not explain the conceptual relationships b/w record, document, and information; [M327(CFIA-IS-ATI3.3-i1.6): confusing conceptual framework: did not explain the conceptual relationships b/w record, document, and information in RDIMS]; [TS3-GC1: identifies the Request for Proposal (RFP) entitled Records/Documents/Information Management: Integrated Document Management System (RDIMS) for the Government of Canada – Software Requirements by LAC as one extended source for understanding the 3 terms];
7. CFIA-IS-ATI3.3-i1.7: Explains “information lifecycle” and uses “information” as a general term; [M328(CFIA-IS-ATI3.3-i1.7): limited usefulness for application];

439 Records Management – Frequently Asked Questions (date modified: 2010-12-20).

440 Official records document or provide evidence of the Agency’s business activities. Official records must be saved according to Agency retention schedules.
8. CFIA-IS-ATI3.3-i1.8: Explains TBS Policy on Information Management; the statement that “All federal government department and agencies must align themselves with this policy” is inaccurate, because the policy only “applies to departments as defined in section 2 of the Financial Administration Act (FAA)”;
CFIA-IS-ATI3.3-i1.8 → M305(2); RM has record creation/accuracy issue];

| TS3-GC1 | 1. TS3-GC1-i1: first uses RDIMS; |
| 2. TS3-GC1-i2: Does not define the 3 them or explain the relationships among them; |
| 3. TS3-GC1-i3: Defines “document management”, including disposition; |
| 4. TS3-GC1-i4: Does not define records management; |
| 5. TS3-GC1-i5: Does not define information management, yet states that IM “is not limited to a single discipline, rather, it involves program areas, libraries, records management and other areas of activity in the organization”]; [M329(TS3-GC1-i5)=TBS 2007 definition for IM: the nature of IM has never been clearly defined]; [M330(TS3-GC1-i5+4+2): incomplete conceptual framework]; |
| 6. TS3-GC1-i6: Identifies DM-RM relationship: the ideal electronic solution would be a document management system that would contain the necessary records management functionality; [M331(TS3-GC1-i6): RM is part of RDIMS and is different from DM]; |
| 7. TS3-GC1-i7: Identifies IM-D/RM relationship: The ideal software should encompass more than traditional document and records management: the ideal software product would extend to … the treatment of information as objects. In this RFP, e-mail messages, word processing files, spread sheet files, images, voice and video files are all considered to be objects; [M332(TS3-GC1-i7): could not find any reference in GC regarding traditional document management]; [M333(TS3-GC1-i7): IM as an extension to DM and... |

---

441 Document management is defined as a system for controlling the capture (when created or received), classification (cataloguing), storage, retrieval, revision, sharing and reuse, protection and disposition of documents. Documents include electronic and non-electronic objects. Electronic objects include products of word processors, e-mail, imaged material, etc.

442 See also, “The software also provides the tools required by the records management community”.
7.1. TS3-GC1-i7.1: Defines Object: According to context, may refer to an object in the generic sense (OLE, object-oriented, etc.) or to a "document". In the latter sense the object may be a paper or electronic document, a video, a sound recording, a photograph, a rock sample, or any other information item to be managed; [M334(TS3-GC1-i7.1): confusing conceptual framework: no explanations on using a term (object) for another one that already exists (document)]; [M335((TS3-GC1-i7:information=object= e-mail messages, word processing files, spread sheet files, images, voice and video files+TS3-GC1-i7.1: object=document= a video, a sound recording, a photograph+TS3-GC1-i3: document = products of word processors, e-mail, imaged material): information = object = document) ⇔ M333 → confusing conceptual framework: conflict conceptual relationships];

8. TS3-GC1-i8: Characterizes IM: Information management forms an integral part of a department's business plans; [M336(TS3-GC1-i8): IM is linked to business];

9. TS3-GC1-i9: Outlines RM roles: [M337(TS3-GC1-i9): RM is not linked to business but tightly constrained within the scope of “record keeping”; [M338(TS3-GC1-i9): what RM does: establish department RK policies and guidelines; provide trainings on RK; negotiate RDAs, set up transfers, etc.];

10. TS3-GC1-i10: For RDIMS (in electronic environment), RM ensures 1. set up and maintain classification system management, 2. retention/disposition management, and 3. Access based on need to know (security); [M339(TS3-GC1-i10): ERM (RM in RDIMS) is not linked to business either]; [M340((TS3-GC1-i10 ⇔ TS3-GC1-i3): both RM and DM manages disposition (⇔ TS3-GC1-i6): yet they refer to different functionalities of RDIMS) → confusing conceptual framework: conflicting conceptual relationships];

11. TS3-GC1-i11: No roles outlined for DM or IM; TS3-GC1-i11 → M330(2): incomplete conceptual framework;

12. TS3-GC1-i12: The requirements use the 3 terms and object without differentiation; [M341(TS3-GC1-i12): is it safe to assume that it will be difficult for departments to apply? check departmental RDIMS documents for “difficult to apply” proofs];

12.1. Document(s) appears 45 times, more than record(s) (33 times), even in cases where the subject is no doubt records; 443

12.2. Information appears 77 times, more than document(s)

12.3. TS3-GC1-i12.3: Object appears 135 times, more than

443 For example, There is a need to manage "classified" documents in the federal government.
| IS-ATI-3.4 | 1. CFIA-IS-ATI3.4-i1: official records must be saved/kept;  
|           | 2. CFIA-IS-ATI3.4-i2: gives 7 examples of “information” that qualifies as official records:  
|           |   2.1. CFIA-IS-ATI3.4-i2.1: Reflects the Agency’s position on an issue;  
|           |   2.2. CFIA-IS-ATI3.4-i2.2: Documents a decision;  
|           |   2.3. CFIA-IS-ATI3.4-i2.3: Initiates, authorizes or completes an Agency business transaction;  
|           |   2.4. CFIA-IS-ATI3.4-i2.4: States policies or directives;  
|           |   2.5. CFIA-IS-ATI3.4-i2.5: Originated from outside the Agency and forms part of a corporate record;  
|           |   2.6. CFIA-IS-ATI3.4-i2.6: Provides evidence of the Agency’s business activities;  
|           |   2.7. CFIA-IS-ATI3.4-i2.7: Does not exist anywhere else in the Agency such as work schedules, status reports, meeting agendas and minutes, briefing notes, or final versions of documents and related recommendations;  

User: Everyone utilizing the system, including knowledge worker, operational staff, records management specialist, the public, etc.

What to Keep, What Not to Keep. (no date).
### Data Indicators \(\rightarrow\) Memos & Substantive Codes

Inadequate/confusing guidance: records identification is difficult if not impossible to distinguish “official records” from “transitory records” even for trained professionals, let alone employees.

**IS-ATI-3.5**

1. CFIA-IS-ATI3.5-i1: Contains procedures for “records to be destroyed”, “Destruction of records”, “Disposition of records”, “Preparation of records for transfer to archives or off-site storage”, and “Classification”;
   1.1. CFIA-IS-ATI3.5-i1.1: All steps are for business functions other than the IM/RM function to follow;
   1.2. CFIA-IS-ATI3.5-i1.2: Records Management Services is to be contacted “for any information or assistant”; [M347(CFIA-IS-ATI3.5-i1.2): RM a passive service function];
   1.3. CFIA-IS-ATI3.5-i1.3: Explains the Subject File Classification as “subjects based on the operation of the Agency”, and the classification structure refers to “the functions within the Agency and not to its specific organizational components”; [M348(CFIA-IS-ATI3.5-i1.3): inadequate/confusing guidance: subject-based vs. functional classification system]; [M349(CFIA-IS-ATI3.5-i1.3): no connection with LAC-4];

**IS-ATI-3.6**

1. CFIA-IS-ATI3.6-i1: Introduces RDIMS functions to employees, including saving, profiling, finding, protection, etc; [M350(CFIA-IS-ATI3.6-i1+CFIA-IS-ATI3.5-i1.1): All policies and procedures are for employees and managers (i.e., none-IM specialists);]}

---

446 Procedures. (no date)


448 “The policy has been written to ensure that all employees are informed of this (= the effective capture, storage and management of information is not only essential to the Agency’s success, but is also a legal obligation of the Agency)”.

281
Appendix 4 Alphabetic Organization of the Conceptual Building Blocks

1. Accountability-Related Activity
   1.1. Specification
      1.1.1. One type of Non-RM Activity
      1.1.2. It requires records to be disclosed to
         1.1.2.1. the public (i.e., ATI requests) with respect to the conduct of their Creating Activity or
         1.1.2.2. other authorities (e.g., the Parliament) with respect to the conduct of their Creating Activity
   1.2. Measurement
      1.2.1. Degree of design quality
      1.2.2. Degree of conduct effectiveness

2. Accountability-Related Activity Knowledge
   2.1. Composition
      2.1.1. Same as those for Business Activity Knowledge
   2.2. Specification
      2.2.1. Same as those for Business Activity Knowledge
   2.3. Measurement
      2.3.1. Same as that for Business Activity Knowledge

3. Activity Time Boundary
   3.1. Specification
      3.1.1. Activities can take place in records creating institutions or archival institutions
      3.1.2. They are distinguishable by their running/operating time
         3.1.2.1. A Past Activity = one that has been completed
         3.1.2.2. A Present Activity = one that is currently taking place
         3.1.2.3. A Future Activity = one that will take place either according to design/plan or unexpectedly
         3.1.2.4. The ending of a Present Activity changes it to a Past Activity
         3.1.2.5. The beginning of a Future Activity changes it to a Present Activity
3.1.2.6. The ending and beginning times may be determined by activity design
3.1.3. The time period is determined by activity design
3.1.4. Time can also be used for sub-activities or processes of an activity

3.2. Measurement
3.2.1. Degree of recognition by Organizational RM

4. Archival Appraisal
4.1. Specification
4.1.1. An activity carried out by an Archival Institution
4.1.1.1. Archival Institution = an organization established to preserve and provide access to records transferred to it by records creating organization
4.1.2. Assesses Record Reuse-Distant Value
4.1.3. Requires assistance from Organizational RM
4.1.4. Relies on Record(s) Maintaining Activity
4.1.5. Is the foundation of Records Disposition Authority

4.2. Measurement
4.2.1. Timeliness

5. Business Activity
5.1. Specification
5.1.1. One type of Operational Activity
5.1.2. Designed to achieve specific, mandate-related objectives of an institution
5.1.3. Objectives are not primarily for RM Activity
5.1.3.1. Primarily indicates inclusion of some RM Activity
5.1.4. Objectives are not for Accountability-related Activity
5.1.5. Objectives are not for Investigation-related Activity

5.2. Measurement
5.2.1. Degree of design quality
5.2.2. Degree of conduct effectiveness

6. Business Activity Knowledge
6.1. Composition
   6.1.1. Business Activity Design Knowledge
   6.1.2. Business Activity Execution Knowledge

6.2. Specification
   6.2.1. Part of RM Extended Knowledge

6.3. Measurement
   6.3.1. Degree of understanding adequacy by Organizational RM (through RM Personnel)

7. Business Activity Design Knowledge
   7.1. Specification
      7.1.1. Understanding of the design of Business Activity
         7.1.1.1. The understanding is necessary for Record Identification
         7.1.1.2. The obtaining of the understanding relies on RM participation in the design of Business Activity
         7.1.1.3. The level of understanding is determined by the goals set for Organizational RM
      7.1.2. Business Activity Design can be of constant modification

7.2. Measurement
   7.2.1. Degree of understanding adequacy by Organizational RM (through RM Personnel)

8. Business Activity Execution Knowledge
   8.1. Specification
      8.1.1. Understanding of the execution of Business Activity is necessary for the Unit RM to conduct RM Maintaining Activities and Record(s) Retrieval Activity including the supervision of Employee RM and Technology RM
      8.1.2. The obtaining of the understanding relies on RM participation in the execution of Business Activity
         8.1.2.1.1. The participation is carried out through the establishment of Unit RM
      8.1.3. The level of understanding is determined by the goals set for Organizational RM
8.2. Measurement
8.2.1. Degree of understanding adequacy by Organizational RM (through RM Personnel)

9. Central Digital Records Management System (CDRMS)
9.1. Specification
9.1.1. Operated by Central RM
9.1.2. Part of Record(s) Maintaining Technology
9.1.3. An information system where information on all records is available
9.1.4. It physically contain records created by Central RM
9.1.5. It does not physically contain records of Non-RM Activity
9.1.6. It can be integrated with Unit Digital Records Management System for access

9.2. Measurement
9.2.1. Degree of design optimization
9.2.2. Degree of operation effectiveness

10. Central RM
10.1. Specification
10.1.1. An independent administrative configuration
10.1.2. Relies on authority established by RM Governance Structure for operation
10.1.3. Fulfills responsibilities outlined in RM Responsibility Arrangement
10.1.4. Operates Central Digital Records Management System
10.1.5. Relies on dedicated RM Personnel for operation

10.2. Measurement
10.2.1. Degree of establishment adequacy
10.2.2. Degree of operation effectiveness

11. Centralized Records
11.1. Specification
11.1.1. Physically in the database of an Organizational Digital Records Management System

11.2. Measurement
11.2.1. Existence of justifications (for to be centralized or not)

12. Decentralized Records

12.1. Specification

12.1.1. Not physically in the database of an Organizational Digital Records Management System

12.1.2. Managerially controlled by a Unit Digital Records Management System

12.2. Measurement

12.2.1. Existence of justifications (for to be centralized or not)

13. Digital Record

13.1. Specification

13.1.1. One type of records

13.1.2. Currently the predominate type

13.1.3. Existence relies on Organizational Information Technology

13.1.4. Complexity determined by OIT

13.2. Measurement

13.2.1. Degree of existence recognition

13.2.2. Degree of complexity recognition

13.2.3. Percentage among identified records

14. Employee RM

14.1. Composition

14.1.1. Creation of record content in compliance with record-making rules

14.1.2. Carry out the portion of RM Maintaining Activity that can be quickly completed (e.g., Record Capture, Record Titling).

14.2. Specification

14.2.1. Structurally part of Non-RM Operational Activity

14.2.2. Structurally also part of Unit RM

14.2.3. Fulfills responsibilities outlined in RM Responsibility Arrangement

14.2.4. Carrying out is assisted by RM Procedure

14.2.5. Carrying out is assisted by Record Titling Template

14.2.6. Carrying out is integrated with the conduct of the creating activity
14.2.7. Carrying out is supervised by Unit RM

14.3. Measurement

14.3.1. Degree of operation effectiveness

15. Investigation-Related Activity

15.1. Specification

15.1.1. One type of operational activity

15.1.2. It requires records to be admissible as evidence in administrative or legal investigations concerning their Creating Activity

15.2. Measurement

15.2.1. Degree of design quality

15.2.2. Degree of operation effectiveness

16. Investigation-Related Activity Knowledge

16.1. Composition

16.1.1. Same as those for Business Activity Knowledge

16.2. Specification

16.2.1. Same as those for Business Activity Knowledge

16.3. Measurement

16.3.1. Same as that for Business Activity Knowledge

17. Local RM

17.1. Composition

17.1.1. Unit RM

17.1.2. Employee RM

17.1.3. Technology RM

17.2. Measurement

17.2.1. Degree of operational effectiveness

18. Non-RM Activity

18.1. Composition

18.1.1. Accountability-Related Activity

18.1.2. Investigation-Related Activity

18.1.3. Business Activity

18.2. Specification
18.2.1. One type of Operational Activity

18.3. Measurement
  18.3.1. Degree of design quality
  18.3.2. Degree of components being distinguished
  18.3.3. Degree of conduct effectiveness

19. Non-RM Activity Knowledge
  19.1. Composition
    19.1.1. Business Activity Knowledge
    19.1.2. Accountability-Related Activity Knowledge
    19.1.3. Investigation-Related Activity Knowledge
  19.2. Specification
    19.2.1. Part of RM Extended Knowledge
  19.3. Measurement
    19.3.1. Degree of understanding adequacy

20. Non-RM Technology Knowledge
  20.1. Specification
    20.1.1. Understanding of Organizational IT used by Non-RM Activity
    20.1.2. Level of understanding limited to software/information system functionality
  20.2. Measurement
    20.2.1. Degree of understanding adequacy

21. Operational Activity
  21.1. Composition
    21.1.1. Non-RM Activity
    21.1.2. RM Activity
  21.2. Specification
    21.2.1. Operational Activity is owned by an institution
    21.2.2. Operational Activity is designed by the institution
    21.2.3. The design is executed by the institution
    21.2.4. Operational Activity is Record Creating Activity
    21.2.5. Conduct relies on information technology
21.2.6. RM Application-Oriented Work (of RM Activity) is part of Non-RM Activity

21.3. Measurement

21.3.1. Degree of design quality in terms of satisfying organizational needs
21.3.2. Degree of components being distinguished
21.3.3. Degree of relationship between components being recognized
21.3.4. Degree of conduct effectiveness

22. Organizational Information Technology (OIT)

22.1. Composition

22.1.1. Non-RM Technology

22.1.1.1. Business Activity Technology
22.1.1.2. Accountability-related Activity Technology
22.1.1.3. Investigation-related Activity Technology

22.1.2. RM Technology

22.2. Specification

22.2.1. Relating to computer or computer-like devices
22.2.2. Relating also to the Internet
22.2.3. Centrally managed in organization

22.2.3.1. Manage = plan, purchase, implement, maintain, upgrade and disposal
22.2.3.2. Maintain = routine, daily work that ensures normal operation

22.3. Measurement

22.3.1. Degree of optimization for Operational Activity

23. Organizational Digital Records Management System (ODRMS)

23.1. Composition

23.1.1. Central Digital Records Management System
23.1.2. Unit Digital Records Management System

23.2. Specification

23.2.1. Can be more than one
23.2.2. Requires Record(s) Maintaining Technology
23.2.3. Requires integration with Record Creating Technology
23.3. Measurement
   23.3.1. Degree of design optimization
   23.3.2. Degree of operation effectiveness

24. Organizational RM
   24.1. Composition
      24.1.1. Central RM
      24.1.2. Local RM
   24.2. Specification
      24.2.1. Relies on RM Governance Structure for establishment
      24.2.2. Relies on RM Responsibility Arrangement for operation
      24.2.3. Determines RM Capacity
   24.3. Measurement
      24.3.1. Degree of establishment adequacy
      24.3.2. Degree of operation effectiveness

25. Record Capture
   25.1. Specification
      25.1.1. Particularly relevant to Digital Record
      25.1.2. Part of Record(s) Maintaining Activity
      25.1.3. Records can be managerially captured in UDRMS
         25.1.3.1. = metadata about the records created in UDRMS
      25.1.4. Records can also be technologically captured in UDRMS
         25.1.4.1. = an actual copy created in UDRMS
         25.1.4.1.1. Triggered by saving (in the sense of computer operation)
      25.1.5. Relies on Record Identification for capturing accuracy with respect to
         25.1.5.1. Record content
         25.1.5.2. Record documentary form
         25.1.5.3. Record Metadata
      25.1.6. Conducted by Local RM
         25.1.6.1. by human beings or RM Technology or combination of human and technology
   25.2. Measurement
25.2.1. Degree of comprehensiveness (percentage of captured records against identified records)
25.2.2. Degree of capture accuracy

26. Record Classification
26.1. Specification
   26.1.1. Implementation of Records Classification Scheme
      26.1.1.1. Classifying records into classes
   26.1.2. Classifying applies only to individual records
   26.1.3. Follows RM Procedure
   26.1.4. Carried out by RM Personnel of Unit RM
   26.1.5. Can also be carried out by Technology RM
      26.1.5.1. Records auto-classification

26.2. Measurement
   26.2.1. Degree of comprehensiveness (percentage of classified records against captured records)
   26.2.2. Degree of timeliness
   26.2.3. Degree of accuracy

27. Record Creation Purpose
27.1. Specification
   27.1.1. To create a record is to satisfy the need of an Operational Activity
   27.1.2. The Operational Activity is its creating activity

27.2. Measurement
   27.2.1. Existence of decision for the creation
   27.2.2. Existence of justification(s) for the creation

28. Record Identification
28.1. Composition
   28.1.1. Identification of record content
   28.1.2. Identification of record documentary form
   28.1.3. Identification of Record Metadata

28.2. Specification
   28.2.1. Relies on understanding of Record Creation Purpose
28.2.2. Relies on understanding of Record Instrumental Value
28.2.3. Relies on Unit RM/Dedicated RM Personnel to be conducted

28.3. Measurement
28.3.1. Degree of importance recognition by organization (through Organizational RM)
28.3.2. Degree of identification comprehensiveness
28.3.3. Degree of identification quality

29. Record Instrumental Value

29.1. Specification
29.1.1. A record possesses Instrumental Value when it is demanded by an Operational Activity for its conduct
   29.1.1.1. The demand is part of the design\(^{449}\) of the Operational Activity
   29.1.1.2. The Operational Activity is its Creating Activity
   29.1.1.3. The Operational Activity is a Present Activity
29.1.2. Record Instrumental Value is exclusive to Creating Activity/Present Activity
29.1.3. Record Instrumental Value is relevant to productivity and effectiveness

29.2. Measurement
29.2.1. Degree of recognition by organization (through Organizational RM)
29.2.2. Degree of realization

30. Record Metadata

30.1. Specification
30.1.1. Recorded information about individual records
30.1.2. Intended for representation and maintenance
30.1.3. In the form of discrete piece

\(^{449}\) The focus here is design. Design can be impacted or influenced by a variety of factor in or outside the organization. It therefore implies constant change and the need for analytical skills to accommodate the change.
30.1.4. Can be combined in accordance with defined rules to achieve a defined goal
30.1.5. Recorded means being affixed to a medium
30.1.6. Relies on RM Application-Oriented Work for development
30.1.7. Facilitates Record Retrievability development
30.1.8. Benefits record preservation and access in archival institution
30.1.9. Is managerially integrated with RCS
30.1.10. Can be technologically integrated with RCS

30.2. Measurement
30.2.1. Degree of accuracy in terms of representing the record
30.2.2. Degree of completeness in terms of enabling management

31. Record Nature
31.1. Specification
31.1.1. Illustrates Record Creation
31.1.2. Illustrates Record Maintenance
31.1.3. Illustrates Record Use
31.1.4. Relies on RM Collective Ability for development
31.1.4.1. Developed as a subject

31.2. Measurement
31.2.1. Degree of being understood by organization

32. Record Reuse Value
32.1. Composition
32.1.1. Record Reuse-Immediate Value
32.1.2. Record Reuse-Distant Value

32.2. Specification
32.2.1. Record Reuse Value is relevant to Future Activity

32.3. Measurement
32.3.1. Degree of recognition by organization
32.3.2. Degree of components being distinguished
32.3.3. Degree of realization by Organizational RM

33. Record Reuse-Distant Value
33.1. Composition
   33.1.1. Record Reuse-Distant-Accountability Value
   33.1.2. Record Reuse-Distant-Investigation Value
   33.1.3. Record Reuse-Distant-Resource Value
33.2. Specification
   33.2.1. The reuse is distant when records are used by a Future Activity taking place in an Archival Institution
33.3. Measurement
   33.3.1. Degree of components being distinguished
   33.3.2. Degree of recognition by organization
   33.3.3. Degree of recognition by Archival Institution
   33.3.4. Degree of realization by Organizational RM
34. Record Reuse-Distant-Accountability Value
   34.1. Specification
      34.1.1. A record possesses Reuse-Distant-Accountability Value when it is used by an Accountability-Related Activity in an Archival Institution
      34.1.1.1. The use is a Future Activity with reference to the Creating Activity
      34.1.1.2. This type of Future Activity cannot be predicted
      34.1.2. The value can be assessed independently by Archival Appraisal
      34.1.3. The value is relevant to legislative compliance
      34.1.4. The value is relevant to government transparency
      34.1.5. The value is relevant to society democracy
   34.2. Measurement
      34.2.1. Degree of recognition by organization (through Organizational RM)
      34.2.2. Degree of recognition by Archival Institution
      34.2.3. Degree of realization
35. Record Reuse-Distant-Investigation Value
   35.1. Specification
      35.1.1. A record possesses Reuse-Distant-Investigation Value when it is used by an Investigation-Related Activity in an Archival Institution

294
35.1.1.1. The Investigation-Related Activity is a Future Activity with reference to the Creating Activity

35.1.1.2. This type of Future Activity is unpredictable

35.1.2. The value should not be assessed independently by Archival Appraisal

35.1.3. It is relevant to legal/juridical compliance

35.2. Measurement

35.2.1. Degree of recognition by organization (through Organizational RM)

35.2.2. Degree of recognition by Archival Institution

35.2.3. Degree of realization

36. Record Reuse-Distant-Resource Value

36.1. Specification

36.1.1. A record possesses Reuse-Distant-Resource Value when it is used by a Business Activity in an Archival Institution

36.1.1.1. Resource = information resource/knowledge resource/business asset

36.1.1.2. This type of resource maintains the characteristics of being records

36.1.2. The value can be assessed independently by Archival Appraisal

36.1.3. It is relevant to productivity and effectiveness

36.2. Measurement

36.2.1. Degree of recognition by organization (through Organizational RM)

36.2.2. Degree of recognition by Archival Institution

36.2.3. Degree of realization

37. Record Reuse-Immediate Value

37.1. Composition

37.1.1. Record Reuse-Immediate-Accountability Value

37.1.2. Record Reuse-Immediate-Investigation Value

37.1.3. Record Reuse-Immediate-Resource Value

37.2. Specification

37.2.1. The reuse is immediate when records are used by a Future Activity that takes place within the records creating organization and/or other organizations as determined by the design of the activity
37.2.1.1. The other organizations are not an archival institution

37.2.2. The types are distinguishable, but not mutually exclusive

37.3. Measurement

37.3.1. Degree of components being distinguished

37.3.2. Degree of recognition by organization

37.3.3. Degree of realization by Organizational RM

38. Record Reuse-Immediate-Accountability Value

38.1. Specification

38.1.1. A record possesses Reuse-Immediate-Accountability Value when it is used by an Accountability-Related Activity

38.1.1.1. The Accountability-Related Activity is a Future Activity with reference to the Creating Activity

38.1.1.2. This type of Future Activity can be regular

38.1.2. This value should not be assessed independently by RM Appraisal because

38.1.2.1. It is originated from Record Instrumental Value, and

38.1.2.2. It co-exists with other Record(s) Reuse-Immediate Value

38.1.3. The value is relevant to legislative compliance

38.1.4. The value is relevant to government transparency

38.1.5. The value is relevant to society democracy

38.2. Measurement

38.2.1. Degree of recognition by organization (through Organizational RM)

38.2.2. Degree of realization (inherited)

39. Record Reuse-Immediate-Investigation Value

39.1. Specification

39.1.1. A record possesses Reuse-Immediate-Investigation Value when it is used by an Investigation-Related Activity

39.1.1.1. The Investigation-Related Activity is a Future Activity with reference to the Creating Activity

39.1.1.2. This type of Future Activity is usually unpredictable
39.1.2. This value should not be assessed independently by RM Appraisal because
39.1.2.1. It is originated from Record Instrumental Value, and
39.1.2.2. It co-exists with other Record(s) Reuse-Immediate Value
39.1.3. It is relevant to legal/juridical compliance

39.2. Measurement
39.2.1. Degree of recognition by organization (through Organizational RM)
39.2.2. Degree of realization (inherited)

40. Record Reuse-Immediate-Resource Value
40.1. Specification
40.1.1. A record possesses Reuse-Immediate-Resource Value when it is used by a Business Activity
40.1.1.1. Resource = information resource/knowledge resource/business asset
40.1.1.2. This type of resource maintains the characteristics of being records
40.1.2. The value is relevant to productivity and effectiveness
40.1.3. It is the primary reason for records retention and maintenance beyond their Creating Activity

40.2. Measurement
40.2.1. Degree of recognition by organization (through Organizational RM)
40.2.2. Degree of realization (inherited)

41. Record Titling
41.1. Specification
41.1.1. Part of classifying
41.1.2. Applies titling template
41.1.3. Carried out by Employee RM
41.1.4. Can also be carried out by Technology RM (when integrated with Record Creating Technology)
41.1.5. Supervised by Unit RM

41.2. Measurement
41.2.1. Degree of comprehensiveness (percentage of named records against all classified records)

41.2.2. Degree of timeliness

41.2.3. Degree of consistence

42. Record Titling Guidelines

42.1. Specification

42.1.1. Guide the development of titling templates with structured place holders for descriptive facets

42.1.1.1. Templates developed by Unit RM

42.1.2. Relies on Record Identification

42.2. Measurement

42.2.1. Degree of pertinence to Creating Activity/Operational Activity

43. Record Usability

43.1. Composition

43.1.1. Being authentic

43.1.1.1. Record content remains unchanged

43.1.1.2. Record documentary form remains unchanged or changed as planned/expected (thus are traceable and can be documented)

43.1.2. Being contextualized

43.1.2.1. Exists in relationships with other records of its creating activity

43.1.3. Being human readable

43.1.3.1. Able to survive technological obsolescence

43.1.3.2. Relies on Record(s) Long-Term Preservation

43.1.4. Specification

43.1.4.1. Relies on Record(s) Maintaining Activity

43.1.4.2. Part of RM Control

43.2. Measurement

43.2.1. Degree of comprehensiveness (percentage of useful records against all identified records)

44. Record Value

44.1. Composition
44.1.1. Record Instrumental Value
44.1.2. Record Reuse Value
44.2. Specification
44.3. Record Reuse Value becomes Record Instrumental Value when Future Activity becomes Present Activity/records creating activity
44.4. Measurement
  44.4.1. Degree of components being distinguished
  44.4.2. Degree of being recognized by organization
  44.4.3. Degree of realization by Organizational RM
45. Record(s) Long-Term Preservation
  45.1. Specification
    45.1.1. Required for records needed by the organization for a time period longer than the existence of the digital technologies supporting them
    45.1.2. Continues RM Control with technological changes (e.g., system upgrade)
  45.2. Measurement
    45.2.1. Degree of comprehensiveness (percentage of records with continued RM Control against all records determined for LTP)
46. Record(s) Maintaining Activity
  46.1. Composition
    46.1.1. Record Capture
    46.1.2. Record Classification
    46.1.3. Record Titling
    46.1.4. RM Appraisal
    46.1.5. Records Retention Calculation
    46.1.6. Records Disposition Activity
    46.1.7. Record(s) Long-Term Preservation
    46.1.8. Unit Digital Records Management System operation
  46.2. Specification
    46.2.1. Carrying out relies on RM Identification
    46.2.2. Carrying out relies on RM Tool
46.2.3. Carrying out relies on RM Procedure

46.3. Measurement

46.3.1. Degree of completion effectiveness

47. Record(s) Maintaining Technology

47.1. Composition

47.1.1. Business Process Management System (BPMS)\textsuperscript{450} for Record Identification

47.1.2. Digital Records Management System (DRMS) for all other Record(s) Maintaining Activities

47.2. Specification

47.2.1. Part of OIT used by Record(s) Maintaining Activity

47.2.2. Design and implementation require understanding of Non-RM Activity

47.2.3. Design and implementation require understanding of RM Activity

47.2.4. Can be integrated with Record Creating Technology

47.2.5. May cause changes to record documentary form originally determined by Record Creating Technology

47.3. Measurement

47.3.1.1. Degree of optimization

47.3.1.2. Degree of integration

47.3.1.3. Percentage of users using the technology against all users with granted access

48. Record(s) Maintenance Purpose

48.1. Specification

48.1.1. To maintain a record (or a class of records) is to permit its use by its creating activity/Present Activity

48.1.2. To maintain a record (or a class of records) is also to permit its use by 
Future Activity 
48.1.3. Maintenance needs to be performed at both individual and class level 
48.2. Measurement 
48.2.1. Existence of decision for maintenance 
48.2.2. Existence of justification(s) for maintenance 
49. Record(s) Metadata 
49.1. Composition 
49.1.1. Record Metadata 
49.1.2. Records Class Metadata 
49.2. Specification 
49.2.1. Necessary for RM Activity 
49.3. Measurement 
49.3.1. Degree of accuracy 
49.3.2. Degree of completeness 
50. Record(s) Purpose 
50.1. Composition 
50.1.1. Record Creation Purpose 
50.1.2. Record(s) Maintenance Purpose 
50.2. Specification 
50.2.1. Derived directly from Record Nature 
50.2.2. Interrelated with Record Value 
50.2.3. Interrelated with RM Nature 
50.3. Measurement 
50.3.1. Degree of components being distinguished 
51. Record(s) Retrievability 
51.1. Composition 
51.1.1. Record Retrievability 
51.1.2. Records Class Retrievability 
51.2. Specification
51.2.1. Development of access points based on Record Metadata enabled by Record Identification
51.2.2. Development of access points based on Records Class Metadata enabled by RCS
51.2.3. Development of location information based on Record Capture and the configuration of ODRMS

51.3. Measurement
51.3.1. Degree of comprehensiveness (percentage of records with retrievability against all identified records)

52. Record(s) Retrieval Activity

52.1. Composition
52.1.1. Record Retrieval
52.1.2. Records Class Retrieval

52.2. Specification
52.2.1. Facilitates obtaining of records
52.2.2. Relies on Record(s) Retrievability
52.2.3. Follows RM Procedure (e.g., access/security rules)
   52.2.3.1. Conducted by non-RM personnel
   52.2.3.2. Conducted also by Employee RM and Technology RM
   52.2.3.3. Conducted also by Unit RM when Employee RM and Technology RM is ineffective
   52.2.3.4. In compliance with access rules

52.3. Measurement
52.3.1. Degree of retrieval timeliness
52.3.2. Degree of retrieval completeness (Recall)
52.3.3. Degree of retrieval precision

---

451 It needs to link the conduct to the types of activity. Non-RM personnel retrieves records when conducting the records creating activity/present activity; RM Personnel retrieves records for other types of activities.
53. Records Class Metadata

53.1. Specification

53.1.1. Recorded information describing records classes in Records Classification Scheme

53.1.2. In the form of discrete piece

53.1.3. Can be combined according to defined rules to structurally present the description

53.1.4. Development relies on the part of Record Metadata that describe the records in the class

53.1.5. Recorded means being affixed to a medium

53.2. Measurement

53.2.1. Degree of accuracy

53.2.2. Degree of completeness

54. Records Classification Scheme (RCS)

54.1. Specification

54.1.1. Developed to organizes records

54.1.2. Contains and/or points to Record Metadata and Records Class Metadata

54.1.3. Development reflects the design of Operational Activity, which determines the relationships between records and records classes

54.1.3.1. When the design of Operational Activity changes, the class structure of RCS changes accordingly

54.1.3.2. Changes need to be documented

54.1.4. Development relies on RM Application-Oriented Work as input, thus is jointly developed by Central RM & Unit RM

54.1.5. Supports Record(s) Retrieval

54.1.6. Supports Records Disposition through integrating with Records Retention

54.1.7. An Organizational RM has only one RCS

54.1.8. Implemented by conducting Record Classifying

54.1.9. Implementation is desired to be assisted by digital technology

54.2. Measurement
54.2.1. Degree of completeness (coverage of Operational Activity or records)
54.2.2. Degree of representation accuracy of relationships between records and their Creating Activity
54.2.3. Degree of currency

55. Records Destruction

55.1. Specification
55.1.1. Removes records from Organizational Digital Records System
55.1.2. The removing intends to disable recoveries of destructed records
55.1.3. Performed at the level of records class
55.1.4. May include (portion of) Records Metadata
55.1.5. Follows RM Procedure
55.1.6. Carried out by Unit RM and Central RM

55.2. Measurement
55.2.1. Degree of comprehensiveness (percentage of records destructed against all records with expired Records Retention)
55.2.2. Degree of timeliness

56. Records Disposition Activity

56.1. Composition
56.1.1. Records Destruction
56.1.2. Records Transfer

56.2. Specification
56.2.1. Relies on Records Disposition Authority

56.3. Measurement
56.3.1. Degree of timeliness

57. Records Disposition Authority (RDA)

57.1. Specification
57.1.1. Issued by Archival Institution to records creating organization
57.1.2. Relies on Archival Appraisal
57.1.3. Can be multiple
57.1.4. Need to be pertinent to records type
57.1.5. Obtaining RDA requires RCS with RRs
57.1.6. Execution of RDA is to conduct Records Disposition Activity

57.2. Measurement
   57.2.1. Degree of comprehensiveness (percentage of covered records against all identified records)
   57.2.2. Degree of pertinence to records type
   57.2.3. Degree of currency

58. Records Retention (RR)
   58.1. Specification
      58.1.1. Time periods for records maintenance
      58.1.2. Relies on RM Appraisal for scheduling
      58.1.3. Scheduling jointly carried out by Central RM & Unit RM
      58.1.4. Scheduling can be aided by risk analysis
      58.1.5. RRs are applicable to records classes
      58.1.5.1. Records are individually scheduled along with Record Identification
      58.1.6. RRs need to be integrated with RCS for disposition
      58.1.7. Re-scheduling occurs when legal hold of discovery order takes place
      58.1.7.1. Discovery is applicable to both physical and digital records
   58.2. Measurement
      58.2.1. Degree of comprehensiveness (percentage of scheduled records against identified records)
      58.2.2. Degree of retention period appropriateness (existence of justifications)
      58.2.3. Degree of currency

59. Records Retention Calculation
   59.1. Specification
      59.1.1. Implementation of Records Retentions
      59.1.2. Desired to be assisted by digital technology
      59.1.3. Can be suspended when needed
   59.2. Measurement
      59.2.1. Degree of accuracy

60. Records Transfer
60.1. Composition
   60.1.1. Records Legal Transfer
      60.1.1.1. the handing over of rights attached to records
   60.1.2. Records Physical Transfer
      60.1.2.1. the changing of records storage

60.2. Specification
   60.2.1. Takes place between records creating organizations and the archival institution
   60.2.2. Requires formal terms and conditions
   60.2.3. Only to be performed at level of records class
   60.2.4. Must include Records Class Metadata
   60.2.5. Must include Record Metadata
   60.2.6. Carried out by Central RM
   60.2.7. Relies on RDA

60.3. Measurement
   60.3.1. Percentage of transferred records against records selected for transfer
   60.3.2. Degree of transfer timeliness

61. RM Academia
   61.1. Specification
      61.1.1. Offers Formal RM Education
      61.1.2. Conducts RM Research
   61.2. Measurement
      61.2.1. Degree of adequacy to support Organizational RM

62. RM Activity
   62.1. Composition
      62.1.1. RM Requirement-Oriented Work
      62.1.2. RM Application-Oriented Work
   62.2. Specification
      62.2.1. The conduct of RM Activity determines the achievement of RM Control
   62.3. Measurement
      62.3.1. Degree of components being distinguished
62.3.2. Degree of recognition adequacy by organization as both necessary
62.3.3. Degree of recognition adequacy by organization as both requiring RM Personnel

63. RM Application-Oriented Work
63.1. Specification
   63.1.1. Part of Non-RM Activity
   63.1.2. Conducted by Local RM
   63.1.3. Conduct Record Identification through participating in Record Creating Activity
   63.1.4. Conduct Record(s) Maintaining Activity
   63.1.5. Conduct Record(s) Retrieval Activity
   63.1.6. Contribute to RM Requirement-Oriented Work

63.2. Measurement
   63.2.1. Degree of completion/conduct effectiveness

64. RM Appraisal
64.1. Specification
   64.1.1. Part of Record(s) Maintaining Activity
   64.1.2. Relies on RM Capacity
   64.1.3. Relies on Record Identification
   64.1.4. Assesses Record Reuse-Immediate Value
   64.1.5. Produces Records Retention

64.2. Measurement
   64.2.1. Degree of comprehensiveness (percentage of appraised records against identified records)
   64.2.2. Degree of timeliness
   64.2.3. Existence of justification(s)

65. RM Capacity
65.1. Composition
   65.1.1. RM Personnel
   65.1.2. RM Technology

65.2. Specification
65.2.1. Determination relies on RM Function Design
65.2.2. Determination relies on establishment of Organizational RM
65.2.3. Critical to the operation of Organizational RM

65.3. Measurement
65.3.1. Degree of adequacy for RM Activity completion (i.e., the number of position)
65.3.2. Degree of technology optimization for Organizational RM operation

66. RM Collective Ability
66.1. Composition
66.1.1. RM Functioning Ability
66.1.2. RM Community Ability
66.2. Specification
66.2.1. Complimentary to each other
66.2.2. Supportive to each other
66.3. Measurement
66.3.1. Degree of adequacy to enable Organizational RM

67. RM Community
67.1. Composition
67.1.1. RM Academia
67.1.2. RM Profession
67.2. Specification
67.2.1. Complimentary with each other
67.2.2. Supportive to each other
67.3. Measurement
67.3.1. Degree of collaboration adequacy

68. RM Community Ability
68.1. Specification
68.1.1. Able to train RM Professionals, through
68.1.1.1. offering formal and continued education
68.1.1.2. conducting research
68.2. Measurement
68.3. Degree of adequacy to support Organizational RM

69. RM Conceptual Framework

69.1. Composition
69.1.1. Concepts
69.1.2. Conceptual relationships

69.2. Specification
69.2.1. Developed by articulating/codifying RM Requisite Knowledge & Skill
69.2.2. Maintained by keeping consistent with RM Requisite Knowledge & Skill advancement
69.2.3. A prerequisite for RM Activity
69.2.4. The concepts may possess relationships of being
   69.2.4.1. Interrelated
   69.2.4.1.1. e.g., Record Value & Record Purpose
   69.2.4.2. Derivable
   69.2.4.2.1. e.g., RM Nature from Record Nature
   69.2.4.3. Mutually exclusive
   69.2.4.3.1. e.g., Reuse-Immediate Value vs. Reuse-Distant-Value
   69.2.4.4. Inclusive
   69.2.4.4.1. e.g., Local RM = Unit RM + Employee RM + Technology RM;
   69.2.4.5. Hierarchical
   69.2.4.5.1. e.g., Operational Activity > RM Activity > Record(s)
   Maintaining Activity > Record Identification
   69.2.4.6. Multiple
   69.2.4.6.1. e.g., Organizational RM > Local RM > = Unit RM > +
   Employee RM
   69.2.4.7. Synonymous
   69.2.4.7.1. e.g., Information Technology = Digital Technology)

69.3. Measurement
69.3.1. Degree of articulation\textsuperscript{452} precision

\textsuperscript{452} Here the choice of term is “articulated”, not understood as used for Record Nature, due to the
69.3.2. Degree of comprehensiveness
69.3.3. Degree of relationship coherence

70. RM Control
70.1. Composition
   70.1.1. Realization of Record(s) Retrievability
   70.1.2. Realization of Record Usability

70.2. Specification
   70.2.1. RM Control is the goal of Organizational RM

70.3. Measurement
   70.3.1. Percentage of controlled records against all identified records

71. RM Core Knowledge
71.1. Specification
   71.1.1. Understanding of RM Foundational Concept
   71.1.2. Understanding of RM Activity
   71.1.3. Understanding of RM Technology

71.2. Measurement
   71.2.1. Degree of understanding adequacy by Organizational RM (through RM Personnel)

72. RM Development Plan
72.1. Specification
   72.1.1. Relies on RM Conceptual Framework
   72.1.2. Relies on RM Application-Oriented Work
   72.1.3. Includes
      72.1.3.1. RM Strategic Plan
      72.1.3.2. RM Action Plan

72.2. Measurement

consideration that understanding can be mentally acquired yet to establish a RM Function, the understanding needs to be clearly articulated. The clear articulation is needed for all kinds of RM products, policy, directive, procedure, tool, or performance evaluation.
72.2.1. Degree of development adequacy in terms of executability

73. RM Extended Knowledge

73.1. Composition
   73.1.1. Non-RM Activity Knowledge
   73.1.2. Non-RM Technology Knowledge

73.2. Specification
   73.2.1. Additional to RM Core Knowledge
   73.2.2. Equally necessary for the conduct of RM Activity

73.3. Measurement
   73.3.1. Degree of recognition adequacy by organization
   73.3.2. Degree of understanding adequacy by Organizational RM (through RM Personnel)

74. RM Foundational Concept

74.1. Composition
   74.1.1. Concept of Record Nature
   74.1.2. Concepts derived from Record Nature
      74.1.2.1. Record(s) Purpose
      74.1.2.2. Record Value
      74.1.2.3. RM Nature
   74.1.3. Concept interrelated with the derived concepts
      74.1.3.1. RM Value

74.2. Measurement
   74.2.1. Degree of understanding by Organizational RM (inherited)

75. RM Function Design

75.1. Composition
   75.1.1. RM Governance Structure
   75.1.2. RM Responsibility Arrangement
   75.1.3. RM Activity

75.2. Specification
   75.2.1. Relies on RM Conceptual Framework for design
   75.2.2. Determines the establishment of Organizational RM
75.3. Measurement
75.3.1. Degree of design adequacy

76. RM Functioning Ability
76.1. Specification
76.1.1. Command of RM Requisite Knowledge & Skill by Organizational RM (through RM Personnel)
76.2. Measurement
76.2.1. Degree of adequacy for RM Activity completion

77. RM Governance Structure
77.1. Specification
77.1.1. Reporting relationship b/w Unit RM & Central RM
77.1.2. Reporting relationship b/w Employee RM & Unit RM
77.1.3. Reporting relationship b/w Technology RM & Unit RM
77.1.4. Reporting relationship b/w Unit RM & Business Activity
77.1.5. Reporting relationship b/w Unit RM & Accountability-Related Activity
77.1.6. Reporting relationship b/w Unit RM & Investigation-Related Activity
77.1.7. Administrative relationship b/w Central RM and Business Activity, Accountability-Related Activity, and Investigation-Related Activity is one that is jointly responsible for =
77.1.7.1. the conduct of Business Activity, Accountability-Related Activity, and Investigation-Related Activity
77.1.8. Reporting relationship b/w Central RM and the highest level of decision making body in the organization

77.2. Measurement
77.2.1. Degree of design adequacy in terms of specification comprehensiveness (authority)

78. RM Legislative Base
78.1. Specification
78.1.1. Provisions regarding record nature in dedicated RM legislation
78.1.2. Provisions regarding RM in dedicated RM legislation
78.1.2.1. Dedicated = enacted as an independent piece of legislation
78.1.2.2. Dedicated = not included as part of an act that establishes an archival institution

78.1.2.3. Dedicated = not included as part of an act that stipulates access to/freedom of information

78.2. Relies on RM Collective Ability

78.3. Support RM Collective Ability

78.4. Measurement

78.4.1. Degree of adequacy

79. RM Nature

79.1. Specification

79.1.1. RM is indispensible

79.1.1.1. Managing records is part of any operational activity

79.1.2. RM is professional

79.1.2.1. Managing records requires specialized knowledge and skill

79.1.3. RM is managerial

79.1.3.1. RM is a management filed and management includes not only records but also personnel and technology

79.1.4. RM is organizational

79.1.4.1. Records are managed for the organization as a whole

79.1.5. RM is dedicated

79.1.5.1. The ubiquitous presence of organizational records requires dedication of RM Activity

79.1.5.2. The volume of digital records requires dedication of RM Activity

79.1.5.3. The complexity of digital records requires dedication of RM Activity

---

453 This includes the RM decision to retain the record for a very short time. This means that whenever a record is determined to be created (made or affiliated), a RM decision must be made about its retention. This also means that non-records should never be created (made or affiliated) in the first place. For information resources controlled also by the organization for business purposes, typically items in in-house library, the term is collected or gathered, not created.
79.1.6. RM is centralized
    79.1.6.1. Every record must be known to the Organizational RM regardless of its physical location

79.2. Measurement
    79.2.1.1. Degree of recognition by organization (through organizational RM)

80. RM Performance Evaluation
    80.1. Composition
        80.1.1. Periodical Review
        80.1.2. On-demand Audit
    80.2. Specification
        80.2.1. Design relies on RM Conceptual Framework
        80.2.2. Design relies on RM Application-Oriented Work
        80.2.3. Conduct relies on RM authority
    80.3. Measurement
        80.3.1. Existence of involvement of RM Professional
        80.3.2. Degree of specificity

81. RM Personnel
    81.1. Specification
        81.1.1. Recognized as RM Professional
        81.1.2. Qualified as RM Professional
    81.2. Measurement
        81.2.1. Existence of recognition
        81.2.2. Degree of qualification

82. RM Policy Instrument
    82.1. Specification
        82.1.1. Typically in forms of mandatory policy, directive, and standard
        82.1.2. Transforms RM Governance Structure into compliance requirements
        82.1.3. Transforms also RM Responsibility Arrangement into compliance requirements
        82.1.4. Contains also enforceable penalties for incompliance
        82.1.5. Relies on RM Conceptual Framework
82.2. Measurement
   82.2.1. Degree of development adequacy in terms of comprehensiveness
   82.2.2. Degree of development adequacy in terms of clarity

83. RM Procedure
   83.1. Specification
      83.1.1. Transforms mandatory compliance requirements in RM Policy Instrument into specific, executable steps on when, how and by whom
      83.1.2. Relies on RM Conceptual Framework
      83.1.3. Relies on RM Application-Oriented Work
   83.2. Measurement
      83.2.1. Degree of development adequacy for RM Activity completion in terms of specificity

84. RM Profession
   84.1. Specification
      84.1.1. Supports Organizational RM
      84.1.2. Participates in RM Research
   84.2. Measurement
      84.2.1. Degree of adequacy to support Organizational RM

85. RM Professional
   85.1. Specification
      85.1.1. Possession of RM Functioning Ability as qualification
      85.1.2. Requires support from RM Profession
      85.1.3. Requires support from RM Academia
   85.2. Measurement
      85.2.1. Degree of qualification

86. RM Research
   86.1. Specification
      86.1.1. Being scientific
      86.1.2. Supports Organizational RM
      86.1.3. Contributing to RM Requisite Knowledge & Skill
   86.2. Measurement
86.2.1. Degree of sufficiency
86.2.2. Degree of pertinence

87. RM Requirement-Oriented Work

87.1. Specification
  87.1.1. Conducted by Central RM
  87.1.2. Codifying RM Conceptual Framework
  87.1.3. Designing RM Function
  87.1.4. Developing
    87.1.4.1. RM Policy Instrument
    87.1.4.2. RM Procedure
    87.1.4.3. RM Tool
    87.1.4.4. Record Titling Guidelines
    87.1.4.5. RM Development Plan
    87.1.4.6. RM Performance Evaluation
  87.1.5. Executing RM Development Plan
  87.1.6. Conducting RM Performance Evaluation

87.2. Measurement
  87.2.1. Degree of completion/conduct effectiveness

88. RM Responsibility Arrangement

88.1. Specification
  88.1.1. Organizational RM is responsible for the effectiveness of RM Activities
  88.1.2. Central RM is responsible for RM Function Design
  88.1.3. Central RM is responsible for RM Requirement-Oriented Work
  88.1.4. Central RM and Local RM are jointly responsible for RM Application-Oriented Work
  88.1.5. Unit RM is responsible for Employee RM
  88.1.6. Employee RM is responsible for titling records according to Record Titling Template determined by Unit RM
    88.1.6.1. Unit RM is responsible for the development and maintenance of the templates
88.1.7. Employee RM is responsible for saving/capturing records into designated space(s)

88.1.7.1. For paper records, a designated space can be a physical folder pre-labelled by Unit RM or a physical location for records drop off

88.1.7.1.1. Pre-labelled = classified

88.1.7.2. For digital records, a designated space can be a digital folder pre-named by Unit RM in Organizational Digital Records Management System for records drop-off

88.1.7.2.1. Pre-named = classified

88.1.7.3. Central RM is responsible for designating space(s)

88.1.7.4. Unit RM is responsible for classifying dropped off records

88.1.8. Unit RM is responsible for Technology RM

88.1.9. Technology RM is responsible for titling records according to pre-determined templates attached to pre-determined workflow and rules

88.1.9.1. Technology RM is responsible for capturing records according to pre-determined workflow and rules

88.1.9.1.1. Capture by Technology RM replaces saving records into designated space by Employee RM

88.1.10. Technology RM is responsible for classifying records according to pre-determined workflow and rules

88.1.10.1. Classification by Technology RM replaces classification by Unit RM

88.2. Measurement

88.2.1. Degree of design adequacy in terms of specification comprehensiveness (balanced work division)

89. RM Requisite Knowledge & Skill

89.1. Composition

89.1.1. RM Core Knowledge

89.1.2. RM Extended Knowledge

89.1.3. RM Skill

89.2. Specification
89.2.1. Relies on RM Collective Ability to be understood/recognized by organization

89.3. Measurement
89.3.1. Degree of existence adequacy in organization

90. RM Skill
90.1. Specification
90.1.1. Analytic, managerial, and technological techniques identified based on RM Core Knowledge for completing RM Activity
90.1.2. Analytic, managerial, and technological techniques identified based on RM Extended Knowledge for completing RM Activity

90.2. Measurement
90.2.1. Degree of possession adequacy by Organizational RM (through RM Personnel)

91. RM Technology
91.1. Composition
91.1.1. Record Creating Technology
91.1.2. Record(s) Maintaining Technology
91.2. Specification
91.2.1. A type of IT
91.2.2. Part of OIT
91.2.3. Record Creating Technology is part of the Non-RM Technology that is directly relevant to the creation of record 454

91.3. Measurement
91.3.1. Degree of optimization for completing RM Activity

92. RM Tool
92.1. Composition

454 For example, a database designed for marketing is of the nature of Non-RM Technology because its primary purpose is not for the management of records but for reaching the goal of a Business Activity. However, the functions of the database that are designed to generate reports are Record Creating Technology.
92.1.1. Records Classification Scheme (RCS)
92.1.2. Records Retention (RR)
92.1.3. Records Disposition Authority (RDA)

92.2. Specification
92.2.1. Relies on RM Conceptual Framework
92.2.2. Relies on RM Application-Oriented Work

92.3. Measurement
92.3.1. Degree of adequacy in terms of records coverage
92.3.2. Degree of currency

93. RM Value

93.1. Composition
93.1.1. RM Constant Value
93.1.2. RM Regular Value
93.1.3. RM Occasional Value
93.1.4. RM Recurrent Value
93.1.5. RM Longer-Term Value

93.2. Specification
93.2.1. RM Constant Value is demonstrable by realizing Record Instrumental Value
93.2.2. RM Regular Value is demonstrable by realizing Record(s) Reuse-Immediate-Accountability Value
93.2.3. RM Occasional Value is demonstrable by realizing Record(s) Reuse-Immediate-Investigation Value
93.2.4. RM Recurrent Value is demonstrable by realizing Record(s) Reuse-Immediate-Resource Value
93.2.5. RM Longer-Term Value is demonstrable by realizing Record(s) Reuse-Distant Value

93.3. Measurement
93.3.1. Degree of recognition by organization (through Organizational RM)
93.3.2. Degree of demonstration

94. Technology RM

319
94.1. Specification

94.1.1. Structurally part of Non-RM Activity
94.1.2. Structurally also part of Unit RM
94.1.3. Carries out a portion of RM Maintaining Activity
94.1.4. Fulfills responsibilities outlined in RM Responsibility Arrangement
94.1.5. Carrying out is assisted by Central RM in the form of RM Procedure
94.1.6. Carrying out may be integrated with Record Creating Technology
94.1.7. Carrying out is supervised by Unit RM

94.2. Measurement

94.2.1. Degree of operation effectiveness

95. Unit Digital Records Management System (UDRMS)

95.1. Specification

95.1.1. Operated by Unit RM
95.1.2. Manages records of Non-RM Activity
95.1.3. Manages also records of Local RM (i.e., records created by RM Application-Oriented Work)
95.1.4. The relationship between UDRMS and the activities can be one-to-many\(^{455}\) or many-to-one\(^{456}\)
95.1.5. The system and the activity must be managerially integrated, and may also be technologically integrated
95.1.6. The systems must be managerially integrated with each other, and may also be technologically integrated
95.1.7. The systems must be managerially integrated with Central Digital Records Management System, and may also be technologically integrated with Central Digital Records Management System

95.2. Measurement

\(^{455}\) An EDRMS is the typical example of this type.

\(^{456}\) An example can be a complex activity that crosses the boundaries of many units or institutions.
95.2.1. Degree of design optimization
95.2.2. Degree of operation effectiveness

96. Unit RM

96.1. Specification
96.1.1. Structurally part of the Unit
96.1.1.1. A Unit is an administrative configuration responsible for a portion of a, or a complete, Non-RM Activity
96.1.2. Structurally also part of the Organizational RM
96.1.3. Operated by dedicated RM Personnel
96.1.4. Fulfills responsibilities as outlined in RM Responsibility Arrangement
96.1.5. Carries out the portion of RM Application-Oriented Work that is not assigned to Technology RM and Employee RM
96.1.6. Carries out the entire RM Application-Oriented Work when Technology RM and Employee RM are absent
96.1.7. Operates Unit Digital Records Management System

96.2. Measurement
96.2.1. Degree of operation effectiveness
Appendix 5 Subject Grouping of Conceptual Building Blocks

The concepts describing the RM function in institutions are grouped in relation to the major RM tasks and into five groups. The categorizations of “simple” and “compound” are used to further divide the concepts into groups of concepts containing no component concepts and of concepts containing component concepts. The numbers of the concepts associated with the groups indicate, in a simplistic yet straightforward manner, the different levels of complexity of the tasks.

Group 1: RM Function Design Related (22)

- Simple concepts
  - RM Functioning Ability
  - RM Governance Structure
  - RM Nature
  - RM Personnel
  - RM Professional
  - RM Responsibility Arrangement
  - RM Skill

- Compound Concepts
  - Operational Activity
    - Non-RM Activity
    - RM Activity
  - Organizational Information Technology
    - Non-RM Technology
    - RM Technology
  - Organizational Digital Records Management System
    - Central Digital Records Management System
    - Unit Digital Records Management System
  - Organizational RM
- Central RM
- Local RM
  - Record(s) Metadata
    - Record Metadata
    - Records Class Metadata
  - Record(s) Purpose
    - Record Creation Purpose
    - Record(s) Maintenance Purpose
  - RM Activity
    - RM Requirement-Oriented Work
    - RM Application-Oriented Work
  - RM Capacity
    - RM Personnel
    - RM Technology
  - RM Conceptual Framework
    - Concepts
    - Conceptual relationships
  - RM Core Knowledge
    - Understanding of RM Foundational Concept
    - Understanding of RM Activity
    - Understanding of RM Technology
  - RM Extended Knowledge
    - Non-RM Activity Knowledge
    - Non-RM Technology Knowledge
  - RM Foundational Concept
    - Concept of Record Nature
    - Concepts derived from Record Nature
      - Record(s) Purpose
      - Record Value
      - RM Nature
- Concept interrelated with the derived concepts
  - RM Value
    - RM Function Design
      - RM Governance Structure
      - RM Responsibility Arrangement
      - RM Activity
    - RM Requisite Knowledge & Skill
      - RM Core Knowledge
      - RM Extended Knowledge
      - RM Skill
    - RM Technology
      - Record Creating Technology
      - Record(s) Maintaining Technology

Group 2: **RM Requirement-Oriented Work** (of RM Activity) Related (13)
- Simple Concepts
  - Central Digital Records Management System
  - Central RM
  - Centralized Records
  - Record Titling Guidelines
  - Records Classification Scheme
  - Records Disposition Authority
  - Records Retention
  - RM Development Plan
  - RM Policy Instrument
  - RM Procedure
- Compound Concepts
  - RM Performance Evaluation
    - Periodical Review
    - On-demand Audit
  - RM Tool
• Records Classification Scheme (RCS)
• Records Retention (RR)
• Records Disposition Authority (RDA)

Group 3: **RM Application-Oriented Work** (of RM Activity) Related (38)

• **Simple Concepts**
  o Business Activity Execution Knowledge
  o Decentralized Records
  o Employee RM
  o Record Capture
  o Record Classification
  o Record Titling
  o Record(s) Long-Term Preservation
  o Record(s) Maintenance Purpose
  o Records Class Metadata
  o Records Destruction
  o Records Retention Calculation
  o RM Appraisal
  o Technology RM
  o Unit Digital Records Management System
  o Unit RM

• **Compound Concepts**
  o Local RM
    ▪ Unit RM
    ▪ Employee RM
    ▪ Technology RM
  o Record(s) Maintaining Activity
    ▪ Record Capture
    ▪ Record Classification
    ▪ Record Titling
    ▪ RM Appraisal
• Records Retention Calculation
• Records Disposition Activity
  • Records Destruction
  • Records Transfer
• Record(s) Long-Term Preservation
• Unit Digital Records Management System operation
  o Record(s) Maintaining Technology
    • Organizational Digital Records Management System
    • Other technologies suitable for Record(s) Maintaining Activities
  o Record(s) Retrieval Activity
    • Record Retrieval
    • Records Class Retrieval
  o Records Transfer
    • Records Legal Transfer
    • Records Physical Transfer

Group 4: **Record Identification** (of RM Application-Oriented Work) Related (17)
• Simple Concepts
  o Accountability-Related Activity
  o Accountability-Related Activity Knowledge
  o Business Activity
  o Business Activity Knowledge
  o Business Activity Design Knowledge
  o Digital Record
  o Investigation-Related Activity
  o Investigation-Related Activity Knowledge
  o Record Creation Purpose
  o Record Instrumental Value
  o Record Metadata
• Compound Concepts
  o Record Identification
- Identification of record content
- Identification of record documentary form
- Identification of Record Metadata

  - Activity Time Boundary
    - Past Activity
    - Present Activity
    - Future Activity

  - Non-RM Activity
    - Accountability-Related Activity
    - Investigation-Related Activity
    - Business Activity

  - Non-RM Activity Knowledge
    - Business Activity Knowledge
      - Business Activity Design Knowledge
      - Business Activity Execution Knowledge
    - Accountability-Related Activity Knowledge
      - Accountability-Related Activity Design Knowledge
      - Accountability-Related Activity Execution Knowledge
    - Investigation-Related Activity Knowledge
      - Investigation-Related Activity Design Knowledge
      - Investigation-Related Activity Execution Knowledge

  - Non-RM Technology
    - Business Activity Technology
    - Accountability-Related Activity Technology
    - Investigation-Related Activity Technology

  - Non-RM Technology Knowledge
    - Business Activity Technology Knowledge
    - Accountability-Related Activity Technology Knowledge
    - Investigation-Related Activity Technology Knowledge

Group 5: **Records and RM Value Related** (16)
• Simple Concepts
  o Archival Appraisal
  o Record Reuse-Distant-Accountability Value
  o Record Reuse-Distant-Investigation Value
  o Record Reuse-Distant-Resource Value
  o Record Reuse-Immediate Value
  o Record Reuse-Immediate-Accountability Value
  o Record Reuse-Immediate-Investigation Value
  o Record Reuse-Immediate-Resource Value
  o Record Usability
  o Record(s) Retrievability

• Compound Concepts
  o Record Value
    ▪ Record Instrumental Value
    ▪ Record Reuse Value
  o Record Reuse Value
    ▪ Record Reuse-Immediate Value
    ▪ Record Reuse-Distant Value
  o Record Reuse-Distant Value
    ▪ Record Reuse-Distant-Accountability Value
    ▪ Record Reuse-Distant-Investigation Value
    ▪ Record Reuse-Distant-Resource Value
  o Record Reuse-Immediate Value
    ▪ Record Reuse-Immediate-Accountability Value
    ▪ Record Reuse-Immediate-Investigation Value
    ▪ Record Reuse-Immediate-Resource Value
  o RM Control
    ▪ Realization of Record(s) Retrievability
    ▪ Realization of Record Usability
  o RM Value
- RM Constant Value
- RM Regular Value
- RM Occasional Value
- RM Recurrent Value
- RM Longer-Term Value
Appendix 6 Hypotheses in Propositions

Within a particular institution in the Government of Canada:

1. When Record Nature is *adequately understood* by the institution, the RM Functioning Ability, i.e., the command of RM Requisite Knowledge & Skill, can *adequately exists* in organization =

   1.1. RM Core Knowledge adequately exists =

      1.1.1. The understanding of RM Foundational Concept adequately exists =

      1.1.1.1. The understanding of Record(s) Purpose adequately exists

      1.1.1.2. + The understanding of Record Value adequately exists

      1.1.1.3. + The understanding of RM Nature adequately exists

      1.1.1.4. + The understanding of RM Value adequately exists

      1.1.2. + The understanding of RM Activity adequately exists =

      1.1.2.1. The understanding of RM Requirement-Oriented Work adequately exists

      1.1.2.2. + The understanding of RM Application-Oriented Work adequately exists

      1.1.3. + The understanding of RM Technology adequately exists

      1.1.3.1. The understanding of Record Creating Technology adequately exists =

      1.1.3.1.1. The understanding of the part/module of Non-RM Technology directly relevant to records creation adequately exists

      1.1.3.2. + The understanding of Record(s) Maintaining Technology adequately exists =

      1.1.3.2.1. The understanding of Business Process Management System (BPMS) adequately exists

      1.1.3.2.2. + The understanding of Digital Records Management System (DRMS) adequately exists

1.2. + RM Extended Knowledge adequately exists =
1.2.1. The understanding of Non-RM Activity adequately exists =
  1.2.1.1. Business Activity Knowledge adequately exists =
    1.2.1.1.1. Business Activity Design Knowledge adequately exists
    1.2.1.1.2. + Business Activity Execution Knowledge adequately exists
  1.2.1.2. + Accountability-Related Activity Knowledge adequately exists
  1.2.1.3. + Investigation-Related Activity Knowledge adequately exists

1.2.2. + The understanding of Non-RM Technology adequately exists

1.3. + RM Skill adequately exists =
  96.2.1. Analytic, managerial, and technological techniques identified based on
    RM Core Knowledge adequately exists
  1.3.1. Analytic, managerial, and technological techniques identified based on
    RM Extended Knowledge adequately exists

1.4. adequately = sufficient in both scope and depth

2. When the RM Requisite Knowledge & Skill adequately exists, the RM Conceptual
   Framework (part of RM Requirement-Oriented Work) can be adequately codified
  2.1. adequately = with precision, comprehensiveness and coherence

3. When the RM Conceptual Framework is adequately articulated, the RM Function can be adequately designed =
  3.1. RM Governance Structure can be adequately designed
    3.1.1. adequately = with all specifications = with sufficient authority
  3.2. + RM Responsibility Arrangement can be adequately designed
    3.2.1. adequately = with all specifications = with balanced work division
  3.3. + RM Activity can be adequately designed
    3.3.1. adequately = with both components = sufficiently recognized by
      organization as necessary and professional

4. When the RM Governance Structure and RM Responsibility Arrangement are
   adequately designed, the Organizational RM can be adequately established =
  4.1. adequately = with all components =
    4.1.1. Central RM
  4.1.2. + Local RM =
    4.1.2.1.1. Unit RM
4.1.2.1.2. + Employee RM
4.1.2.1.3. + OIT RM

5. When the Organizational RM is adequately established, the RM Capacity can be adequately determined =

5.1. RM Personnel can be adequately determined =
  5.1.1. adequate = sufficient number of positions
5.2. + RM Technology can be optimally determined
  5.2.1. optimal = most suitable technology

6. When the RM Capacity is adequately determined, other RM Requirement-Oriented Work can be effectively accomplished =

6.1. RM Policy Instrument can be adequately developed
  6.1.1. adequately =
    6.1.1.1. clearly outlined compliance requirements
    6.1.1.2. clearly outlined penalties for incompliance

6.2. + with also input from RM Application-Oriented Work, the RM Procedure can be adequately developed
  6.2.1. adequately = with sufficient specifics for completing RM Activities

6.3. + with also input from the RM Application-Oriented Work, the RM Tool can be adequately developed =

6.3.1. Records Classification Scheme (RCS) can be adequately developed =
  6.3.1.1. adequately =
    6.3.1.1.1. RCS structure is fully consistent with the design of Operational Activity
    6.3.1.1.2. RCS covers all records of an Operational Activity
    6.3.1.1.3. RCS covers all Operational Activities of the organization
    6.3.1.1.4. Records Class Metadata are consistently represented
    6.3.1.1.5. The RCS is current

6.3.2. + Records Retention (RR) can be adequately developed
  6.3.2.1. adequately =
    6.3.2.1.1. Identified records are all scheduled
    6.3.2.1.2. Retention periods are all justifiable
6.3.2.1.3. + Retention periods are all current

6.3.3. + Record(s) Disposition Authority (RDA) can be adequately developed

6.3.3.1. adequately =

6.3.3.1.1. Identified records are all covered
6.3.3.1.2. + RDAs are all pertinent
6.3.3.1.3. + RDAs are all current

6.4. + with also input from Record Identification (part of RM Application-Oriented Work), Record Titling Guidelines can be adequately developed

6.4.1. adequately =

6.4.1.1. Record titling templates are developed with pertinence to Creating Activity/Operational Activity
6.4.1.2. + Record titling templates are developed for all types of identified records

6.5. + with also input from the RM Application-Oriented Work, the RM Development Plan can be adequately developed

6.5.1. adequately = with sufficient specifics permitting execution

6.6. + with also input from RM Application-Oriented Work, the RM Performance Evaluation can be adequately designed and conducted

6.6.1. adequately =

6.6.1.1. led by RM Professionals
6.6.1.2. focusing on specificity (i.e., concrete results and detailed problem reporting)

7. When the RM Requirement-Oriented Work is effectively accomplished, the RM Application-Oriented Work can be effectively accomplished =

7.1. Record Identification can be effectively conducted =

7.1.1. effectively =

7.1.1.1. Record Creating Activity is fully understood
7.1.1.2. + Record Creating Technology is fully understood
7.1.1.3. + Records needed by the Operational Activity are all identified with =

7.1.1.3.1. record content
7.1.3.2. + record documentary form
7.1.3.3. + Record Metadata

7.2. When Record Identification is effectively conducted, the Record(s) Maintaining Activities can be *effectively accomplished* =

7.2.1. Record Capture can be effectively accomplished

7.2.1.1. effectively =

7.2.1.1.1. identified records are all captured (either managerially only or both managerially and technologically)

7.2.1.1.2. + records are captured with all identified components (i.e., content, documentary form, metadata)

7.2.2. + Record Classification can be effectively accomplished

7.2.2.1. effectively =

7.2.2.1.1. captured records are all classified

7.2.2.1.2. + classification is timely

7.2.2.1.3. + classification is accurate

7.2.3. + Record Titling can be effectively accomplished

7.2.3.1. effectively =

7.2.3.1.1. classified records are all titled

7.2.3.1.2. + titling is timely

7.2.3.1.3. + titling is consistent (i.e., in accordance with titling template)

7.2.4. + RM Appraisal can be effectively accomplished =

7.2.4.1. Record Reuse-Immediate Value can be effectively assessed

7.2.4.2. effectively =

7.2.4.2.1. identified records are all appraised

7.2.4.2.2. + appraisal is timely

7.2.4.2.3. + decisions are justifiable

7.2.5. + Records Retention Calculation can be effectively accomplished

7.2.5.1. effectively =

7.2.5.1.1. calculations are accurate

7.2.6. + Records Disposition Activity can be effectively accomplished =

7.2.6.1. Records Destruction can be effectively accomplished
7.2.6.1.1. effectively =
    7.2.6.1.1.1. records with expired Records Retentions are all destructed
    7.2.6.1.1.2. + destruction is timely

7.2.6.2. + Records Transfer can be effectively accomplished
    7.2.6.2.1. effectively =
        7.2.6.2.1.1. records selected for transfer are all transferred
        7.2.6.2.1.2. + transferring is timely

7.2.7. + Record(s) Long-Term Preservation can be effectively accomplished
    7.2.7.1. effectively =
        7.2.7.1.1. records determined for long-term preservation all possess
                    continued RM Control

7.2.8. + Operation of Unit Digital Records Management System can be effectively accomplished
    7.2.8.1. effectively =
        7.2.8.1.1. objectives of implementing the system are all achieved

7.3. + When the Record(s) Maintaining Activity is effectively accomplished, the Record Retrievability can be fully developed
    7.3.1. fully = identified records all possess retrievability

7.4. + When the Record(s) Maintaining Activity is effectively accomplished, the Record Usability can be fully developed
    7.4.1. fully = identified records all possess usability

7.5. + When the Record Retrievability is fully developed, the Record(s) Retrieval Activity can be effectively accomplished
    7.5.1. effectively =
        7.5.1.1. records are retrievable by RM personnel and/or non-RM personnel
        7.5.1.2. + retrieval is fast
        7.5.1.3. + retrieval is comprehensive (i.e., all relevant records are retrieved)
        7.5.1.4. + retrieval is precise (i.e., only relevant records are retrieved)

7.6. + When the Record Usability is fully developed, the record use is fully enabled
    7.6.1. fully =
        7.6.1.1. records authenticity is readily approvable
7.6.1.2. records contextual information is readily presentable
7.6.1.3. records human-readable copies are readily presentable

8. When Record Retrievability Activity is effectively accomplished and Record Usability is fully enabled, the RM Control, or the goal of the Organizational RM, is fully achieved;

9. When the RM Control is fully achieved, all types of Record Value can be fully and effectively realized;

10. When Record Value is fully and effectively realized, RM Value can be fully and concretely demonstrated;

11. When RM Value is fully and concretely demonstrated, the justification for RM Function Design can be confirmed.

Beyond a particular institution:

- When RM Value is fully and concretely demonstrated,
  - Archival Function or Archival Institution can be supported for performing Archival Activity;
    - Advancement of RM Community Ability can be supported =
      - RM Research can be supported
      - + RM Formal Education can be supported
      - + RM Continuing Education can be supported;
    - Record Community can be supported =
      - RM Profession can be supported
      - + RM Academia can be supported can be supported;
    - RM Legislative Base can be adequately established, and
    - RM Legislative Base can be continuously reinforced.
Appendix 7 The IM Crisis in Measurements

1. In the Government of Canada, because the Record Nature is *inadequately understood*, the RM Functioning Ability, i.e., the command of RM Requisite Knowledge & Skill, *inadequately exists* in institutions =

11.1. RM Core Knowledge *inadequately exists* =

11.1.1. The understanding of RM Foundational Concept *inadequately exists* =

11.1.1.1. The understanding of Record(s) Purpose *inadequately exists*

11.1.1.1.1. The understanding of Record Creation Purpose *inadequately exists*

11.1.1.1.2. + The understanding of Record(s) Maintenance Purpose *largely exists*

11.1.1.2. + The understanding of Record Value *inadequately* exists

11.1.1.2.1. The understanding of Record Instrumental Value *inadequately exists*

11.1.1.2.2. + The understanding of Record Reuse Value *largely exists*

11.1.1.2.2.1. The understanding of Record Reuse-Immediate Value *largely exists*

11.1.1.2.2.1.1. The understanding of Record Reuse-Immediate-Accountability Value *largely exists*

11.1.1.2.2.1.2. + The understanding of Record Reuse-Immediate-Investigation Value *largely exists*

11.1.1.2.2.1.3. + The understanding of Record Reuse-Immediate-Resource Value *largely exists*

11.1.1.2.2.2. + The understanding of Record Reuse-Distant Value *largely exists*

11.1.1.3. + The understanding of RM Nature *inadequately exists*

---

*457* It is overall inadequate because of the inadequate understanding of the instrumental value, which is the foundation for the reuse value.
11.1.1.3.1. The understanding of “RM is indispensible” *inadequately* exists
11.1.1.3.2. + The understanding of “RM is professional” *partially* exists
11.1.1.3.3. + The understanding of “RM is managerial” *partially* exists
11.1.1.3.4. + The understanding of “RM is organizational” *inadequately* exists
11.1.1.3.5. + The understanding of “RM is dedicated” *inadequately* exists
11.1.1.3.6. + The understanding of “RM is centralized” *inadequately* exists
11.1.1.4. + The understanding of RM Value *inadequately* exists
11.1.2. + The understanding of RM Activity *inadequately* exists =
   11.1.2.1. The understanding of RM Requirement-Oriented Work *partially* exists
   11.1.2.2. + The understanding of RM Application-Oriented Work *does not* exists
11.1.3. + The understanding of RM Technology *inadequately* exists
   11.1.3.1. The understanding of Record Creating Technology *does not* exists =
      11.1.3.1.1. The understanding of the part/module of Non-RM Technology directly relevant to records creation *does not* exists
   11.1.3.2. + The understanding of Record(s) Maintaining Technology *inadequately* exists =
      11.1.3.2.1. The understanding of Business Process Management System (BPMS) *does not* exists
      11.1.3.2.2. + The understanding of Digital Records Management System (DRMS) *inadequately* exists
11.2. + RM Extended Knowledge *does not* exists =
   11.2.1. The understanding of Non-RM Activity *does not* exists =
      11.2.1.1. Business Activity Knowledge *does not* exists =
         11.2.1.1.1. Business Activity Design Knowledge *does not* exists
         11.2.1.1.2. + Business Activity Execution Knowledge *does not* exists
      11.2.1.2. + Accountability-Related Activity Knowledge *does not* exists
      11.2.1.3. + Investigation-Related Activity Knowledge *does not* exists
   11.2.2. + The understanding of Non-RM Technology *does not* exists
11.3. + RM Skill adequately exists =

96.2.2. Analytic, managerial, and technological techniques identified based on RM Core Knowledge inadequately exists

11.3.1. Analytic, managerial, and technological techniques identified based on RM Extended Knowledge does not exists

2. Because the RM Requisite Knowledge & Skill inadequately exists, the RM Conceptual Framework (part of RM Requirement-Oriented Work) is inadequately codified

2.1. inadequate = unclear/indistinguishable, incomplete, contradicting

3. Because the RM Conceptual Framework is inadequately articulated, the RM Function is inadequately designed =

3.1. RM Governance Structure is partially designed

3.1.1. partial = the part for RM is insufficient

3.2. + RM Responsibility Arrangement is partially designed

3.2.1. partial = the part for RM is insufficient

3.3. + RM Activity is inadequately designed

3.3.1. inadequate = the component RM Application-Oriented Work does not exist

12. Because the RM Governance Structure and RM Responsibility Arrangement are inadequately designed, the Organizational RM is inadequately established =

12.1. not all components are established =

12.1.1. Central RM is established

12.1.2. Local RM is not established =

12.1.2.1.1. Unit RM is not established

12.1.2.1.2. + Employee RM is not established

12.1.2.1.3. + OIT RM is not established

13. Because the Organizational RM is inadequately established, the RM Capacity is inadequately determined =

13.1. RM Personnel is inadequately determined =

13.1.1. the number of positions is insufficient

13.2. + RM Technology is not optimally determined
13.2.1. the technology selected is not the most suitable configuration

14. Because the RM Capacity is inadequately determined, the other RM Requirement-Oriented Work is *ineffectively* conducted =

14.1. RM Policy Instrument is *inadequately* developed

14.1.1. compliance requirements are not clearly outlined

14.1.2. + penalties for incompliance are not clearly outlined

14.2. + because there is no input from the RM Application-Oriented Work, the RM Procedures are *inadequately* developed

14.2.1. inadequate = no sufficient specifics for completing RM Activities

14.3. + because there is no input from the RM Application-Oriented Work, the RM Tools are *inadequately* developed =

14.3.1. Records Classification Scheme (RCS) is *inadequately* developed =

14.3.1.1. inadequate =

14.3.1.1.1. RCS structure is not fully consistent with the design of Operational Activity

14.3.1.1.2. + not all records of an Operational Activity are covered

14.3.1.1.3. + not all Operational Activities of the organization are covered

14.3.1.1.4. + Records Class Metadata are not consistently represented

14.3.1.1.5. + The RCS is not current

14.3.2. + Records Retention (RR) is *inadequately* developed

14.3.2.1. inadequate =

14.3.2.1.1. not all records are scheduled

14.3.2.1.2. + not all retention periods are justifiable

14.3.2.1.3. + not all retention periods are current

14.3.3. + Record(s) Disposition Authorities are *inadequately* developed

14.3.3.1. inadequate =

14.3.3.1.1. not all records are covered

14.3.3.1.2. + not all RDAs are current

14.4. + because there is no input from Record Identification (part of RM Application-Oriented Work), Record Titling Guidelines are *inadequately* developed or do not exist
14.4.1. inadequate =
14.4.1.1. Record titling templates are not developed with pertinence to Creating Activity/Operational Activity
14.4.1.2. + Record titling templates are not developed for all types of records
14.5. + because there is no input from the RM Application-Oriented Work, the
RM Development Plan is inadequately development
14.5.1. inadequate = insufficient specifics permitting execution
14.6. + because there is no input from the RM Application-Oriented Work, the
RM Performance Evaluation is inadequately designed and conducted
14.6.1. inadequate =
14.6.1.1. not led by RM Professionals
14.6.1.2. not focused on RM but generally on IM, and in most cases, on IT
15. Because the RM Requirement-Oriented Work is not effectively conducted, the RM
Application-Oriented Work is ineffectively conducted =
15.1. Record Identification is not conducted =
15.1.1. Record Creating Activity is not understood
15.1.2. + Record Creating Technology is not understood
15.1.3. + Records created do not have complete record content, record
documentary form, or Record Metadata
15.2. Because Record Identification is not conducted, the Record(s) Maintaining
Activities is ineffectively conducted =
15.2.1. Record Capture is not effectively conducted =
15.2.1.1. Not all records are captured (neither managerially only nor both
managerially and technologically)
15.2.1.2. Not all records are captured with all identified components (i.e.,
content, documentary form, metadata)
15.2.2. + Record Classification is not effectively conducted =
15.2.2.1. Not all captured records are classified
15.2.2.2. + classification is time consuming
15.2.2.3. + classification is inaccurate
15.2.3. + Record Titling is not effectively conducted =
15.2.3.1. Not all classified records are titled
15.2.3.2. + titling is time consuming
15.2.3.3. + titling is inconsistent (i.e., in accordance with titling template)
15.2.4. + RM Appraisal is not effectively conducted =
   15.2.4.1. Record Reuse-Immediate Value is not effectively assessed =
   15.2.4.2. Not all records are appraised
   15.2.4.3. + not all appraised records have justifiable decisions
15.2.5. + Records Retention Calculation is not effectively conducted
   15.2.5.1. calculations are not timely
   15.2.5.2. + calculations are not accurate
15.2.6. + Records Disposition Activity is not effectively conducted =
   15.2.6.1. Records Destruction is not effectively conducted
      15.2.6.1.1. Not all records with expired Records Retentions are destructed
      15.2.6.1.2. + destruction is not timely
   15.2.6.2. + Records Transfer is not effectively conducted
      15.2.6.2.1. Not all records selected for transfer are transferred
      15.2.6.2.2. + transferring is not timely
15.2.7. + Record(s) Long-Term Preservation is not effectively conducted
   15.2.7.1. Not all records determined for long-term preservation possess continued RM Control
15.2.8. + Operation of Unit Digital Records Management System is not effectively conducted
   15.2.8.1. Not all objectives of implementing the system are met
15.3. + Because the Record(s) Maintaining Activity is ineffectively conducted, the Record Retrievalability is not fully developed =
   15.3.1. Not all records possess retrievability
15.4. + Because the Record(s) Maintaining Activity is ineffectively conducted, the Record Usability is not fully developed =
   15.4.1. Not all records possess usability
15.5. + Because the Record Retrievalability is not fully developed, the Record(s) Retrieval Activity is not effectively completed =
15.5.1. records are not fully retrievable by RM personnel and/or non-RM personnel
15.5.2. + retrieval is time consuming
15.5.3. + retrieval is incomplete
15.5.4. + retrieval is inaccurate
15.6. + Because the Record Usability is not fully developed, the record use is not fully enabled =
   15.6.1. records authenticity is not readily approvable
   15.6.2. records contextual information is not readily presentable
   15.6.3. records human-readable copies are not readily presentable
16. Because the Record Retrieval Activity is ineffectively conducted and the Record Usability is not fully enabled, the RM Control is not fully achieved;
17. Because the RM Control is not fully achieved, the Record Value is not fully or effectively realized;
18. Because the Record Value is not fully or effectively realized, the RM Value is not fully or concretely demonstrated.

In a circular way, because the RM Value is not fully or concretely demonstrated, the justification for the RM Function Design cannot be established, and the lack of an adequate RM Functioning Ability will continue to exist in the institutions of the Government of Canada.
### Appendix 8 List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AANDC</td>
<td>Aboriginal Affairs and Northern Development Canada (former Indian and Northern Affairs Canada)</td>
</tr>
<tr>
<td>ARMA</td>
<td>Association of Records Managers and Administrator</td>
</tr>
<tr>
<td>ATI</td>
<td>Canadian Access to Information</td>
</tr>
<tr>
<td>ATI-DR</td>
<td>ATI disclosed records data</td>
</tr>
<tr>
<td>Data</td>
<td></td>
</tr>
<tr>
<td>ATI-PR</td>
<td>ATI process responsive Data</td>
</tr>
<tr>
<td>Data</td>
<td></td>
</tr>
<tr>
<td>ATI-RH</td>
<td>ATI request handling data</td>
</tr>
<tr>
<td>Data</td>
<td></td>
</tr>
<tr>
<td>BASCS</td>
<td>Business Activity Structure Classification System</td>
</tr>
<tr>
<td>CBSA</td>
<td>Canada Border Services Agency</td>
</tr>
<tr>
<td>CFIA</td>
<td>Canadian Food Inspection Agency</td>
</tr>
<tr>
<td>CIDA</td>
<td>Canadian International Development Agency</td>
</tr>
<tr>
<td>CIC</td>
<td>Citizenship and Immigration Canada</td>
</tr>
<tr>
<td>CRA</td>
<td>Canada Revenue Agency</td>
</tr>
<tr>
<td>CSC</td>
<td>Correctional Service of Canada</td>
</tr>
<tr>
<td>CSIS</td>
<td>Canadian Security Intelligence Service</td>
</tr>
<tr>
<td>CSPS</td>
<td>Canada School of Public Services</td>
</tr>
<tr>
<td>DFO</td>
<td>Fisheries and Oceans Canada</td>
</tr>
<tr>
<td>DPR</td>
<td>Departmental Performance Reports</td>
</tr>
<tr>
<td>DRMS</td>
<td>Digital records management system</td>
</tr>
<tr>
<td>EDRMS</td>
<td>Electronic document and record management system</td>
</tr>
<tr>
<td>EC</td>
<td>Environment Canada</td>
</tr>
<tr>
<td>ERMS</td>
<td>Electronic records management system</td>
</tr>
<tr>
<td>eGov</td>
<td>electronic government</td>
</tr>
<tr>
<td>FAA</td>
<td>Financial Administration Act</td>
</tr>
<tr>
<td>FAITC</td>
<td>Foreign Affairs and International Trade Canada</td>
</tr>
<tr>
<td>HCan</td>
<td>Health Canada</td>
</tr>
<tr>
<td>------</td>
<td>---------------</td>
</tr>
<tr>
<td>HRSDC</td>
<td>Human Resources and Social Development Canada</td>
</tr>
<tr>
<td>GC</td>
<td>Government of Canada (the Canadian Federal Government)</td>
</tr>
<tr>
<td>GEDS</td>
<td>Government Electronic Directory Services</td>
</tr>
<tr>
<td>GOL</td>
<td>Government On-Line</td>
</tr>
<tr>
<td>GT</td>
<td>Grounded theory</td>
</tr>
<tr>
<td>IC</td>
<td>Industry Canada</td>
</tr>
<tr>
<td>IM</td>
<td>Information Management</td>
</tr>
<tr>
<td>IM/RM</td>
<td>Refers to the indiscriminating manner by which some GC sources discuss IM and RM.</td>
</tr>
<tr>
<td>IM(RM)</td>
<td>Refers to the IM-including-RM-as-a-part situation in GC, when IM is discussed as a whole yet it is necessary to make RM visible.</td>
</tr>
<tr>
<td>InterPARES</td>
<td>International Research on Permanent Authentic Records in Electronic Systems</td>
</tr>
<tr>
<td>LAC</td>
<td>Library and Archives Canada</td>
</tr>
<tr>
<td>MAF</td>
<td>Management Accountability Framework</td>
</tr>
<tr>
<td>NAA</td>
<td>National Archives of Australia</td>
</tr>
<tr>
<td>ND</td>
<td>National Defence</td>
</tr>
<tr>
<td>OAG</td>
<td>Office of the Auditor General of Canada</td>
</tr>
<tr>
<td>OIC</td>
<td>Office of the Information Commissioner of Canada</td>
</tr>
<tr>
<td>OPI</td>
<td>Office of primary interest</td>
</tr>
<tr>
<td>OSTA</td>
<td>On Second Thought Advisory</td>
</tr>
<tr>
<td>PAA</td>
<td>Program Activity Architecture</td>
</tr>
<tr>
<td>PCH</td>
<td>Canadian Heritage</td>
</tr>
<tr>
<td>PCO</td>
<td>Privy Council Office</td>
</tr>
<tr>
<td>PS</td>
<td>Public Safety Canada</td>
</tr>
<tr>
<td>PWGSC</td>
<td>Public Works and Government Services Canada</td>
</tr>
<tr>
<td>RCMP</td>
<td>Royal Canadian Mounted Policy</td>
</tr>
<tr>
<td>RDIMS</td>
<td>Records, Document and Information Management System</td>
</tr>
<tr>
<td>RM</td>
<td>Records Management</td>
</tr>
<tr>
<td>RM(IM)</td>
<td>Refers to the RM-as-part-of-IM situation in GC, when RM is indeed the real/sole focus yet it is necessary to point out its GC context.</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PRN</td>
<td>Program Record Number</td>
</tr>
<tr>
<td>RPP</td>
<td>Reports on Plans and Priorities</td>
</tr>
<tr>
<td>SC</td>
<td>Substantive code</td>
</tr>
<tr>
<td>sG</td>
<td>Starting group</td>
</tr>
<tr>
<td>TBS</td>
<td>Treasury Board Secretariat of Canada</td>
</tr>
<tr>
<td>tsG</td>
<td>Theoretical sampling groups</td>
</tr>
</tbody>
</table>