

**Why Does It Take So Long? Implementing Electronic Records Programs at  
Universities**

**by**

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## **Abstract**

The implementation of electronic records management is a challenging task due to the resources it requires and most importantly because it requires a substantial change in the methodology to be used for electronic rather than analog records. Universities in North America have struggled with electronic records management for the last two decades because most records practitioners have neglected this methodology paradigm shift created by the arrival of electronic records. Given the great significance of universities in their societies, it is important that they manage electronic records effectively. It seems a bit odd that universities have not developed adequate responses to the challenge of managing electronic records since many are heavily funded by governments and must comply with multiple regulations that obligate them to manage their records well. Moreover, universities have been the source of much academic research into digital records issues and have access to this expertise, and familiarity with the issues. They also have a long tradition of archival programs for analog records.

This thesis analyzes the causes for delayed implementation of electronic records management (eRM) best practices in certain North American universities in Canada and the United States. It concludes that the main cause is failure to adopt the guiding principles of the ISO (International Organization for Standardization) Records Management (RM) standard 15489: 2001 and the methodologies associated with it.

## **Dedication**

I dedicate this thesis to my family. I would have never completed this work without their support.

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## Introduction

The ISO (International Organization for Standardization) Records Management (RM) standard 15489: 2001<sup>1</sup> defines 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. It is vital that organizations such as universities understand that information and records are assets and as such need to be managed actively and properly. Creation and management of records are integral to any organization's activities, processes and systems. They enable organizational efficiency, accountability, risk management and business continuity. This is especially important for institutions as significant to their societies as universities. Thus their experiences and issues are the subject of this thesis.

Many universities are heavily funded by governments and must comply with multiple regulations that obligate them to manage their records well. Moreover, universities have been the source of much academic research into digital records issues and have access to this expertise, and familiarity with the issues. They also have a long tradition of university archival programs for conventional paper, photographic, and oral records. In light of these circumstances and advantages, it is not clear why universities have not developed adequate responses to the more recent challenge of managing electronic records.

The purpose of this thesis is to analyze the causes for delayed implementation of electronic records management (eRM) best practices in certain North American universities

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<sup>1</sup> ISO 15489-1:2001 Information and Documentation – Records Management – Part 1: General. The ISO standard for Records Management ISO 15489 is based on the Australian Standard AS 4390-1996. It sets out and promotes a standard for international best practice in records management.

in Canada and the United States. Implementing eRM is a daunting task regardless of the type of organization or geographic area but early on I realized that North American universities were not achieving results as good as their Australian counterparts while implementing eRM programs. This realization came after a review of the RM program at the University of Sydney Australia through its institutional website<sup>2</sup>. The program had adopted existing standards and methodologies well known across the globe and was able to present policies and procedures that seemed to be working. To my surprise, in 2007 they had already implemented an electronic records management system (ERMS<sup>3</sup>) to capture their electronic records. Rather than comparing this outstanding example with some underdeveloped programs in North America, I decided that a new analysis of North American universities and the root causes for this “delay” would be more beneficial.

The complexity of eRM will be explained in Chapter 1 "Electronic Records Management: Principles and Standards", where I will try to represent what is currently understood as eRM best practices according to the framework created by multiple standards that have tried to address the management of electronic records during the last two decades.

Chapter 2, "North American Universities: Previous Studies on Records Management," covers the history and development of records management (RM) in general and eRM in particular at certain North American universities through the eyes of records practitioners. This chapter unveils their frequent frustration with the slow progress of these programs. This

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<sup>2</sup> The University of Sydney. "Archives and Records Management Services - The University of Sydney." The University of Sydney. <http://sydney.edu.au/arms/> (last accessed March 5, 2012).

<sup>3</sup> In this thesis I will refer to the type of application that complies with basic eRM functionality as ERMS. The software industry has called applications with similar functionalities and various degrees of compliance with functional requirements in different ways such as Electronic Content Management (ECM), Electronic Documents Management Systems (EDMS), or Electronic Documents and Records Management Systems (EDRMS).

seems odd in some ways, given the fact that universities are pioneers in doing research on this particular matter, providing instruction, and certifying professionals in fields such as library, archival, computer, and information sciences. Moreover, North American universities have a longstanding tradition of archival programs, which would lead one to believe they should have developed stronger electronic records management and archiving programs. Nevertheless, implementation of eRM seems to be in its infancy.

Chapter 3, "How Well are Universities in North America Doing?", analyzes how much has been achieved by a number of universities in North America through a thorough analysis of documentation posted on their websites. Universities were chosen as follows: the ten largest American public universities; the five largest private American universities; the top five ranked medical/doctoral Canadian universities; and four other American and Canadian universities known for their expertise in electronic records management and archiving. Although a survey method could have been chosen and has been used in previous studies of university records management and archives programs, the limitations of that method prompted me to employ another one. Surveys do not always receive adequate responses, which means that the quality of response can be quite uneven, including lack of responses from key institutions. The methodology used here consists of a thorough analysis of policies, procedures, training material and case studies posted on the chosen universities' websites that could be used to draw conclusions about the state of the implementation of eRM. My assumption here is that this reveals an acceptable result because if universities have made significant progress in the area of electronic records management and archiving they would be very likely to trumpet their progress. Universities tend to be quite open in terms of making their policies available, and they commonly open up their archives to the public through their



websites to feature their collections and therefore attract potential researchers. These websites are valuable primary sources that allow the researcher to read between the lines and understand methodological challenges or limitations, unveiling contradictions as well as successes in current RM practices. The proposed research method gathered enough data to draw conclusions on the root cause for many failures as well as the reasons for the successes.

I focused on the implementation strategies or methodologies followed to implement eRM programs as I believe the main cause for the poor achievements of North American universities is the failure to adopt the guiding principles of the Records Management ISO 15489 and the methodologies associated with it. The Conclusion emphasizes the need for wider adoption of ISO 15489 and associated methodologies as accelerators for the achievement of more consistent outcomes. The persistence of outdated methodologies is portrayed as the main factor behind the delayed implementation of commonly accepted best practices.

## Chapter 1: Electronic Records Management: Principles and Standards

With the emergence of the priority of electronic records during the 1980s, it was thought that the same rules that apply to analog records should also apply to the electronic ones. These early assumptions were proven to be wrong. Electronic records created a great shift. Poor records management, with the unintentional loss of documents, caused embarrassment to organizations from government departments to small businesses. This risk of poor records management and the destruction of vital records led to a new focus on transparency, preservation, and accountability.

### What is a Record?

It is critical to define what a record is and to establish a common understanding of this among all the members of an organization. The ISO 15489 definition is important in this regard. The standard defines a record as information created, received, and maintained as evidence and information by an organization or person, in pursuit of legal obligations or in the transaction of business. The MoReq2<sup>1</sup> specification adds “a record may incorporate one or several documents (for instance when one document has attachments), and may be on any medium in any format. Consequently, it may be comprised of one or more components. In addition to the content of the document(s), a record should include contextual information and, if applicable, structural information (for instance information which describes the components of the record). A key feature of a record is that it cannot be changed.”<sup>2</sup> As for an

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<sup>1</sup> European Commission IDA Program. "MoReq2: Model Requirements for the Management of Electronic Records: MoReq Specification." The MoReq Collateral Website. <http://www.moreq2.eu/> (last accessed January 22, 2012). This set of functional requirements, first published in 2001, sets the basis for procuring Electronic Records Management Systems in the European Union.

<sup>2</sup> Ibid., p. 17.

electronic record, MoReq2 defines it as a record which is in electronic form, as a result of having been created by application software or as a result of digitization, for example by scanning.<sup>3</sup>

Electronic records are particularly challenging because they are easy to alter and duplicate, can be easily erased accidentally or may be difficult to destroy, and can exist in multiple locations. Metadata<sup>4</sup> associated with electronic records is not always rendered to the end user when the record is displayed on a screen or printed out. MoReq2 lists four main characteristics of electronic records: authenticity, reliability, integrity and usability. Preserving electronic records is also challenging for many reasons. It requires a different approach from analog records as the former depend on software and hardware to be retrieved. As Xiaomi An states, “providing coherent and consistent service that meets users' needs has long been a challenge for records managers and archivists worldwide. It is even more challenging in a digital world. Timely access to accurate, reliable, authentic, complete, and readable records over time is always difficult for both users and custodians”.<sup>5</sup> In a court of law, electronic records may be judged by the quality of the electronic records system from which they come, as a measure of their trustworthiness. Preservation of integrity, trustworthiness, and authenticity received great attention from the early research projects on

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<sup>3</sup> Ibid., p. 12.

<sup>4</sup> Metadata can be simply defined as data about other data. It provides information about a certain item's content. For example, an electronic image may include metadata that describes how large the picture is, the colour depth, the image resolution, when the image was created, and other data. An electronic document's metadata may contain information about how long the document is, who the author is, when the document was written, and a short summary of the document.

<sup>5</sup> An Xiami. "An integrated approach to records management: the records continuum model's purpose-oriented approach to records management changes the role of recordkeeping from reactive to proactive. - Free Online Library." The Free Library.  
<http://www.thefreelibrary.com/An%20integrated%20approach%20to%20recordsmanagement:%20the%20records%20continuum...-a0105768177> (last accessed March 10, 2012).

this matter and many specifications were created to standardize functional requirements for ERMS.

### **Records Life Cycle vs. Records Continuum**

The “life cycle” approach to records management became a North American tradition following the influence of Theodore R. Schellenberg. This approach is based on the belief that records become less important to their creators as time passes. The life cycle can be divided into three phases depending on the levels of use: active; semi-active; and inactive. Another way to describe this life cycle, whether records are ready for destruction or archiving, is by identifying the creation, the maintenance and the use phase. Using a birth-to-death analogy, the life cycle model describes the records as passing through a series of stages. It provides a fragmented framework for recordkeeping by artificially dividing the responsibilities for records and archives management, viewing records as tangible physical objects in a paper world and static environment. The beginning and the middle of the records life cycle are seen as the responsibility of records managers while the end of the life cycle is reserved for the archivist.<sup>6</sup> This model is unsuitable for electronic records as electronic records are “dynamic and recursive in nature and may exist in more than one stage of the life cycle simultaneously. They may not follow a serial path from creation to disposal but may be reappraised at the disposition time and reappear in an earlier stage.”<sup>7</sup>

Records in the electronic environment result from a transaction having taken place.

According to David Bearman, transactions are actions communicated from one person to

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<sup>6</sup>See Terry Cook. "What is Past is Prologue: A History of Archival Ideas Since 1898, and the Future Paradigm Shift." *Archivaria* 43 (Spring 1997): 17-63.

<sup>7</sup>Richard Barry. "Electronic Document and Records Management Systems: Towards a Methodology for Requirements Definition." *Information Management & Technology* 27 (1994): 251-56. <http://caldeson.com/old-site/RIMOS/barry1.html> (last accessed December 15, 2011).

another, from a person to a store of information such as a filing cabinet or computer database, or from a store of information to a person or a computer.<sup>8</sup> As such, transactions must leave the human mind or the computer memory to be created, spoken, written or read elsewhere. These electronic transactions are conveyed across at least one software layer, and typically across a number of hardware connections in order to be communicated.

According to the researchers involved in the InterPARES project<sup>9</sup>, the intellectual methods required to guarantee the integrity of active records are quite different from those required for inactive records. They insist that there must be a two-phase life cycle approach to the management of records in the creating body “with primary responsibility for their reliability and authenticity while they are needed for business purposes and the preserving body with responsibility for their authenticity over the long term.”<sup>10</sup>

A new model concept, the records continuum, was formulated in the 1990s in efforts led by Australian archival theorist Frank Upward. Upward saw the growing need to exercise control over electronic records. In the traditional life-cycle approach, archival involvement in the records life cycle is mainly made at the end of the records’ active life. Electronic records cannot be managed in that way. Given electronic records’ dependency on software and hardware, their susceptibility to inadvertent loss through technological obsolescence becomes an enormous risk, if they are not under archival control from the moment of their creation.

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<sup>8</sup> David Bearman. "Toward a Reference Model for Business Acceptable Communications." Web Archive. <http://web.archive.org/web/20000303001909/www.sis.pitt.edu/~nhprc/prog6-5.html> (last accessed June 10, 2010).

<sup>9</sup> The International Research on Permanent Authentic Records in Electronic Systems project (InterPARES) aims at developing the knowledge essential to the long-term preservation of authentic records created and/or maintained in digital form and providing the basis for standards, policies, strategies and plans of action capable of ensuring the longevity of such material and the ability of its users to trust its authenticity.

<sup>10</sup> Luciana Duranti and Heather MacNeil. "The Protection of the Integrity of Electronic Records." *Archivaria* 42 (Fall 1996): .60.

According to the records continuum model, close attention must be given to records and archival issues from the outset of the life of electronic records. Ideally, records management and archival decisions should be made even before the records are created, as part of the systems development process, and as the systems are being established or upgraded.<sup>11</sup>

The adoption of ISO 15489, which is in line with the records continuum model, has not been fully understood. The standard focuses on systems and processes that support organisations in meeting their accountability obligations while remaining efficient and effective. The use of function-based classification systems is instrumental in this regard. Library and Archives Canada describes function-based records classification as “a logical arrangement of all records documenting or evidencing the activities of an institution based upon an analysis of the institutions business functions, sub-functions, and activities. Function-based analysis focuses on the accountability agenda of an institution and, in so doing, situates records within their operational or administrative context and, in an order that reflects the sequence in which activities and/or events take place.”<sup>12</sup> Function-based classification systems have proven to be effective and enduring because they are based on analyses of actual business activities and processes of the institution rather than the subject content of documents, frequently changing organizational structures, or other characteristics upon which records classification systems were traditionally constructed. Currently it is being argued whether or not the use of metadata and controlled vocabularies could supersede the need of a pre-established and hierarchical classification code against which records need

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<sup>11</sup> Frank Upward. "Structuring the Records Continuum. Part One: Post-Custodial Principles and Properties." *Archives and Manuscripts* 24 (November 1996): 268-285.

<sup>12</sup> Library and Archives Canada. "Function-based Classification - Tools - Government - Library and Archives Canada." Library and Archives Canada. <http://www.collectionscanada.gc.ca/007/002/007002-2084-e.html> (last accessed March 5, 2012).

to be classified, but no one argues in favour of subject based classification systems for records.

The adoption of this approach to classification requires a professional shift whereby records managers have to become leaders in pursuing the changes of individual behaviour and of organizational culture that are needed in order to manage electronic records. It is not easy to negotiate with senior administration to obtain their support, and to overcome resistance to change from the end user who tends to see this type of implementation as compliance driven, usually associated with a new administrative burden carrying little or no personal benefit.

### **Requirements for Electronic Records Management Systems**

Electronic records became a challenge for organizations several decades ago primarily because software applications had never been developed with “recordkeeping” functionality in mind. In fact the data created and processed was not seen as records. These applications were not intended to generate or maintain evidence of transactions.

Clearly it would be difficult to document transactions occurring in electronic environments unless the concept of electronic recordkeeping systems was fully understood. In 1996 David Bearman stated that “...not all data is a record. In fact, most information created by and managed in information systems, is not a record because it lacks the properties of evidence. Information captured in the process of communication will only be evidence if the content, structure and context information required to satisfy the functional requirements for recordkeeping is captured, maintained and usable”.<sup>13</sup> He called for systems

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<sup>13</sup> David Bearman. "Moments of Risk: Identifying Threats to Electronic Records." *Archivaria* 62 (Fall 2006): 15-46.

that could ensure good recordkeeping practices. Otherwise there would be no reliable records in the future. He stressed that “information systems were generally designed to hold timely, non-redundant and manipulable information, while recordkeeping systems store timebound, inviolable and redundant records”.<sup>14</sup> Much of the research of Bearman and InterPARES in the 1990s and 2000s aimed to identify the creation of explicit and testable recordkeeping specification requirements, with which information systems should comply to correct a growing liability and contribute with "day-to-day" organization effectiveness.

All current standards for electronic recordkeeping insist on the fact that the absence of critical metadata on electronic records being generated not only raises questions about the records' authenticity but also makes them inaccessible over time. The absence of critical metadata simply means that, as stated by David Bearman, "most collections of electronic data, electronic documents, or information are not records because they cannot qualify as evidence."<sup>15</sup>

Most, if not all, of the recordkeeping requirements for software applications<sup>16</sup> agree on the basic categories of functionality a recordkeeping system must possess. The functional requirements for recordkeeping dictate the creation of records that are comprehensive, identifiable (bounded), complete (containing content, structure and context), and authentic. Functional requirements will include aspects regarding compliance with legal and administrative requirements, meeting national and international standards, and best practices

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<sup>14</sup> Ibid.

<sup>15</sup> This approach is inherent in the methodology advocated by the University of Pittsburgh Electronic Records Project. This methodology was the one adopted and tested by the Indiana University Electronic Records project. See David Bearman. *Electronic evidence: strategies for managing records in contemporary organizations*. Pittsburgh: Archives and Museum Informatics, 1994. p.2.

<sup>16</sup> MoReq and DoD5015.2 are the most commonly referred to, but there are other specifications that also concur on this matter.



for recordkeeping. An electronic records management system must be capable of management and control of electronic records according to legal admissibility and security requirements. This implies knowledge of the laws of jurisdictions with authority over the organization creating records (physical and electronic), as well as over best practices for the particular industry or business sector in which the organization is engaged.

In the course of business processes, electronic documents are generated or received from both internal and external sources and in a variety of formats. Different authors may intervene in the creation process, and the records may arrive through different communication channels: a local area network; wide area network; electronic mail; facsimile; and letter post (to be scanned) — and at variable arrival rates and volumes. Therefore, to address these requirements, the input system has to be flexible in order to capture documents with sufficient management controls. The process to preserve their completeness, structure and authenticity is usually called “records capture” and is widely used for records that are not created within an electronic recordkeeping environment.

Records should be captured as near as possible to the point of creation. The capture of these records involves several processes like registration, classification, addition of metadata, and the storage of records in a system that manages records. There are many specifications that apply to capturing records. Some of these relate to the metadata generated at that particular moment. Prevention measures must be taken to avoid alteration of the content, its deletion or destruction, with the exception of destruction according to disposal authorities. This “ingestion process”, as described by the Electronic Recordkeeping Standard formulated

by the New Zealand<sup>17</sup> government for all public offices and local authorities, encompasses the classification process with the consequent addition of metadata to the record, and further storing in the electronic records management system.

The MoReq specifications rightfully indicate that it is not possible to define all the metadata requirements for all possible kinds of ERMS implementation. Differences between organizations and applications, and even organizational culture, could determine particular needs and, consequently, choices. In its phase II, the University of Indiana RM project concluded that given that most of the structural metadata and some other metadata categories such as preservation history were common for many records, there was no need to apply these categories at the individual record level. Instead these metadata elements would be embedded in the system configuration or the system documentation.<sup>18</sup> Metadata could document business and information as follows: workflow, data elements, audit trails, previous system views, arrangement schema, document structures, rights management, user and usage data, links and pointers to other records/systems, configuration management, data warehousing, implementation of access restrictions, data and user authentication, time, date, and version stamping, thus ensuring records reliability and authenticity by maintaining expressions of records attributes.

There is also general agreement that the metadata model includes documentation about terms and conditions for access and use, and that the system should document use history. Metadata documents protective procedures to prevent loss or corruption of records, but does

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<sup>17</sup> Archives New Zealand. "S5: Digital Recordkeeping Standard - Archives New Zealand. Te Rua Mahara o te Kāwanatanga." Archives New Zealand. Te Rua Mahara o te Kāwanatanga. <http://archives.govt.nz/s5-digital-recordkeeping-standard> (last accessed March 14, 2012).

<sup>18</sup> Indiana University Bloomington. "Indiana University Electronic Records Project - Phase II 2000-2002." Indiana University Bloomington. [www.indiana.edu/~libarch/ER/nhprcfinalreport.doc](http://www.indiana.edu/~libarch/ER/nhprcfinalreport.doc) (last accessed January 22, 2012).

not help to prevent media and technology deterioration — although it may trigger actions that allow record keepers and/or archivists to take steps toward preservation. It helps to identify an authoritative record when multiple copies exist, and must document procedures used in the removal and disposition of records.

The business audit trail metadata is defined in MoReq2 as information about transactions or other activities which have affected or changed entities (e.g. metadata elements) held in sufficient detail to allow the reconstruction of a previous activity. The concept of the immutability of the record has shifted with the incorporation of a broad audit trail concept since the record becomes an entity that is constantly changing. Every action taken by users or administrators, or even initiated automatically by the system is expected to be registered and therefore viewed as metadata of the records, revealing some aspects of the history of the record. These common recordkeeping transactions, such as changes in the classification scheme, have to be defined by each organization. The audit trail should include metadata elements such as type of recordkeeping action, user initiating and/or carrying out the action, and date and time of action.

Although MoReq2 does not consider it essential, the standard indicates that the system must be capable of managing and controlling electronic records in order to meet requirements regarding legal admissibility and security, and must be capable of demonstrating this compliance. Indiana University electronic records archivist Philip Bantin writes: “The audit trail data for these functions will document activities performed on the record, such as the date when the activity occurred, the nature of the activity and the person who initiated it. Other metadata on these activities, which will likely be applied at the file or class level and will primarily document the management of the record, will include metadata

documenting laws or policies that govern or restrict access or disposition, retention periods, specific preservation strategies performed, and the physical medium on which records are stored.”<sup>19</sup>

To meet accountability and reliability standards every system policy and procedure has to be well documented. Also, system hardware and software have to be regularly tested. Systems must capture all business records and all essential metadata related to that business process. Systems are expected to maintain records protected from accidental or intentional deletion or alteration. All components of a record, including relevant metadata, notes, attachments, etc., must be made accessible, displayed and managed as a unit or complete record of a business process. Also, the requirements agree that recordkeeping systems must ensure the future usability of the business records including the capability of recreating the content of records as well as any relevant metadata over time.

The New Zealand recordkeeping standard<sup>20</sup> indicates that ERMS must have comprehensive controls to create regular backups of the records and recordkeeping metadata. These backups should enable the electronic recordkeeping system to rapidly recover lost records because of system failure, accident, or security breach. In practice, backup and recovery functions may be divided between electronic recordkeeping system administrators and information technology (IT) staff. It is important to make a clear distinction between back up procedures and preservation strategies as the language used by IT professionals does not always coincide with the one used by RM professionals.

<sup>19</sup> Philip Bantin. "Recordkeeping Metadata Specifications – Evolution of the IU List of Specifications." Electronic Recordkeeping at IU (University Archives). [www.indiana.edu/~libarch/ER/nhprfinalmeta.doc](http://www.indiana.edu/~libarch/ER/nhprfinalmeta.doc) (last accessed March 10, 2012).

<sup>20</sup> Archives New Zealand. "S5: Digital Recordkeeping Standard - Archives New Zealand. Te Rua Mahara o te Kāwanatanga." Archives New Zealand. Te Rua Mahara o te Kāwanatanga. <http://archives.govt.nz/s5-digital-recordkeeping-standard> (last accessed March 14, 2012).

Part 6 of the Australian Standard AS 4390<sup>21</sup> relates to record storage and its significance to records management. If a record is not stored properly, it can cease to exist. The extent of its metadata description or disposal coverage is irrelevant if a record fails to physically exist due to media failure; therefore storage is crucial although frequently overlooked. Records can become inaccessible in very short periods of time unless storage media is watched closely. Storage not only relates to preservation issues as it is also important to determine where actual servers are located. Since the approval of the USA PATRIOT Act (The Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism) in the United States, the rights to privacy of personal and health information are endangered because information about Canadians or other foreigners housed in the United States is susceptible to seizure.

An ERMS should also have provisions regarding retention and disposition with reference to specific and modifiable disposition/retention authorities and the management of legal holds. A review process of files must be allowed before disposition takes place. It is the process of checking files, once they have reached the date or event specified by the retention schedule, to decide whether they are to be retained, transferred to another system, or destroyed. The reviewer may consider metadata, contents, or both. In some environments, the retention schedules are used to govern disposition without a review, but close attention has to be paid to legal holds, temporary suspension of disposition processes and rules when there is a court order to preserve records with specific content or when litigation is anticipated or

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<sup>21</sup> In December 1995, Australia became the first country in the world to develop a standard on records management - AS 4390 - 1996. Following the approval and release of the standard, the international records management community began work on the development of an international standard. This work used the Australian standard as its starting point. AS ISO 15489-2002 replaces AS 4390-1996.

expected. The system should be able to segregate collections of records where legal holds apply, and to manage these holds over time.

An ERMS should also be able to define non-electronic aggregations in the classification scheme. The system must allow both kinds of records to be managed in an integrated manner. A physical file which is associated as a hybrid with an electronic file may use the same file title and numerical reference code, but with an added indication that it is a hybrid physical file.

Despite the proliferation of similar system specifications and working groups to establish standardized best practices, eRM remains a puzzling activity. This challenge goes beyond the implementation of an ERMS and is observed not only in universities but in any organization, public or private, large or small. For many organizations, management of electronic records is still done less well than that of paper records. According to a recent study, information management industry group AIIM (Association for Information and Image Management) cited a recent survey of some 700 companies that indicated that many firms are still not taking management of digital records seriously. The survey titled "Electronic Records Management – Still Playing Catch-up with Paper"<sup>22</sup> notes that over a third of these organizations, if challenged, would not be confident that their electronic records had not been changed, deleted or inappropriately accessed.

Even though the various functional requirements posted to date reflect the standard expectation for an ERMS, not every organization has to comply with them in order to manage their electronic records. The requirements have certainly set a bar that computer

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<sup>22</sup> AIIM (Association for Information and Image Management). "Electronic Records Management - Still Playing Catch-Up with Paper?." AIIM. <http://www.aiim.org/infonomics/still-playing-catchup-with-paper.aspx> (last accessed January 22, 2012).

software providers have to reach in order to certify their compliance before they can even bid for a request for proposal.<sup>23</sup> This varies from jurisdiction to jurisdiction and even though DoD 5015.2 has become a de-facto model for functional requirements ERMS in the United States, it does not mean that all organizations in the US have to deal with a certified supplier to address their records management issues. The relatively high cost of these applications is driven not only by licensing and hardware requirements. The cost of these applications can only be measured against the benefits they provide or the risks they help mitigate. The higher the risks the easier it will be for a RM program to obtain the necessary funding for these kinds of systems. Every organization faces risks of various types and there are various procedural ways of addressing eRM issues without having to invest large amounts of money. Sometimes compromises with the functional requirements mentioned above have to be made as long as there are no specific mandates, but the absence of a strict regulatory framework mandating the implementation of a certified ERMS does not mean that records do not have to be managed according to basic principles that address retrievability, authenticity, access restriction, and disposition rules.

### **Implementation Methodology**

The importance of functional requirements cannot be questioned and the development of the standards mentioned above had its biggest impact in the IT industry with multiple software firms having developed compliant ERMS. The importance of referring to current standards during the software application procurement process is clear from the records manager point of view, but ERMS implementations have not always been driven by records

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<sup>23</sup> Currently there are about twenty software applications certified as DoD 5015.02 compliant. See JITC Command. "DISA JITC." Joint Interoperability Test Command. <http://jitic.fhu.disa.mil/cgi/rma/reg.aspx> (last accessed March 6, 2012).

managers. Administrators have believed the implementation of an ERMS would be the magic solution for the e-records nightmare, but many organizations have tried to implement ERMS without even having an adequate classification system resulting in an absolute fiasco.

As Charles Dollar has stated, the standard for archival preservation requires that records have to be more than readable and intelligible. Records must also be identifiable, encapsulated, retrievable, reconstructable, understandable, and authentic. Bantin indicates that the most prominent digital preservation strategies discussed in the literature include creating computer museums, copying to paper or microfilm, converting to standard formats or into software independent modes, the "emulation" strategy, and the conversion or migration of records. Some of these strategies do not address many of the challenges posed by format obsolescence. It is not possible to preserve existing and valuable metadata if the preservation strategy is just copying to paper. The main challenge arises from some of the software components involved in the processing between media and rendered information, such as proprietary file formats, application software, and operating system software, which are constantly evolving.

The DIRKS methodology<sup>24</sup> is a sound and proven approach to implement adequate and comprehensive records management programs. It expands on the methodological framework of ISO 15489 and consists of an eight-step process for organizations to follow in order to improve their records management and information management practices, including the design and implementation of new records management systems. The first step (step A) tends to provide a thorough understanding of the business, regulatory and social context in which

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<sup>24</sup> National Archives of Australia. "Designing and Implementing Recordkeeping Systems (DIRKS) Manual." National Archives of Australia. <http://www.naa.gov.au/records-management/publications/dirks-manual.aspx> (last accessed January 22, 2012).



the systems operate. Without this information the records manager lacks critical information about strengths and weaknesses of the current recordkeeping systems. It is not possible to create a sound classification system and taxonomies without understanding the organization's culture. Many organizations may look alike but their history and culture make them different, and there is no one single solution that fits all of the scenarios.<sup>25</sup> The analysis of their business activities and environmental factors is a key component in order to identify their need to create, control, retrieve and dispose of records (steps B and C). Then an assessment of existing organizational strategies (such as policies, procedures and practices) has to take place, to evaluate if they satisfy their records management requirements (step D). This process sheds light over the need for redesigning existing strategies or designing new strategies to address unmet or poorly satisfied requirements (steps E and F). The implementation follows (step G) and the whole process concludes with a post-implementation review of the recordkeeping requirements and organizational constraints defined in Steps C to E (step H).

The methodology provides the essential framework to: establish a business case for records management; develop a business classification scheme that identifies the unique functions and activities of an organization in a hierarchical way (functions, activities and transactions); construct agency-specific classification tools such as a thesaurus or controlled vocabularies; compile a functions-based records disposal authority for records unique to an agency; compile a general disposal scheme relating to common administrative functions to enable systematic disposal of records when they are no longer required to comply with

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<sup>25</sup> The culture of organizations differ in various ways and a records manager has to understand cultural factors such as: how seriously staff in an organization take recordkeeping responsibilities; receptiveness towards information technology; degree of risk sensitivity or risk aversion. These factors will support or inhibit use of ERMS and will have to be addressed accordingly.

legislation and regulations, or to support an organization's business; adopt appropriate metadata standards for control, security and access of records; and design or select records management software products and other electronic business information systems that meet an agency's requirements to create, control, retrieve and dispose of records.

The findings of a recent survey conducted in Australia on the rate of implementation of eRM programs show that "around 93% of all surveyed organizations claimed to have an effective electronic recordkeeping system, or to be in the process of planning and/or implementing an electronic recordkeeping system."<sup>26</sup> This result appears to suggest that the public sector is progressing towards compliance with the laws and regulations on effective and efficient records management". The same survey also indicates that DIRKS was the preferred method for the implementations of these programs. This methodology was intended to be used by approximately 25% of the institutions surveyed and the results showed that it was used by 23% of the respondents. "This led to the question of why DIRKS is not more widely used. Is it because decision makers are not aware of this methodology, or because DIRKS is not a practical fit for all agencies?"<sup>27</sup> The authors of the study concluded that many public organizations in Australia need a more tailored set of guidelines for record-keeping system implementation projects, which is arguable considering the flexibility of DIRKS. The lack of a standard methodology for the implementation of electronic record-keeping systems is seen as an explanation, or at least a major contributor to many failed implementation projects in practice.

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<sup>26</sup> Linh Nguyen and Paula Swatman. "Australian Public Sector Adoption of EDRMS: A Preliminary Survey" presented at "Creating the Future: Transforming Research into Practice - 19th Australasian Conference on Information Systems, 2008." [www.bsec.canterbury.ac.nz/acis2008/Papers/acis-0020-2008.pdf](http://www.bsec.canterbury.ac.nz/acis2008/Papers/acis-0020-2008.pdf) (last accessed January 20, 2012).

<sup>27</sup> Ibid.

The first component for a sound records management program is an integrated framework where the management of records is oriented toward customer-satisfaction, service, cost-effective management, and best value. This implies the development of an organization wide recordkeeping culture which can only be achieved through consistent and consensual implementation of records management standards, policies and procedures that establish common understandings and expectations among creators, users, custodians, and administrators of the values and functionality of documents, records, and archives. A records management policy must set a clear definition of responsibilities and accountability in managing an organization's information assets. The need for this accountability and policy enforcement has become clear as more information is generated in electronic form, which increases the risk of non-compliance and information loss.

Some authors are calling for a new methodology because they believe that the paradigm of the ERMS has failed and a new paradigm is needed.<sup>28</sup> Indeed, many changes have occurred in the last ten years and ERMS implementations can no longer be seen as the sole solution for the eRM challenge. More applications have come on stream in organizations, and individuals and teams have numerous choices as to how and where to keep their records, making it more complicated to insist on a single corporate records system intended to apply retention and access rules. New generations require more flexible computerized environments, and organizational boundaries are becoming unclear with collaboration practices that involve multiple parties, frequently located across the globe. However DIRKS was not meant to be "a paradigm" and as Adrian Cunningham says, electronic records management will "remain a contested work in progress, rather than a

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<sup>28</sup> James Lappin. "What will be the Next Records Management Orthodoxy?." *Records Management Journal* 20, no. 3 (2010): 252-264.

settled orthodoxy.”<sup>29</sup> The DIRKS methodology is still sound but not always understood by all of the stakeholders. Records managers need to understand the dynamics of each step. In other words, regulatory, social, and technological contexts are always changing and therefore have to be revisited. When the environment changes, organizational strategies have to be adapted or updated. Additionally, changes do not always come from inside the organization, sometimes they are driven by new technologies that arrive creating new user expectations.

The extent of training that the use of DIRKS requires has not always been fully understood either. The National Archives of Australia (NAA) had to launch a huge training effort in 1998 in order to get their staff on board with new best practices. They contracted Monash University to deliver a year-long training course in modern recordkeeping theory and practice to NAA staff. The training required that all staff above a certain classification pursue a two-days per week online course for 12 months. Cunningham says: “Many of the NAA’s standard operations and services were suspended in order to free up staff time for the Monash training. This suspension of normal business was itself an important circuit breaker in moving from the old regime to a new regime. By the end of that year the staff felt equipped with the conceptual knowledge and enthusiasm that was needed for the NAA to reinvent itself as a recordkeeping standards setter and expert advisor.”<sup>30</sup> Only in recent times have ERMS vendors and consulting firms started to promote implementation models that resemble the Australian one. They realized that unless a comprehensive effort to understand an organization’s regulatory context and culture takes place, implementations were condemned to failure. Failure would also follow if resources allocated for the implementation

<sup>29</sup> Adrian Cunningham. "Digital Curation/Digital Archiving: A View from the National Archives of Australia." *The American Archivist* 71 (Fall/Winter 2008): 530-543.

<sup>30</sup> *Ibid.*, p.4.

barely covered the cost of software, hardware, and training, there were unrealistic timelines, and return on investment that was not occurring according to plan.

The nature of an ERMS varies from organization to organization. MoReq specifications, for example, have to be adapted to each organization's needs and to meet each organization's legal requirements. That is actually the first step to be pursued by any records manager according to the DIRKS methodology. The preliminary investigation has the purpose of identifying and documenting the role of the organization, its structure, the regulatory and socio-political environments in which it operates, as well as recordkeeping practices. The ISO standard does not go beyond the indication that a classification system has to be function-based.

Many organizations went through great recordkeeping failures when ERMS were brought in by IT or legal departments alone, thus causing a compliance crisis. Trying to manage electronic records without a proper classification system led to a massive number of records with no standardized criteria for retention or security, and, despite the fact the software was compliant with the most rigorous standards, no rules were applicable to collections that were not arranged. Records managers have been tempted to believe that users could dictate how records are to be classified, and many have overlooked the development of classification systems based on the belief that records surveys would be sufficient. An organization cannot rely on old arranging methods that frequently do not work for the current user, making implementation of security rules and disposition practices a daunting task. Some organizations are still accumulating records while ignoring that consistent disposition practices are paramount to mitigation of litigation risks associated with e-discovery. Many organizations have not yet implemented electronic records management and are still

struggling with emails, applying rules based on the records format instead of rules based on context and content. Other organizations claim they have developed function-based classification systems when instead they have created a file plan that merely reproduces their organizational chart. While organizational charts are a critical starting point for the preliminary investigation according to DIRKS, they change frequently and therefore any classification scheme based on them will have to be updated too frequently to truly remain current as the organization evolves. By comparison, function-based classification systems are better to employ because the basic functions of an organization remain more stable and make possible the management of a much smaller and more stable number of record aggregations, with a consequently more simplified retention system and less duplication of records overall — making the whole system more efficient.

### **Preservation**

Electronic records held for the long term face three kinds of risks: media degradation, hardware obsolescence, and format obsolescence. Throughout the 1990s, archivists argued more frequently about the principles that should guide the appraisal and long-term preservation of authentic and reliable electronic records. They concluded that this required preserving formal document structure (structural characteristics) and descriptive metadata and that decisions relating to the preservation of a digital record should ideally be made before its creation, at the point of designing the recordkeeping system:

Failure to manage properly these records and the systems that produce them will render archivists powerless to meet one of their primary tasks: the preservation of institutional memory. If we think of e-mails, for instance, the challenge posed by electronic media is not only one of preserving the records themselves but also preserving their various relationships between each other, their creator(s), and their receiver(s) in the communication process. The preservation needs expand beyond the

record itself reaching also the process through which the record is created, used, transmitted and disposed of.<sup>31</sup>

A new proactive approach is needed to address the many issues related to electronic records creation. To do so records professionals have to get involved 'up front' with legal compliance and audits, and should provide advice on any software implementation. Departments, units, and administrative offices designing or modifying information systems should require archival advice at the start of these projects to discuss archival and records management requirements. Terry Cook highlights the need for a powerful strategy to get archival issues addressed by record creators at the front end of the records continuum: "[This] is essential if an archival record is to survive in the electronic era."<sup>32</sup>

The following techniques are recognized in MoReq2: migration (converting information to new formats which can be accessed by current hardware and software); emulation (moving the information to new hardware but with an additional software component which emulates the old hardware, thus allowing execution of the old application software); technology preservation (continual maintenance of the original hardware; not practical in the long term); and bundling of data and software.<sup>33</sup>

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<sup>31</sup> David Wallace. "Metadata and the Archival Management of Electronic Records." *Archivaria* 36 (1993): 87-110.

<sup>32</sup> Terry Cook. "What is Past is Prologue: A History of Archival Ideas Since 1898, and the Future Paradigm Shift." *Archivaria* 43, (Spring 1997): 17-63. Cook also wisely warns: "Yet with its heavy focus on institutional and official records in its formulation and examples, the accountability approach also carries with it, (...) a danger of rendering into two camps the administrative and cultural roles of archivists, and thus of devaluing archives' role as a bastion of national culture and societal memory in favour of narrower, strictly legal accountabilities."

<sup>33</sup> The complex nature of the preservation metadata has led to the development of the OAIS reference model. The OAIS reference model is one example of this type of preservation approach. According to this model an Archival Information Package contains two distinct items: the Content Information that includes the data object or digital resource itself as well as the systems and information necessary to render the object; and Preservation Description Information that includes information describing the object itself and associated preservation information. See Consultative Committee for Space Data Systems. "Reference Model for an Open Archival Information System (OAIS)." Consultative Committee for Space Data Systems. <http://public.ccsds.org/publications/archive/650x0b1.pdf> (accessed March 14, 2012).

## Summary

All relevant organizational variables have to be taken into consideration for the development of a records management program. These variables are unique for each organization, including universities. Even universities following similar organizational patterns will develop a unique organizational culture. Any program should balance technological, policy, and educational approaches in a way that fits the organization's culture. Type and size of an organization, administrative culture, and computing culture are just some examples of the factors that should influence the approach. Despite the general agreement on functional requirements for electronic records management application systems and metadata standards, program implementation methodologies remain a contested field between the major traditions: the North American "life cycle" and the Australian "records continuum". Archivists must deal with electronic systems that do not always managing electronic records properly. The present environment is characterized by rapid change, which leads Bantin to suggest that there is not much room for

... dogmatism and a rigid allegiance to strongly held notions of the past on how to manage records. (...) What is needed at this point in time are archivists who are willing to experiment with creative combinations of ideas, old and new; who are courageous enough to seek out and form partnerships with information specialists, auditors, and risk managers whose language and methodologies are presently foreign to them; who are motivated to learn new skills; and ultimately, who are committed to developing realistic strategies for managing electronic records, no matter where this journey may lead them.<sup>34</sup>

The records continuum model with its integrated control over product, process, and service greatly improves the collaboration among creators, users, archival administrators, and custodians for better quality of service. The records continuum concept shows records

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<sup>34</sup> Philip Bantin. "The Indiana University Electronic Records Project: Lessons learned | Information Management Journal | Professional Journal archives from AllBusiness.com." All Business. <http://www.allbusiness.com/management/3603527-1.html> (last accessed March 10, 2012).



management and archives management moving toward integration and leaving behind stages and changes in the chain custody that had been created artificially. An integrated approach, with integrated control, and an integrated governance framework are components of a best-practice scheme. Best practices can then be measured “by client-satisfaction service, cost-effective management process, and best-value records.”<sup>35</sup>

The life cycle theory has not lost its momentum. The whole InterPARES project still insists that the archives should take care of the custodian role that is inherent to the archival function, making sure that the record remains unchanged, authentic and trustworthy over time. However the electronic record, just like any record will continue changing over time. Records change as they are accessed, re-interpreted, and repurposed, and these changes will occur whether or not the records have been migrated to an “archival” repository. Each time an electronic record is migrated for preservation purposes, or is accessed, audit trail metadata should be updated, and in principle, this represents a change to the record. The importance of the evidential value of the record is not a new concern, but must be addressed anew in the electronic realm. As David Bearman indicated, “creation of records — taken for granted by archivists in the age of paper documentation because communication in writing required the information content to be fixed on a medium in the form in which it was received — can no longer be taken for granted.”<sup>36</sup>

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<sup>35</sup> An Xiomi, (2003)

<sup>36</sup> David Bearman. "Managing Electronic Mail." *Archives and Manuscripts* 22,(May 1994): 28-50.

## Chapter 2: North American Universities: Previous Studies of Records Management

Some studies of records management at North American universities have already been made. These studies did not necessarily focus on electronic records, but their findings help us understand the conditions that have impeded the implementation of electronic records programs.

According to Nicholas Burckel the late-twentieth-century practice followed by American university archives has been that of “collecting, processing, and preserving non-current institutional records of permanent historical, legal or administrative value.”<sup>1</sup> This view reflects the Schellenbergian life cycle archival theory that was current at that time. Burckel was, nevertheless, pushing for broader collecting policies as he realized that receiving records transfers from administrative officers would not be sufficient to document the increasing complexity of universities. He was not referring to electronic records as they had not yet arrived on the scene. That same year Ian Wilson wrote about Canadian university archives which in his opinion, and despite their size and relative importance, appeared to be less involved in records management than federal and provincial archives. He went on to quote a provincial archivist who even questioned “whether those university archives without functioning records management programs deserve[d] the name archives.”<sup>2</sup> Wilson also pointed to a number of issues that became prevalent in the literature on this matter. In his own words those issues were “the administrative position of the archives within the

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<sup>1</sup> Nicholas Burckel. "The Expanding Role of a College or University Archives." *The Midwestern Archivist* 1, no. 1 (1976): 3-15.

<sup>2</sup> Ian Wilson. "Canadian University Archives." *Archivaria* 3 (Winter 1976-77): 17-27

university administration; the applicability of records management systems to the university environment; and the involvement of university archives in general manuscript acquisition programmes.”<sup>3</sup> This last topic coincides with Burckel’s concern about the acquisition mandate for many university archives.<sup>4</sup> Information obtained by Canadian surveys conducted at that time was revealing. Although most of twenty-three university archivists surveyed had an interest in the records of their own institutions, only seven had developed formal records management programs.<sup>5</sup>

Stout and Baird published the summaries of an early 1980s survey of topics related to so-called “machine readable” records (MRR).<sup>6</sup> They noticed that administrative use of computers was surging in colleges and universities, probably more than in any other sector of society, with a clear impact on the university archival scene. Their survey first sought information on archival responsibility for machine-readable records and computerized storage media. The survey also inquired into the use of technologies to support activities within the archives, the sharing of holdings in library or archival databases, and the consideration of archiving in the automation of recordkeeping systems on campus. When referring to machine-readable records, the main concern expressed in the survey was their preservation.

Stout and Baird reported that in most universities and colleges no systematic effort was being made to save administrative MRR. These records were being “unintentionally

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<sup>3</sup> Ibid., p.18.

<sup>4</sup> Burckel. (1976): 4-6

<sup>5</sup> Don Skemer and Geoffrey Williams. "Managing the Records of Higher Education: The State of Records Management in American Colleges and Universities." *The American Archivist* 53 (Fall 1990): .535

<sup>6</sup> Leon Stout and Donald Baird. "Automation in North American College and University Archives: A Survey." *The American Archivist* 47, no. 4 (1984): 394-404.

erased.”<sup>7</sup> Among the issues raised about an information system project at Pennsylvania State University was the difficulty of determining “[what] version of a constantly changing file should be preserved? How can the appearance of a data file at the time an important decision was made be recreated for the researcher?”<sup>8</sup> It is interesting to note that the authors were more concerned about future researchers than about current users having to make decisions based on those same records.

Many of the archives surveyed by Stout and Baird had records management functions combined in the same unit, but surprisingly, 45.3 percent of the universities were not in this situation. In almost two thirds of the repositories the archivist or the records manager had initiated work with MRR. Most of the responding archives thought MRR should fall within the normal responsibilities of their unit. Whatever very limited amount of electronic records these archives accessioned was acquired at the end of their life cycle, and with little or no descriptive information provided 'up front' by their creators, and by relying on descriptive practices that were sound for physical records but were inadequate for electronic ones. Furthermore, these records were not accessible to the public — not simply because of the lack of user awareness of them but also because of the impossibility of providing access to them. The typical archival repository described in the survey was fully compliant with the concept of the life cycle custodial role, except that preservation of electronic records was not actually being done.

According to the same survey, the common understanding of many archivists was that they were not well prepared to deal with the problem of preservation and should go through

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<sup>7</sup> Ibid., p.398.

<sup>8</sup> Ibid., p.398.

extensive computer training. Far from accepting the methodological shift required by electronic records, and the obsolescence of the custodial approach, the authors focused on lack of funding, unfavourable administrative relationships, and lack of communication with what is now called the IT community. It was clear that further cooperation with administrators and IT services had to be developed, but these problems were being identified as the root cause of failure when they were just the manifestation of an inadequate approach. Only few exceptions were cited in this survey where archivists had been involved in recordkeeping planning activities.<sup>9</sup>

In 1985 Boles and Marks Young insisted that the Schellenbergian appraisal strategy should be revisited for university records.<sup>10</sup> Interestingly, this was indeed a more proactive point of view on appraisal that contradicted earlier approaches that prevented archivists from attempting to influence the creation of records. Without referring to electronic records, they recommended an approach wherein “appraisal should be a continuous process, beginning with the identification of record holders possessing potentially valuable records.”<sup>11</sup>

A significant question was asked five years later by Skemer and Williams about the proper relationship between the archival and records management functions in academic institutions, acknowledging that further study had to be made of the “extent, scope and administrative structure of archival involvement in college and university records management.”<sup>12</sup> Their survey on records management programs at higher education institutions in North America published in 1990 was a great contribution at that time and

<sup>9</sup> Ibid., p.400.

<sup>10</sup> Frank Boles and Julia Marks Young. "Exploring the Black Box: The Appraisal of University Administrative Records." *The American Archivist* 48 (Spring 1985) : 121-140.

<sup>11</sup> Ibid., p.131.

<sup>12</sup> Skemer and Williams, p.535.

highlighted the state of records management activities. At that time archivists started to realize that their paradigms were being undermined by the explosion of electronic records. Skemer and Williams defined records management programs as “organized efforts to provide centralized services for the management of all records in all formats generated by academic institutions in their day-to-day operations; the programs had been officially designated and legally authorized at the campus or system level to implement retention and disposition guidelines and provide other centralized services to an entire university or college, or at least in two or more of the following areas: administrative and departmental records; student records; business and financial records; and official publications.”<sup>13</sup> Despite Skemer and Williams’ efforts to broaden the scope of their research they found that records management programs were indeed rare. Only 148 out of 449 of the respondents were able to claim compliance with the criteria established for the survey.<sup>14</sup> The authors quickly concluded that legal and fiscal accountability were the main drivers behind higher levels of compliance in publicly supported colleges and universities, although the extent of the survey was not sufficient to assess how mature or robust these programs were. Half of the 148 institutions with RM programs noted that archivists instead of records managers held responsibilities for the programs. This is not surprising given the strong institutional archival tradition of collecting manuscripts, which can lead to a lack of interest in records management. Only fourteen responding archives were managed by full-time records managers. A high percentage of records administrators indicated that they reported to a library administrator. A

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<sup>13</sup> Ibid., p.537.

<sup>14</sup> The survey was mailed to 1,532 institutions of which 449 responded.

smaller number reported to the president's office or to another senior administrator. The data is not surprising even today.

Skemer and Williams were already trying to identify a relationship between the quality of RM programs and their positioning in the organizational structure. They also collected data on the educational levels of records administrators, determining that three quarters of them had at least a master's degree. At this time only 98 records administrators held a master's degree. Another interesting finding of the survey was that many of the universities' records schedules were outdated or obsolete. An indication of the lack of records management is the fact that institutions had office-specific schedules, a trend that leads to difficulties for any archivist/records manager trying to develop and implement a function-based classification scheme. The survey revealed that only a few schedules covered electronic records.<sup>15</sup> Most of the schedules had been developed using records surveys, a method that is mostly utilized when departments responsible for RM are under-resourced and can only capture a high level inventory of records collections. This indicates they are unable to complete the type of analysis that DIRKS describes in steps B and C.

Despite the growing automation of records management few respondents expressed any preparedness to deal with electronic records, or acknowledged that electronic records should be scheduled for retention and disposition. Lack of technical expertise was often blamed for this. Although my assessment of the results of this survey is rather pessimistic, when records administrators were asked to evaluate their program, evaluations were quite

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<sup>15</sup> The authors referred to them as "automated records".

positive, except that they complained about not being adequately staffed and not having enough storage space.

Skemer and Williams were still thinking within the old custodial mindset. Their response was to clamour for more space and more resources. They did perceive the emergence of a new de facto model whereby the physical custody of the records following a centralized model was no longer feasible and strong departmental solutions were making their way through, but not that the old Schellenbergian model was not sustainable any more. Archivists were going to have to be pushed into a new arena of having to negotiate coordinated solutions with new stakeholders like registrars, other administrators, and IT. Although many universities lacked articulated and comprehensive electronic programs, that did not mean they were not keeping their electronic student, personnel, or financial records. These records collections were for the most part out of the archivists' reach, as they still are in many universities.

Any organizations, public or private, have to comply with multiple regulations and are subject to periodic financial audits. Universities are no exception and they are also subject to the scrutiny of students, their parents, unionized employees, and the public at large. Skemer and Williams expressed their belief that public universities were more likely to have stronger RM programs based on the assumption that "legal pressure is more persuasive in colleges and Universities that rely on public financing."<sup>16</sup> In Chapter 3 several examples will demonstrate how compliance with regulations is not necessarily the main driver for better records management practices.

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<sup>16</sup> Ibid., p.545.



Brown and Ruggerio published an article in 1989 on their efforts to establish decentralized policies for the management of electronic records at Delaware University.<sup>17</sup> They conducted a survey in June 1987 in which all departments were asked about electronic records management issues that they were facing. They obtained an outstanding 85 percent response. The focus of the survey was file organization, ignoring other issues such as access permissions, systems instability, identification of vital records that did not exist elsewhere, or lack of documentation of methods used to arrange electronic records. Some of the questions that an “ad hoc task force” had raised at the beginning of this process a couple of years before were drawing attention to the need for schedules that could be specifically designed for electronic records, but the schedules for paper records were poorly designed or maintained. The survey's findings led to a recommendation to create a policy to ensure compliance. The policy required each university administrative entity to establish and document departmental standards for file organization and naming conventions to ensure effective retrieval mechanisms.

The units also had to establish and document measures for protecting sensitive or critical information from unauthorized disclosure, and procedures for file back up to protect university information from hardware malfunction, including measures for the protection of hardware. Departments were given a year to bring their existing electronic systems to compliance. A number of “big buckets” were established to classify records accordingly but it is not clear if a connection was established with the existing classification scheme for paper records. The classification scheme did not reflect an analysis of functions and activities and for the most part was subject based. It represented some progress in the sense that they had

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<sup>17</sup> Brown, Jean K., and Linda L. Ruggerio. "Establishing Policy and Standards for Decentralized Management." *Records Management Quarterly* 23, no. 2 (1989): 34-47.

achieved a huge step by getting an electronic records management policy approved at the highest level possible within the university. This policy tried to capture all records regardless of storage medium. The challenge remained in that not enough study had been conducted and a subject-based classification system was not going to take them in the right direction. The records manager was already strategically engaging with stakeholders at different levels of the organization and although preservation was not perceived as an issue, they were setting the ground for further progress. They had already realized that since the university had “learned to manage its paper mountain – now the time had come to tackle its electronic Everest!”<sup>18</sup>

That same year William Maher<sup>19</sup> published a paper that stated that despite the natural expectation that the primary mission of the academic archives should be to document the heritage of a college or university, the lack of a clearly defined overall mandate frequently undermined the effectiveness of the programs in meeting this primary goal: “Presumably, the academic archivist's time would be devoted predominantly to the care and servicing of campus records and all other activities would be peripheral. In practice, however, most archives adopt a number of other functions, so that it often seems that the most characteristic feature of academic archives is their extra-institutional and extra-archival responsibilities.”<sup>20</sup> Maher recognized that university archives had developed in a variety of ways and he identified six developmental factors: the character, age, and mission of the parent institution; the administrative location of the archives; the place of the archivist in the institutional

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<sup>18</sup> Ibid., p.46.

<sup>19</sup> William Maher used to be chair of the SAA's College and University Archives Section.

<sup>20</sup> William Maher. "The Current State of Academic Archives: A Procrustean Bed for Archival Principles?" *American Archivist* 52 (1989): 343.

hierarchy; research preferences of faculty and administrators; research preferences of the archivist; and archival theory and principles.<sup>21</sup> He was acknowledging that archives are not a “neutral place” where records are simply stored, and thus highlighting how the old paradigm was shifting. Indeed archivists and administrative politics affect archives. His analysis of how the position of the archives within the organization could be influential in regard to RM puts the accent on the context of the university. Unfortunately most university archives have constructed a customer that is outside their boundaries, developing a target audience based on the records holdings that seem to be more appealing to current researchers. The scenario Maher describes where “important administrative activities such as records management or information retrieval are likely to earn the archivist little credit with library superiors”<sup>22</sup> is unlikely to materialize when the customers are university administrators.<sup>23</sup>

Skemer and Williams identified a handful of successful programs at larger public and private institutions. Most of these programs reported to a high-level campus administrator, the remaining portion reported to a librarian or archivist. The authors made clear the need for collaboration between records managers and archivists as two very distinctive professional fields but they highlighted a shift in archival thinking whereby “the management of current and recent academic information for administrative purposes had to be considered as important to resource allocators and archivists as the preservation of historical information for cultural purposes is to archivists. Unless archivists have a broader interest in the management of all administrative information, either directly or by coordination of

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<sup>21</sup> Ibid., p.344.

<sup>22</sup> Ibid., p.345.

<sup>23</sup> In a different setting this has been my own professional experience where I have been able to secure resources for RM projects that enabled collaboration on records management for the executive team of a pharmaceutical company.

decentralized efforts, most of them will continue to have weak records management programs or none at all.”<sup>24</sup>

It was not until Helen Samuels published her *Varsity Letters* in 1992 that a stronger voice highlighted that the coordination or overlapping of RM and archival programs was not the real issue for universities. She suggested the use of records management skills to address the problems created by administrative records. The most useful techniques according to her are “planning and analysis before records are created, systematic filing procedures and records retention schedules. While analysis and planning are imperative for machine-readable records, they are also extremely useful to help records creator and archivists manage paper files. Prior analysis helps to ensure that offices create and retain appropriate information and that it is managed effectively for as long as it must be retained.”<sup>25</sup> One of the biggest virtues of her book was that by applying a functional analysis to universities and colleges she was actually broadening the scope of archival and recordkeeping programs.

She listed the main functions of universities as follows: confer credentials, convey knowledge, foster socialization, conduct research, sustain the institution, provide public service, and promote culture. Records created by organizations may fit under multiple functions depending on the interpretations of them given within a certain organizational setting or culture. She revealed how important transactions within these functions were not well documented and how functional analysis was a great tool to assist organizations in the determination of gaps where records were not even created. The best examples of the latter

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<sup>24</sup> Ibid., p. 547.

<sup>25</sup> Helen Samuels. *Varsity Letters: Documenting Modern Colleges and Universities*. (Chicago, Ill.: Society of American Archivists; 1992), p.146.

that she provided involve critical activities such as the interaction between student and teacher in the classroom and the life of the student outside the classroom.

Samuels dedicated a brief section of her book to electronic records, under the title "Automation". She fully recognized the impact computerized systems were having in academic institutions and she grouped the ways in which they were being used under Control, Analysis, Production, and Communication. She highlighted how the secretarial function was being redistributed and how the administrative structure that oversees these functions was being affected because faculty and supervisors were beginning to perform their own secretarial tasks. She pointed out the striking lack of any substantial discussion about the long-term preservation of electronic records. She indicated that the appraisal process should be addressed as records are created and used. The main obstacles to orderly creation, maintenance and reuse of electronic records were perceived to be mainly technical but she also pointed out the challenge created by incipient email technology where communities with access to that technology had resisted efforts to capture and preserve their interactions.

In their study of administrative use and users in university archives published in 1994, Yakel and Bost refer to organizational studies done by Cohen and March who consider universities "organized anarchies," which have no shared goals, foster fluid participation, and maintain little understanding of their processes. They noted that in many cases the "garbage can" model was at work: "decisions and solutions find each other accidentally, depending on temporal and spatial coincidence."<sup>26</sup> Their article suggested "that archivists should look at themselves less as the historical voice in an institution and more as part of the administrative

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<sup>26</sup> Elizabeth Yakel and Laura L. Bost. "Understanding Administrative Use and Users in University Archives." *American Archivist* 57 (Fall 1994): p.598.

team.”<sup>27</sup> This suggestion was not fully explained in their article but it is in line with the records continuum paradigm. RM may or may not be within the scope of university archives, but records managers and archivists are compelled by the cultural shift created by electronic records to collaborate and focus on comprehensive RM programs if they still think university memory need to be appraised and preserved. Stout concludes, however, that in the mid 1990s on most campuses “the archives [was] either invisible to relevant administrators or viewed as having nothing to do with 'modern' information.”<sup>28</sup>

In Stout’s study of efforts to establish an electronic records program at Pennsylvania State University Archives through the appraisal of electronic records published in 1995, he stressed the importance of cooperation between archivists and librarians. He described the benefits of cooperation between archivists and IT departments in the appraisal of old databases and how this process led to new projects where archival knowledge was taken into consideration as of concern to more than solely the protection of the history of the institution. That role was not always seen as valuable by comparison with the archives contribution to cost effectiveness and efficiency. Although his proposed plan of action was not clear, Stout pointed in the right direction by indicating that more collaboration and less competition was needed. Also, he acknowledged that archivists’ competencies in the area of electronic records could be challenged, but the records management responsibilities provide the overall records function with all the networking that is needed for a comprehensive electronic records program. Stout described a records program that stretched beyond its traditional boundaries to develop policies that dealt with information in all formats, enabled archival participation in

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<sup>27</sup> Ibid., p. 596.

<sup>28</sup> Lee Stout. "The Role of University Archives in the Campus Information Environment." *The American Archivist* 58, no. 3 (1995): 124-140.

various advisory committees responsible for electronic records, and educated students and staff on records management.

In 1996 Brown and Yakel noted a lack of substantive dialogue and action among academic administrative and information professionals that “must be reversed if college and university archives are to meet the goal of service to administrators.”<sup>29</sup> They suggested that archivists must intervene in the information policy process and be ready to manage increasingly complex and diverse types of records. In other words they were referring to a new approach that does not follow the life-cycle tradition for records management, a shift for the archival profession away from its traditional confinement to custodial functions. The environment described by Brown and Yakel was one wherein the archives and the administrative functions were disconnected. They saw no options for the archives other than making this shift, as there was no way for universities to continue supporting practices that do not benefit the institution in a measurable manner.

In her paper about the implementation of records management at the University of Illinois at Urbana-Champaign published in 2006, Kaczmarek discussed the need for a different approach to implementing electronic RM, explaining her “inside out” approach as opposed to bottom up or top down.<sup>30</sup> Her assessment was basically that any successful RM implementation requires thorough analysis before records are created, considering customer needs as the main concern to be satisfied. In her experience, when the archives was given the chance to prove that it could benefit the organization it did so by improving efficiencies in

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<sup>29</sup> William Brown and Elizabeth Yakel. "Redefining the Role of College and University Archives in the Information Age." *The American Archivist* 59, (Summer 1996): 272-287.

<sup>30</sup> Joanne Kaczmarek. "Establishing a University Records Management Program from the Inside Out." *Archival Issues* 30, no. 1 (2006): 23-34.

the area of documentation and ease of access to records. The process she described encompasses some of the steps described in DIRKS, but there is no mention of the methodology. Without specifically questioning the life-cycle concept, Kaczmarek ratified the idea that the RM and archives professions have an intertwined relationship and suggested a renewed focus on the interdependency and relationship between the two. The main difference between Kaczmarek's approach and the DIRKS methodology is that she indicated that customer needs should prevail instead of compliance with legal mandates and internal regulations. Kaczmarek described the University of Illinois as another example of a far from desirable relationship between archives and RM until recently. She highlighted the achievements recently obtained through the integration of RM and archives. In fact this highlights the fact that even such a large institution lacked an overall and comprehensive RM program until the launch of its Strategic Information Management Services in 2003.

The study published in 2006 on Institutional Repositories (IR) at college and university campuses<sup>31</sup> offered interesting yet results narrow results concerning questions related to RM and archival functions since it mainly focused on the archivist's level of involvement in the implementation of IR and the preservation of electronic information, assuming that archivists should be recognized as the preservation experts. Rather than focus on the process that led to such implementations, the authors were more seemingly concerned about archivists missing an opportunity, and collections that should "belong" to the archives were instead being managed by librarians or IT professionals who do not understand the true nature of the challenge posed by long-term preservation of electronic records.

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<sup>31</sup> Yakel, Elizabeth, Soo Young Rieh, Beth St. Jean, Karen Markey, and Jihyun Kim. "Institutional Repositories and the Institutional Repository: College and University Archives and Special Collections in an Era of Change." *The American Archivist* 71 (Fall/Winter 2008): 323-349.



Bessie Schina and Garron Wells' 2002 article discussed the challenges being faced by University RM programs in the US and Canada. They analyzed RM programs at institutions that have been “leaders in acquiring and preserving (...) documentary heritage”<sup>32</sup> — although it is clear that the vast majority has not been able to adequately preserve their own institutional history. They note that analysis of university archival programs goes as far back as 1949 when the Society of American Archivists' Committee on College and University Archives (SAA CCUA) conducted a survey among 84 institutions “to determine the extent of archival awareness in institutions of higher learning in the United States and Canada.”<sup>33</sup> At that time it was determined that 56 universities had developed some sort of an archival program. However, only 15 reported that despite the fact that they were responsible for official records there was no unified archival/RM program in place. The authors said that public universities had promptly responded to their obligation to comply with legal requirements. However, the limited scope of many electronic RM programs was an indicator that the root cause of the challenge of developing full RM programs does not depend on whether a university is publicly funded or not, just as the strength of the university archival program is not necessarily an indicator of a strong RM program. Accountability demands as pointed out by Schina and Wells have put some pressure on universities, but this pressure has not been sufficient to bring these institutions up to speed.

The strongest impetus for better RM practices was the implementation of privacy legislation, which occurred in the late nineties and early two thousands. It is clear that universities committed more resources to RM at that time, but it is also clear that those

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<sup>32</sup> Bessie Schina and Garron Wells. "University Archives and Records Programs in the United States and Canada." *Archival Issues* 27, no. 1 (2002): 35-51.

<sup>33</sup> *Ibid.*, p. 36

resources were not sufficient. Many RM programs were not able to transition towards a more proactive mode and the momentum gained by RM programs in those years was probably insufficient to achieve compliance with privacy legislation. The challenges faced were of great complexity and caught many organizations off guard. A survey done by researchers in the UK in 2004 revealed that compliance with FOI was still an area of concern for many records managers working at higher education institutions.<sup>34</sup> It can be argued that universities in North America might have coped with these challenges better than their colleagues overseas but, in fact, there is no data to confirm or deny such allegations. Schina and Wells point out public institutions are forced or induced to accept certain standards derived from government authorities in the matter of archival practices. However on Chapter 3 I demonstrate how public universities which are bound to comply with state or provincial regulations are not necessarily complying with their legal mandates. Another point Schina and Wells make is that public universities have been confused in “distinguishing between the official records and the collections of historical material pertaining to the institution or the region.”<sup>35</sup> They highlight the lack of clarity in many archival programs that tend to expand their scope towards other areas of regional interest instead of focusing on preserving their own institutional memory. Every time an archival program expands its acquisition strategy beyond its natural organizational boundaries it compromises resources that should be allocated towards stronger a RM program. By doing so archival programs tend to improve their popularity through public programming that is guided by current trends but this

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<sup>34</sup> Northumbria University, Information Management Research Institute. "Developing Records Management in Further Education: Responding to the requirements of the Freedom of Information Act 2000, Final Report.." Joint Information Systems Committee (JISC). [www.jisc.ac.uk/media/documents/.../recordsmanagementinfereport.pdf](http://www.jisc.ac.uk/media/documents/.../recordsmanagementinfereport.pdf) (last accessed June 16, 2010).

<sup>35</sup> Schina and Wells. p. 36.

approach actually undermines the robustness and effectiveness of appraisal strategies that should ensure adequate documentation of university functions. This misconception has reduced the scope and influence of many RM programs that operate under the umbrella of university archives. If there is not a defined or clear mandate for the archives, which is often the case, the scope of any RM program will be even more unclear.

The increasing pressure from society for better records management systems applies equally to publicly supported universities in the United States and Canada, and to private universities as they are both subject to legislation intended to establish accountability. Public expectations with regard to the integrity of electronic records are high given that students must complete many transactions over the Internet, sometimes far away from the university campus. Schina and Wells refer to the pressure “to meet not only cultural and research needs but also accountability demands.”<sup>36</sup> Records managers and archivists must work together in order to preserve organizational memory while achieving compliance with applicable legislation and serving organizational needs with high levels of efficiency. Cooperation between archivists and IT professionals is mandatory when records are to be preserved for the long term. This team has to cooperate to deal effectively with both analog and digital records.

Several studies have pointed out the potential impact of the location of the RM function in the administrative structure of universities, but as indicated by Skemer and Williams, very few articles have analyzed “the administrative structure of records management in institutions of higher education and the proper relationship of records management to a

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<sup>36</sup> Ibid., p.35.

professional archives program.”<sup>37</sup> The reappearance of this question usually leads to the view that having archival programs report through librarians, or receive funding through a library, is inadequate. Chapter 3 demonstrates that despite the reporting structure, reporting through the archives and libraries has not impeded the implementation of a small number of successful RM programs. Success seems to depend not so much the structure of the organizational chart but on how far reaching and proactive the program is. The position of the RM function in the organizational structure of universities is irrelevant if there is no clear mandate for archival and RM programs. The artificial boundaries between programs created by the custodial model has isolated archives and largely limited the scope of archival work to the collection of manuscripts and rare books and reacting to departments trying to dispose of records (either physical or electronic). Archives have been for the most part unable to assess how and when these records were created.

Schina and Wells also refer to a survey conducted at public universities in Canada and the United States in 2002.<sup>38</sup> The survey questions draw attention to areas such as organizational structure, administrative authorization, policies and procedures, personnel, and training and outreach. In addition, there were questions on the history of the establishment of the programs, the degree of policy implementation, and the existence of a compliance review process. The survey determined that records management advisory committees are common to universities in both countries. However, these committees have limited responsibilities, no authority to enforce policy and are frequently inactive. Most US and Canadian universities reported policies applying to all records formats, and six out of the 15 US institutions

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<sup>37</sup> Skemer and Williams, p.534

<sup>38</sup> Schina and Wells, p.38.

reported separate electronic records guidelines/policies. In Canada, none of the universities reported having a separate electronic records policy. Nevertheless institutions with electronic records policies admitted that these policies had been poorly implemented. Most of the respondents lamented that “the electronic records policies lack an implementation mechanism,”<sup>39</sup> which is an indication that the records managers were not well equipped for these implementations and had put too much hope on policy statements developed in isolation. The survey revealed that records retention and archives policies were lacking consistent implementation despite the fact they had been in place for several years. Most institutions had records retention schedules that related to the organization as a whole as well as unit specific ones. Although the authors were led to believe that university archivists and records managers think they are the only ones that understand the importance of consistent records programs, I think that archivists and records managers can learn much from other stakeholders and should take it upon themselves to engage with records’ creators in order to obtain more consistent support and to achieve better results.

The same survey also gathered information regarding how these programs were staffed and the way their budgets were managed. On average archives and records programs are administered by two to four full-time professional archivists/records managers and one to five part-time students. It is hard if not impossible to establish an adequate ratio of staff members with RM responsibilities in a day when the RM function has been delegated to every single desktop user. Thus, the complaint about increasing workloads and inadequate staff reflected by the authors could simply be the result of inadequate implementation of best RM practices, and the consequent accumulation of inefficiencies. About half of the programs

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<sup>39</sup> Ibid., p.40.

on both sides of the border were managing their own budget and the authors also noted the reappearance of inadequate funding, space, and a backlog of unprocessed collections as a recurring theme in archival literature. The number of researchers submitting records requests via email also appeared to be a problem, revealing a deep lack of understanding of a need for a customer service culture.

Schina and Wells also asked about future priorities for the following five years and grouped the responses into two types — basic records and archives management and electronic records management. The fact that eRM was listed as a priority was not an indication the respondents were on the right path, although it was, at least, an indication of good intentions. In probing electronic records management, the authors aimed at gathering some qualitative responses to assess the prevailing perceptions about the effectiveness of records and archives programs in raising the level of accountability for the management of active institutional records. One of the questions examined the relationship between the records and archives program and the offices of internal auditor, legal counsel, and IT. The US respondents reported that they had good collaboration and routine contact with the first two, while their relationship with IT was weak. They complained of not being included in the decision-making process pertaining to electronic records management. Most viewed the IT department as "a challenging area." The Canadian respondents reported closer collaboration with the offices of internal auditor and legal counsel since these administrators were usually members of the records management advisory committees. Overall, there seemed to be a more uniform involvement of these offices in records management compared to their US counterparts. The survey revealed a clear need for a closer relationship between university archivists and records managers and their IT colleagues, which will not materialize unless

both the former two redefine an area of collaboration. Of course this will be hard to achieve unless archivists and records managers develop a more proactive approach that does not focus on compliance as the almost exclusive driver of better archives and RM programs.

The difficulties in managing electronic records effectively are not a consequence of not being able to enforce policies but rather from the fact that universities have adopted new technologies with little consideration given to records management capabilities for preserving and appraising the records. The value of the records will remain undetermined until effective classification systems and retention schedules are not only published but also enforced across the organizations. This is the responsibility of records professionals who should develop stronger cases to obtain adequate support from senior administration. The tendency to throw the blame onto other stakeholders such as IT professionals has not improved the way electronic records are being managed; rather, it has prevented records professionals being more proactive and from developing creative and effective partnerships.<sup>40</sup> By focusing on preservation and compliance with standards that apparently only matter to them, most records managers in charge of university records have isolated themselves from records creators, and are missing the opportunity to support university core business units and senior administration. Records managers are responsible for the current situation in which there is increased legal risks, neglect of the electronic records long-term preservation, and inconsistent documentation and collection of historical university records. University records and archives programs are caught between a very slowly changing institutional culture, and an uncertain view of accountability in managing institutional

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<sup>40</sup> My personal professional experience indicates IT professionals are most of the time willing to collaborate with knowledgeable RM professionals who understand the regulatory environment as well as end user's needs.

information. If university archivists and records managers have not been involved in the design of university-wide information management strategies, it is simply because, at large, they condemned themselves to a position of isolation by remaining attached to an outdated custodial model. Schina and Wells did not assess the root cause of the poor implementation of RM policies. Instead they quickly assigned responsibilities to IT professionals and administrators without examining the role that records professionals played. It is the records professionals' responsibility to raise the profile of their activities to show that they do add value to the organization by consistently achieving compliance with multiple regulations and legislation while improving access, retrieval and protection of information assets whether they are active, semi-active or inactive.

The efforts by Schina and Wells to develop an abbreviated set of tools derived from ISO 15489 and the Society of American Archivists Guidelines for College and University Archives<sup>41</sup> may have been well intended but erred in trying to develop tools that were already in existence. The lack of references to DIRKS and the absence of in-depth analysis or studies of how to implement records management systems following ISO 15489 prevail among North American authors with few exceptions. The debate around the validity of the records continuum model was reserved for scholars and not embraced by practitioners. University records managers should not expect another standard specifically tailored for their environment. It is the records manager's challenge to understand his/her institution's culture. There is no clear explanation of why most of North American reviewers deny the success of their counterparts in Australia and New Zealand. Nobody argues against the ISO 15489 but

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<sup>41</sup> Society of American Archivists. "SAA: Guidelines for College and University Archives." Society of American Archivists. [http://www.archivists.org/governance/guidelines/cu\\_guidelines.asp](http://www.archivists.org/governance/guidelines/cu_guidelines.asp) (last accessed March 10, 2012).



not many practitioners have actually taken steps towards implementing function-based classification systems. The functional analysis conducted by Helen Samuels in *Varsity Letters* has been ignored by all of the universities studied as if the adoption or rejection of function-based classification systems had no implications for the implementation of RM programs. As was said in Chapter 1, ISO 15489 was created as a voluntary code and not as compliance standard. I would call it an enabling standard as it provides the baseline for any RM implementation but is not a fixed set of instructions to be followed. North American records practitioners should stop asking for a fixed set of instructions to be followed or they will never get started implementing current RM standards.

### **Chapter 3: How Well are Universities in North America Doing?**

The main purpose of this thesis is to understand why North American universities are having such a hard time when trying to implement eRM. Much of the literature and surveys on the subject so far has shown a diverse landscape where conclusions put some blame on other stakeholders such as librarians with leadership responsibility, IT professionals, or university administrators at large. As my analysis of this material thus far indicates, I am not convinced that the surveys have gotten entirely to the heart of the problem. Universities usually make their policies available on their public websites and university archives, frequently responsible for RM, tend to publicize their achievements and feature their most popular records collections. Some programs have gone even further and published more information on their websites such as training tools, procedures, case studies and various other achievements on this field. Having selected a number of leading universities I decided to focus on the information available through university websites as a way to obtain more information than the one obtained through surveys of the views of practitioners. Even the opinion of records professionals gathered through interviews does not always grasp the truth of the matter. The review of policies, manuals, procedures and classification schemes published online offers important evidence of the current status of the programs being analyzed. This information accurately shows the depth or weaknesses of existing implementations because if progress had been significant in the key area of electronic records universities would no doubt publicize it widely. By the same token, silences also speak loudly and assist in determining where the root cause of the delay in implementing more consistent and robust eRM programs resides — in whether institutions are private or public, if the RM program reports to the archives, library or central administration, IT professionals

are not willing to cooperate, or just in lack of understanding of the fact that electronic records will only be managed properly if the records continuum model is adopted and the custodial model is abandoned.

The existence of so many universities in North America means that a sample is needed. I chose to examine the very largest and academically highest ranked universities. I start with analysis of the eRM programs at the ten largest public American universities (Table 1), and the five best-ranked medical/doctoral universities in Canada (Table 4). A decision to change the size criteria used for universities in the United States allowed for more geographical diversity. A contested area for this topic of research is the comparison of public versus private, as some suggest that public universities have gone farther than private ones in eRM due to their obligation to comply with more regulations and also because they are subject to more public scrutiny. That is the reason why this analysis will also review the five largest private universities in the US (Table 2). The number of students is not necessarily an indication of excellence so I decided to make a cross review of other rankings to see if the analysis of other universities could be beneficial. As a result I added the best five universities according to *US News and World Report* (Table 3). Another group of universities (Table 5) was deliberately chosen as they had been cited by researchers due to their eRM achievements. The Committee on Institutional Cooperation that was established by the presidents of the “Big Ten Conference” members in 1958 held an E-records Conference in 2008. Four universities participated in this meeting: University of Chicago, University of Illinois, Indiana University and University of Michigan. It is not clear whether the University of Chicago is running a records management program and was therefore omitted. The other three universities not only have records management programs but have made significant

contributions in the field of electronic records management. The only Canadian university captured in this last group is the University of Calgary, which has openly embraced the records continuum model and has made substantial progress in the field.

There are a few basic expectations in chapters 1 and 2 that I have established for the reader. Any RM program should be aware of the challenges created by electronic records and this awareness should at least be reflected in their policies and procedures. Records managers should also be involved in the process of designing how and what electronic records will be created. That is, records managers should have moved from a pre-archival role where their main function is to manage a semi-active file repository, and develop strategies for the destruction of records that are no longer needed by the organization, into a new role, wherein they should be working together with different stakeholders to provide expertise in areas such as access control, records authenticity, metadata development, and preservation among other issues. RM policies are quite revealing as overarching documents that define responsibilities and procedures. Policies may or may not be approved by senior administration of the university and this will be an indication of how much support a program has been able to obtain. Policies usually indicate overall objectives and they must be realistic. They may link to legal obligations resulting from an organization being a public one and therefore having to follow specific state, provincial or federal laws, but they have to relate to procedures that indicate how the objectives of the policy will be achieved. While conducting audits, the review of documentation such as policies, standard procedures, and records is common practice. Auditors, just like courts, rely more on records than on the sayings of auditees. This is something that I learned while working for a pharmaceutical company, where the saying goes, “if a transaction is not recorded, it did not happen”. It is

clear that universities do not have to adhere to good manufacturing practices, but it is the records manager's responsibility to carry out functional analysis to determine if and when records have to be created as a result of a transaction or activity, and records managers are responsible for promoting good RM policies and procedures as best practices for good university governance.

### **Largest Public Universities in the United States**

**Table 1 Ten Largest American Universities <sup>1</sup>**

<b>Ranking</b>	<b>University</b>	<b>Location</b>	<b>Enrolment</b>
1.	Arizona State University	Tempe, Arizona	58,371
2.	University of Central Florida	Orlando, Florida	56,235
3.	Ohio State University	Columbus, Ohio	56,064
4.	University of Minnesota	Minneapolis/Saint Paul, Minnesota	51,721
5.	University of Texas at Austin	Austin, Texas	51,195
6.	University of Florida	Gainesville, Florida	49,827
7.	Texas A&M University	College Station, Texas	49,129
8.	University of South Florida	Tampa, Florida	47,576
9.	Michigan State University	East Lansing, Michigan	47,131
10.	Penn State University	University Park, Pennsylvania	44,832

#### **1. Arizona State University**

The Arizona State University RM program is under the responsibility of the University Archives, which reports to the University Library. The profile of the program, as presented on its website, focuses mainly on the management of analog records by offering services in

<sup>1</sup> Wikipedia contributors, "List of United States university campuses by enrollment," Wikipedia, The Free Encyclopedia, [http://en.wikipedia.org/w/index.php?title=List\\_of\\_United\\_States\\_university\\_campuses\\_by\\_enrollment&oldid=471918734](http://en.wikipedia.org/w/index.php?title=List_of_United_States_university_campuses_by_enrollment&oldid=471918734) (last accessed January 21, 2012)

the area of records storage and destruction.<sup>2</sup> Some coordination with appraisal activities under the responsibility of the university archivist is apparent. At least the university archivist's contact info is present on the site, and he is indicated as responsible for appraisal decisions regarding records deemed to be of archival value. The website refers to the definition of record provided by the Arizona State Legislature, which covers records regardless of physical form, including electronic ones. The only policy available related to RM is, however, under the Property Control System Manual (PCS) and relates to transfer and destruction of physical records. Reference to both "approved" and "unapproved" schedules is an indication that this program, initiated in 1987, was not able to develop its own records retention system covering all records created and received by the university. In a Q&A section university employees are given instructions on when records can or cannot be destroyed, but there is no policy other than the one mentioned above. Regarding electronic records, there is another statement made in the same Q&A section that indicates that electronic records should be maintained for the same length of time as paper records that perform the same function. For electronic records that have to be retained for longer than five years, the archives recommends contacting the university archivist but procedures are uncertain, and it is unrealistic that the archivist will be addressing electronic records on case by case basis when the framework for these transactions has not been established.

## **2. University of Central Florida**

The University of Central Florida located in Orlando offers a similar scenario with few variations. The archives reports to the Libraries and it promotes its special collections by

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<sup>2</sup> Arizona State University. "ASU Libraries: Records Management." Arizona State University. <http://www.asu.edu/lib/archives/records.htm> (last accessed January 22, 2012)

suggesting “Explore collections, university history, art, rare books, and manuscripts.”<sup>3</sup> The policy on records management dated February 16, 2001 deals with retention and disposition of public records at the university.<sup>4</sup> This policy also assigns each department custodianship responsibilities. Accordingly, upon request for records destruction, the records manager conducts research to assess compliance with state regulations. There is no single mention of how to proceed with electronic records. It is quite interesting that this policy was classified under Administration & Finance. One of the definitions for university records used in the Policy on University Archives describes a collecting strategy. This policy clearly follows a Schellenbergian approach that focuses almost exclusively on records created by "administrators, faculty acting in administrative capacities, and staff of university units in the performance of an official function that have enduring historical or administrative value."<sup>5</sup> There is no indication of any analysis of the main university functions. The lack of central policy for the actual management of records upon their creation – existing policies only address records transfer, disposition and permanent retention – can be an indicator of a complete absence of coordinated efforts on that matter. It can be assumed that records are the responsibility of each unit or faculty. None of the existing policies refer to state regulations.

### 3. Ohio State University

The records management program at OSU is an initiative run by the university archives reporting to the university library. This program, led by Tamar Chute, offers abundant

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<sup>3</sup> University of Central Florida. "Special Collections & University Archives." University of Central Florida Libraries. <http://library.ucf.edu/SpecialCollections/Archives/RecordsTransfer.php> (last accessed March 7, 2012).

<sup>4</sup> University of Central Florida. "Records Management Procedural Manual." UCF Administration and Finance. <http://admfin.ucf.edu/pdf/Policies/4010.pdf> (last accessed March 7, 2012).

<sup>5</sup> "University Archives Policy." University of Central Florida . <http://policies.ucf.edu/documents/4-005UniversityArchivesFINALonletterhead.pdf> (last accessed January 22, 2012)

information on its website.<sup>6</sup> The program stresses the importance of records management to institutional memory, enhanced organizational efficiencies, compliance with regulations and mitigation of risk. The program articulates its activities around a comprehensive set of policy and procedures that addresses records activities such as inventory and classification, retention scheduling, storage and conversion, the vital records program, disaster prevention and recovery planning, and disposition. This demonstrates that it has reached a certain maturity. Ohio State University's records are considered to be public, and as such they are regulated by the Ohio Revised Code (ORC) 149.43(A) (1).<sup>7</sup> Ohio state empowers state-supported institutions of higher education to establish records programs for their respective institutions. The state mandates efficient and economical RM methods, and grants sufficient autonomy to revise and update records schedules that no longer match the dynamics and culture of a specific organization. In this particular case, the Inter-University Council of Ohio created a model for records retention that was implemented by its fourteen members, allowing participants sufficient autonomy to create "local" or "unique" schedules as needed. Ohio State's General Records Retention Schedule (General Schedule)<sup>8</sup> accounts for the management and disposition of university record series that are common to many units across the campus. In addition, there are units on campus in possession of record series that are unique to their operations and therefore have a unique records retention schedule in addition to the General Schedule. All schedules, general or unique, are developed by the University Archives in consultation with campus and unit representatives. The program has

<sup>6</sup> "Records Management Policy." Ohio State University. <http://library.osu.edu/documents/records-management/Records-Management-Policy.pdf> (last accessed January 19, 2012)

<sup>7</sup> LAWriter. "LaWriter - ORC - 149.43 Availability of public records for inspection and copying.." LAWriter Ohio Laws and Rules. <http://codes.ohio.gov/orc/149.43> (last accessed March 7, 2012).

<sup>8</sup> The Ohio State University. "The Ohio State University." General Records Retention Schedule. <http://library.osu.edu/documents/records-management/general-schedule.pdf> (last accessed March 7, 2012).



matured to the point that it provides guidance on how to manage emails although there is no indication of an ERMS being used.

The Records Management Policy was first approved in 1967 and was only reviewed a few times until 1972, remaining unchanged until it was revised in April 2010. Although the University Archives and the RM program are under the responsibility of the university archivist, they seem disconnected. While the RM program indicates that staff in that unit have responsibility over all university records, the University Archives lists some records collections in which they are interested: some athletic records; college, school, research center, institute and department records (especially meeting minutes, correspondence with department heads, and photographs), and papers of eminent faculty and student organizations.

The rest of the content on the OSU RM website is informational and educative in nature but not programmatic. It covers some of the issues that electronic records have created in areas like trustworthiness, preservation, and eRM tools. This reveals the good intentions of the electronic Records Manager/Archivist that have not come to fruition yet. All of the links listed as additional resources refer to North American references.

#### **4. University of Minnesota**

The policy statement of the Records and Information Management Program at the University of Minnesota elaborates on a couple of interesting points. It prioritizes the management of disposition practices and it mentions the importance of having procedures for managing confidentiality of records. It indicates the need to collaborate with other units while promoting the use of technology resources to efficiently manage and preserve the

university records.<sup>9</sup> This policy is classified under “Administration & Operations Policies – Miscellaneous”, a clear indication that it is hard for the administration to understand how RM fits into the organization.

The records retention schedule is a list of subject-based aggregations in alphabetic order that only covers retention. This document contains no reference to the context of its creation and there is no additional metadata associated with it, therefore it is difficult to determine who has the authority for the destruction of records.<sup>10</sup> It is also interesting to note that the primary contact for public requests for access to university information is the manager of the IT department, although the policy statement singles out the Records and Information Management Office reporting to the General Council as the initial resource for questions concerning classification and disclosure of data. The "Owner" of the policy is the Associate General Counsel of the UMN Twin Cities. Both the University Archives and the Records and Information Management Office report through the Office of the General Counsel and it is remarkable that there is no indication of the RM office dealing with electronic records, while the archives is currently running a program called Digital Conservancy that provides access to records as current as Committee Minutes from February 2011.

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<sup>9</sup> "University of Minnesota Records Retention Schedule." University of Minnesota. [www.ogc1.umn.edu/stellent/groups/public/documents/webasset/da\\_031145.pdf](http://www.ogc1.umn.edu/stellent/groups/public/documents/webasset/da_031145.pdf) (last accessed January 20, 2012).

<sup>10</sup> University of Minnesota. "University of Minnesota Records Retention Schedule." UWide Policy Library. [http://www.ogc1.umn.edu/stellent/groups/public/documents/webasset/da\\_031145.pdf](http://www.ogc1.umn.edu/stellent/groups/public/documents/webasset/da_031145.pdf) (last accessed March 7, 2012).

Digital Conservancy is a program managed by the University of Minnesota Libraries for long-term access to "a wide range of University works in digital formats."<sup>11</sup> This collection of electronic artifacts is arranged by originating unit and by subject. The submission of items to this digital repository does not follow any specific procedure or workflow. The guidelines are not clear on the identification of records generated by administrative or academic units, and the publication of these records does not seem to be mandatory. In fact all these electronic artifacts become available to the public and therefore do not allow for management of specific permissions at the item or aggregation level. The organization of these entities by subject is an example of how this type of digital repository launched as a multipurpose electronic storage area can render confusing results. This is indicated by the first items listed in alphabetic order, which show subjects such as 021, 022, 026, etc. The metadata guidelines followed in the implementation according to information provided on the same website are based on Dublin Core Metadata Best Practices. This metadata standard has been widely adopted for description of electronic artifacts in libraries' environments but does not reflect current trends for electronic records metadata whether they are to be stored in an ERMS or an archival digital repository. Again, it is not always well understood that records should not be managed as library items and therefore one single application cannot fit all of the needs without further configuration for capturing other artifacts types. Users may be able to store electronic records in this application but that does not mean that records will be managed according to best RM practices and standards. This initiative provides at least a formal repository but further work has to be done to improve the management of permissions, and capture adequate audit trail. As indicated above some of

<sup>11</sup> University of Minnesota. "University of Minnesota Digital Conservancy: Home." <http://conservancy.umn.edu/> (last accessed March 7, 2012).

these records are fairly current. Therefore end users may be referring to them with some frequency. It is not clear if the “original” records are to be disposed of once a copy has been uploaded to the digital repository, or if records disposition rules are manageable within this application. Digital conservancy runs on DSPACE, a “free and easy to install” software used to build open digital repositories.<sup>12</sup> It can be said this software application provides storage for records but there is no indication of these records being managed as such.

### **5. University of Texas at Austin**

Records Management Services (RMS) report to the Office of Accounting at the University of Texas at Austin. The RMS website indicates it share responsibility for compliance with local, estate, and federal regulations with Departmental Records Management Contacts (DRMC) which coordinates records management activities.<sup>13</sup> The approach the University of Texas has taken is fairly decentralized, leaving it up to departments and other units to develop their own RM policies and procedures. Departments are required to classify their records according to the classification scheme provided by the state, which is not function-based but highlights areas where archival considerations should be made before destruction of records.<sup>14</sup> Other than some basic and loose instructions regarding how to deal with email, there is no indication of a centralized RM policy for all university records, or specific policies, practices or guidelines for eRM. The University of Texas Libraries has also implemented a digital repository but there is no mention of this

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<sup>12</sup> Dspace. "Dspace." Dspace. [www.dspace.org/](http://www.dspace.org/) (last accessed March 7, 2012).

<sup>13</sup> University of Texas at Austin. "Records Management Services." University of Texas at Austin. <http://www.utexas.edu/business/accounting/retention/> (last accessed January 22, 2012).

<sup>14</sup> University of Texas at Austin. "University of Texas at Austin Records Retention Schedule." University of Texas at Austin, Office of Accounting. [www.utexas.edu/business/accounting/pubs/utrrs2011.pdf](http://www.utexas.edu/business/accounting/pubs/utrrs2011.pdf) (last accessed March 7, 2012)

repository being used for records management or archival purposes. Upon designation as Records Management Contacts (decentralized departmental function) staff have to take three basic training courses to be ready to perform their duties.

## **6. University of Florida**

The University of Florida Records Management program used to report to the office of the Provost and, unlike the University of Central Florida, refers to Florida statutes as its authorities. Overall records were described as all documents regardless of physical form made or received in connection with a transaction. Although the state indicates that it is the agency's responsibility to develop and implement a program for the management of electronic records in compliance with the General Records Schedule, there is no evidence of such a program. The Electronic Records and Records Management Practices guidelines<sup>15</sup> were published by the State of Florida date from February 2010. Since then, a new program reporting to the library has been launched with records management responsibilities for the whole university,<sup>16</sup> but there is no indication of eRM being addressed at the moment other than references to state regulations.

The University of Florida George A. Smathers Libraries has implemented a digital repository where over 6 million pages of unique manuscripts and letters are being hosted. A superficial review of the materials collected shows that many of these are records collections have been carefully arranged by subject, not by function or provenance.

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<sup>15</sup> State of Florida. "Electronic Records and Records Management Practices." State of Florida. <http://dlis.dos.state.fl.us/barm/handbooks/electronic.pdf> (last accessed January 19, 2012).

<sup>16</sup> University of Florida Libraries. "Records Management at UF." University of Florida Libraries. <http://guides.uflib.ufl.edu/content.php?pid=269198&sid=2224653> (last accessed January 19, 2012).

## 7. Texas A&M University

The Records Management Program at Texas A&M University reports to the university libraries. The program presents itself in a very proactive way by stating clearly that all university records are under its authority.<sup>17</sup> The goals of the program are related to efficiency, implementation of innovative technologies, and risk management. References to records that have to be authentic, reliable, complete and unaltered, and ultimately usable, are an indication that there is awareness of the implications of electronic records. The department has also established strong links with records coordinators, who appear to be responsible for the RM function in the various departments. The RM program promotes several training sessions on records management matters such as "Fundamentals of Managing Departmental Records" and "State Records Retention Basics" — the latter being offered by the Texas State Library and Archives Commission.

The university website also posts the Records Retention Schedule (last reviewed in June 2005).<sup>18</sup> This schedule is "certified" by the Texas State Library and Archives Commission and covers all the records under the responsibility of the Texas A&M University System. The schedule offers a classification of records that is not function driven. For example, records series No 2 covers Electronic Data Processing Records, with no identification of the business functions, activities or transactions being documented. As explained before, this way of classifying records renders inadequate the management of records because it is the content and context of a record and not the medium supporting it

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<sup>17</sup> Texas A&M University Libraries. "University Records Management - Texas A&M University Libraries." Library Homepage - Texas A&M University Libraries. <http://library.tamu.edu/services/additional-services/records-management> (last accessed January 22, 2012).

<sup>18</sup> Texas A&M University. "61.99.01 Retention of State Records." Texas A&M university Libraries. <http://policies.tamus.edu/61-99-01.pdf> (last accessed March 7, 2012).

that determines the length of time it has to be retained, the level of confidentiality, and the potential archival value of that record. Other sections of the Retention Schedule also show many records groupings that are subject based.

On the website section specifically dedicated to electronic records<sup>19</sup> the language becomes more ambiguous and there are no indications or links to more specific policies. The overall recommendation is to treat electronic files just as paper records but paying special consideration to the grouping and naming of these files. It is recommended that electronic records to be retained for longer than 10 years should be printed out or migrated to microfilm due to “software and hardware dependability” (obsolescence). The archives does not accept electronic records at all. The problem with this approach is that in the future the archives may be inclined to scan records collections that were actually “born digital”. Digitization projects are resource intensive and quite often they are driven to satisfy external customers such as researchers working from distant locations.

## **8. University of South Florida**

The Director of Purchasing is the designated Records Liaison Officer responsible for the Records Management Program at the University of South Florida. The Records Retention and Disposition of Records Policy delineates the scope of the program as well as a vague framework where every unit is designated as responsible for managing records under its

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<sup>19</sup> Texas A&M University. "Electronic Records General Overview — Texas A&M University Libraries." Library Homepage — Texas A&M University Libraries. <http://library.tamu.edu/services/additional-services/records-management/electronic-records-general-overview> (last accessed March 7, 2012).

control.<sup>20</sup> This framework may be sufficient to comply with state regulations but it does not promote good RM practices.

A digital repository was implemented by the university archives but the efforts are not coordinated by the RM program.<sup>21</sup> Records are arranged by the originating office and the website indicates that policies are under development and will be posted as they obtain approval from the Steering Team. This is an interesting scenario wherein an eRM initiative gets under way started by a department that is not officially responsible for the RM function. Despite the apparent lack of coordination this program is making progress. Nevertheless, this initiative is intended to address "archival needs" and the repository that was developed using Dspace has no records management functionality. The existing guidelines require records submissions to be made by the authors of the material or appointed agents of one of the authors. The final statement on these guidelines — indicating that if the USFSP Digital Archive was ever terminated, materials would be returned to their authors or office of primary responsibility — shows that although the initiative may be well intended, it has not secured support from the senior administration to continue with this function in compliance with any existing regulations or in support of business needs.<sup>22</sup>

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<sup>20</sup> University of South Florida. "Records Retention and Disposition." University of South Florida - General Counsel. <http://generalcounsel.usf.edu/policies-and-procedures/pdfs/policy-5-012.pdf> (last accessed March 7, 2012).

<sup>21</sup> University of South Florida. "University Archives." University of South Florida. <http://dspace.nelson.usf.edu/xmlui/handle/10806/61> (last accessed January 22, 2012).

<sup>22</sup> University of South Florida. "Overview of the USFSP Digital Archive." University of South Florida, University Archives. [http://dspace.nelson.usf.edu/xmlui/bitstream/handle/10806/1211/Overview\\_CDA\\_rev.pdf?sequence=1](http://dspace.nelson.usf.edu/xmlui/bitstream/handle/10806/1211/Overview_CDA_rev.pdf?sequence=1) (last accessed January 22, 2012).



## 9. Michigan State University

The University Archives and Historical Collections at Michigan State University has responsibility for records management. The purpose of the program is to promote efficient management of records. There is a wide variety of information provided to the internal user on their website.<sup>23</sup> The program promotes a decentralized approach whereby major recordkeeping responsibilities are delegated to the units and their records liaisons, who are to be qualified enough to develop a function-based classification system for each unit and to create and promote the adoption of procedures.

There are some guidelines for managing electronic files and email, but they are not programmatic in nature and there is no indication that the records office has any control over the management of electronic records. These "guidelines and policies" carry no weight as they were not approved by senior administration and are written in a language that does not prescribe specific actions.

In December 2010 the Enterprise Business Systems (EBS) was launched to support transactions related to finance, payroll and human resource management. The university archives is responsible for the provision of training through the implementation of EBS but the extent of its involvement in the planning phases of this initiative — aimed to transition from paper based systems to "paper-sparse" business workflows — is not clear. The RM site refers to the EBS on the link to Scanning where it is stated that administrative and academic units will “scan, attach and store business documents electronically rather than retaining

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<sup>23</sup> Michigan State University. "Records Management University Archives | Michigan State University." University Archives - Michigan State University. <http://archives.msu.edu/records/index.php> (last accessed January 22, 2012).

papers copies in a file cabinet.”<sup>24</sup> This section provides definitions for "university business record" (extracted from the ISO 15489), "e-doc", and supporting documentation". None of these definitions are complete and they actually overlap with one another.

Overall, it is clear that MSU has made a great progress with this type of implementation to manage certain records holdings despite the absence of a clearly defined policy framework and contradictory advice that on one hand recommends decentralization while on the other hand promotes the management of records from a centrally managed location.

### **10. Penn State University**

The RM program at Penn State reports to the Libraries through the University Archives.<sup>25</sup> The Policy AD35 University Archives and Records Management was approved by senior administration on October 29, 2007. It governs all records created or received at Penn State, and designates authorities for records destruction. This policy also includes some guidelines for retention of electronic records but there is no reference to procedures that make sure the guidelines are followed. This RM program centralizes disposition functions but decentralizes the creation and management of records until they reach disposition time.<sup>26</sup> Supposedly this framework ensures recordkeeping and destruction in a systematic fashion, but as explained in Chapter 1 this type of framework is only feasible for paper records, not electronic ones. In fact, the policy has specific rules for the destruction of paper records

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<sup>24</sup> Michigan State University. "Scanning." University Archives - Michigan State University. [http://archives.msu.edu/records/scanning.php?records\\_scanning](http://archives.msu.edu/records/scanning.php?records_scanning) (last accessed January 19, 2012).

<sup>25</sup> Penn State University. "University Archives and Records Management." PennState University Libraries. [www.libraries.psu.edu/psul/speccolls/psua/records.html](http://www.libraries.psu.edu/psul/speccolls/psua/records.html) (last accessed January 22, 2012)

<sup>26</sup> Penn State University. "Policy AD35 University Archives and Records Management ." GURU - General University Reference Utility. <http://guru.psu.edu/policies/AD35.html#H> (last accessed March 7, 2012).

depending on their level of access restriction, but there is no indication of how electronic records are to be disposed of or how to prevent their accidental loss or destruction. There is reference to electronic records such as email, web pages, databases/sets and other “born digital” records that should be appraised by the creator and if deemed to be archival should “be retained beyond routine back-up protocol” using “retrievable media as created, utilized and/or published.”<sup>27</sup> This is one example of a policy statement that did not go through a capability check with stakeholders. Capturing web pages in order to save them in a retrievable format requires specialized software. Therefore this delegated activity should rather be performed by the RM program. Managing email has proven to be daunting and should not be left up to the responsible unit either or records will get lost.

The policy contains a section where guidance is provided regarding digitization. According to the policy no “reformatting” of university records should take place without prior assessment and approval by the RM Program, which is responsible for performing an evaluation of the project against “established standards”. This initiative appears to be quite valuable as it is not uncommon to find that units undertake digitization/scanning projects that do not add value to the organization.

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<sup>27</sup> Ibid.

## Private Universities in the United States

Table 2 Five Largest Private University Campuses as of Fall 2010<sup>28</sup>

Ranking	University	Location	Enrolment
1	Liberty University	Lynchburg, Virginia	46,312
2	New York University	Manhattan, New York	43,404
3	University of Southern California	Los Angeles, California	34,828
4	Brigham Young University	Provo, Utah	34,130
5	Boston University	Boston, Massachusetts	31,960

### 1. Liberty University

There is no indication of a formal Records Management program at Liberty University. There is an archival program that follows a custodial approach and makes available finding aids on line.<sup>29</sup> The purpose of the Liberty University archival program is to preserve the history of the university and a number of Christian ministries by collecting, preserving, and making available records of enduring value, but there is no evidence of archival involvement with the collection of electronic records.

### 2. New York University

The university archives reports through the libraries at New York University. On its website it offers a candid statement about the difficulties of coping with large volumes of records in the absence of systematic records management, even though implementing RM

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<sup>28</sup> Wikipedia contributors, "List of United States university campuses by enrollment," Wikipedia, The Free Encyclopedia, [http://en.wikipedia.org/w/index.php?title=List\\_of\\_United\\_States\\_university\\_campuses\\_by\\_enrollment&oldid=471918734](http://en.wikipedia.org/w/index.php?title=List_of_United_States_university_campuses_by_enrollment&oldid=471918734) (last accessed January 21, 2012)

<sup>29</sup> Liberty University. "Library | ILRC Archives | Liberty University." Liberty University Christian College Education. <http://www.liberty.edu/information/services/ilrc/library/index.cfm?PID=19897> (last accessed March 7, 2012).

“by formulating policy and procedures that will ensure the collection and preservation of archival materials” is part of the core mission of the archives. The University Archives promotes university-wide records management and collects material from all administrative and academic units of the university with the exception of the Medical and Dental Centers, but there is no indication of the extent of this “promotion”.<sup>30</sup>

### 3. University of Southern California

The Records Management Policy at the University of Southern California indicates that each unit is responsible for the management of university records. It was issued August 15, 2008 and it designates units as responsible for establishing practices consistent with the policy.<sup>31</sup> It is unclear how the whole university would comply with any “applicable laws and regulations as well as established best practices, reasonable business judgment, and common sense,”<sup>32</sup> if different faculties and units have to make decisions about records management without centralized guidance. It is impossible to expect any kind of standardization throughout the organization when “certain” but unspecified departments are charged with setting RM standards and other departments must follow them. Although the policy mentions electronic records briefly, it does not indicate how these are to be managed except that emails are to be deleted from e-mail servers after a year. This policy also demonstrates a misunderstanding of how archives may support ongoing business when it defines archival records as “records no longer retained to meet legal standards or serve an educational or

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<sup>30</sup> New York University. "University Archives Collection Development Policy." New York University Libraries. <http://library.nyu.edu/collections/policies/archive.html> (last accessed January 19, 2012)..

<sup>31</sup> University of Southern California. "Administrative and Business Practice: Records Management." University of Southern California. [http://policies.usc.edu/p2admOpBus/record\\_management.pdf](http://policies.usc.edu/p2admOpBus/record_management.pdf) (last accessed January 22, 2012).

<sup>32</sup> Ibid.

administrative purpose, but which have permanent or historic value”. There is another policy dedicated exclusively to “Personnel Files and Payroll Records,” which indicates that there is a disconnect between programs. Although the University Archives Collection has a broad scope, being intended to document the history and growth of the university, it is mainly focused on manuscripts, periodicals, newspapers, ephemera, photographic images, disc and tape recordings, and such “archival” material as defined in its overview. There is no connection between this collection policy and the records management policy.

#### **4. Brigham Young University**

The RM program at Brigham Young University is run by two records management personnel, who report to an Assistant University Librarian, and are responsible for records center storage, records management training, and general office management.

The University Information and Records Retention Schedule at Brigham Young University was revised recently and shows a classification scheme based on the organizational structure of the university, listing all existing units with a brief inventory of records holdings. This is a common mistake that has been noted at other universities where there exists a general records schedule and a "specific" one for those records created in specific units that are not found in the "general schedule". The American Heritage - 107 big bucket containing Film clips, Past TA photos, Power Point Lectures, Slides, and TA contracts is the most clear demonstration of the uselessness of this classification scheme according to which "all slides" are deemed to be permanent records pertaining to American

Heritage regardless of the context of creation or function, activity or transaction that produced that record.<sup>33</sup>

A records handbook containing more detailed policy statements offers more direction on RM expectations across the university and includes a section for electronic records and email. This well-intended document does not follow current standards and assumes that regular backups will be sufficient to maintain records accessible over time. A regular (yearly) transfer of electronic records to the archives is recommended without acknowledging this type of practice is not only impractical but also risky when there are no standardized practices in place at the unit level. Moreover, there is no explanation of how records will remain accessible to the end user upon transfer. The records transfer form that users have to fill before transferring electronic records seems to be unrealistic considering that all files are expected to be listed individually through capturing some basic descriptive metadata values.

This policy follows the life-cycle approach — like most of the universities reviewed so far — but the definition of the transition between active and inactive records is extremely loose and confusing. Records are to be determined inactive once they are referenced less than once a month. If units are supposed to follow this statement, they should be tracking the number of times individual records are referred to, but that would lead to record systems being split apart in ways that would be detrimental to the maintenance of their context of creation — as documents in them may be referenced at very different rates.

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<sup>33</sup> Brigham Young University. "Information and Records Retention Schedule." Brigham Young University. <http://lib.byu.edu/sites/recordsmanagement/files/2011/04/Information-and-Records-Retention-Schedule-2011.pdf> (last accessed January 19, 2012).

## 5. Boston University

The Vice President for Administrative Service at Boston University is designated University Records Administrator by the University Record Retention Policy that became effective on June 1, 2009.<sup>34</sup> There is no indication of previous policies on these matters. Although this policy claims responsibility for electronic records in several sections, it focuses on analog records and records storage but provides no guidance on how units should proceed to secure, maintain and transfer to the archives any records that have become “inactive”, nor what should be done to maintain their accessibility over their “active” period. According to this policy, appraisal decisions are made at the end of the life cycle: “When the prescribed retention period (see the Record Retention Table) for University Records has passed, the unit’s administrative manager should ensure that the records are properly disposed of unless the records are of historic value to the University. The administrative manager should consult the University Records Administrator to designate those records that are archival.”<sup>35</sup>

The classification scheme used to develop the retention schedule is not hierarchical and is subject based.

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<sup>34</sup> Boston University. "University Records Retention Policy." Boston University Policies. [www.bu.edu/policies/pdf/Record\\_Retention\\_Policy\\_1-27-10.pdf](http://www.bu.edu/policies/pdf/Record_Retention_Policy_1-27-10.pdf) (last accessed March 7, 2012).

<sup>35</sup> Ibid., p.4.



**Five Best Ranked Universities in the United States (according to *US News and World Report*)**

**Table 3 Five best ranked universities**

<b>Ranking</b>	<b>University</b>	<b>Location</b>	<b>Enrolment</b>
1	Harvard University	Cambridge, MA	19411
2	Princeton University	Princeton, NJ	7592
3	Yale University	New Haven, CT	24230
4	Columbia University	New York, NY	43304
5	Stanford University	Stanford, CA	18498

### 1. Harvard University

The Harvard University Records Management Office<sup>36</sup> reports to the Harvard University Library and has developed a set of policies<sup>37</sup> governing the care and management of Harvard's records. These policies establish authority over records creation, transfer and disposition as well as ownership and responsibility for the oversight of the program. The policy clearly indicates that the University RM programs should set the standards for the management, disposal, and preservation of the electronic records. Although the records retention schedule is not publicly available, training resources posted on the program's website indicate that the classification system for their records is subject based.

The website offers abundant guidance on how to manage records in general and electronic records in particular. There is one interesting guideline prepared by the university

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<sup>36</sup> Harvard University. "Records Management Services: Harvard University ." Harvard Library. <http://hul.harvard.edu/rmo/> (last accessed January 22, 2012).

<sup>37</sup> Harvard University. "Records Management Services: Policies / Guidelines ." Harvard Library. [http://hul.harvard.edu/rmo/policies\\_03.shtml](http://hul.harvard.edu/rmo/policies_03.shtml) (last accessed March 8, 2012).

archives on how to maintain electronic records at the desktop level or within a work group. The drivers for these guidelines are efficiency and risk management and they set principles for how to manage a directory structure and naming conventions. Implementation of these basic steps usually facilitates training of new employees. Even though these guidelines are mainly suggestions and do not prescribe specific actions, they have been available for over eleven years, which could be an indication that staff at Harvard are referring to them in the absence of an ERMS. The guidelines suggest that users should assess the effectiveness of existing classification system. When systems in use are not efficient an analysis of business rules, functions and activities should be conducted to create a system that could work equally well in both the paper system and the electronic workplace.<sup>38</sup>

Elsewhere on the site this program also offers guidance on scanning, with clear a indication of when scanning is recommended or not by pointing at cost and accessibility (but not preservation of records) as exclusive potential justifications to be considered before starting a digitization project. The “Guidelines for Managing Faculty Files” from 2006 acknowledge the absence of a comprehensive long-term strategy for preserving access to email and other electronic records, but this was at least another effort to reach out to end users with recommendations to help them address this daunting task.<sup>39</sup>

Another guideline posted on the website refers to the management of email as a record. It uses more prescriptive language to mandate that offices make provision to stop deletion of email messages in the event of audit, litigation, investigation or other legal event. It may be

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<sup>38</sup> Matthew Cioffi. "Electronic Desktop Management Guidelines: Harvard University Archives." Records Management Services. <http://hul.harvard.edu/rmo/downloads/ElectronicDesktopManagementGuidelines.pdf> (last accessed June 16, 2010).

<sup>39</sup> Harvard University. "Guidelines for Managing Faculty Files." Harvard University Archives. <http://hul.harvard.edu/rmo/downloads/FacultyGuidelines.pdf> (last accessed March 8, 2012).

impossible to fulfill the mandate without an ERMS, but the guide offers a number of recommendations to mitigate the risks mentioned above.<sup>40</sup>

This set of policies and guidelines at Harvard University refers to the need to understand the organization's culture. This concept is widely held in current records management and archival literature. It is worth mentioning that the last two items in the bibliography of this guideline refer to the University of Melbourne in Australia.

## **2. Princeton University**

In January 2011 Princeton University appointed its first University Records Manager in an effort to ensure comprehensive documentation of Princeton's history. The announcement indicated that despite being a part of the Archives, the Records Manager serves the entire university.<sup>41</sup> One new focus of the revamped program is the management of electronic records — with the goal of finding solutions for the long-term management of the University's digital information.

During this last year the records manager put together a set of guidelines for those departments that are planning or already have digitization programs. Following a phased approach she started working with the financial administration areas of the university to set

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<sup>40</sup> Harvard University. "E-Mail Management: A Guide for Harvard Administrators." Records Management Services. <http://hul.harvard.edu/rmo/downloads/EMailManagement.pdf> (last accessed March 8, 2012).

<sup>41</sup> Princeton University. "Annual Report 2011: Records Management - Mudd Manuscript Library Blog." Princeton University WordPress Service | News and information about our WordPress hosting environment. <http://blogs.princeton.edu/mudd/2011/09/annual-report-2011-records-management.html> (last accessed January 22, 2012).

retention guidelines. A public blog was also launched and there is mention of planning activities for an electronic records management program.<sup>42</sup>

### 3. Yale University

At Yale there is a Records Services Program that is part of the University Archives and reports to the Yale University Library.<sup>43</sup> The program is responsible for records (regardless of format) created or received university wide. The purpose of the program is to carry out appraisal, selection, and preservation activities for the institutional records of Yale and its affiliated agencies. The website indicates that Yale offices and staff that create and maintain records are responsible for the preservation and security of their records while they are in active use, and are also responsible for consulting with Archives and Records Services staff to determine when and how inactive records should be transferred to the University Archives or destroyed. The site also indicates that “the policies and procedures practiced by the Archives and Records Services Program are fully endorsed by the Secretary of the University, who has the ultimate responsibility for protecting Yale's records and holdings.” There is no indication, however, that a Records Management policy as such exists except for the Yale University Policy Statement on Student Records, which is limited in scope.<sup>44</sup> Other statements on the website indicate that valuable records generated by the schools, departments, and offices of the university are “the most tangible evidence of Yale's history and activities,” as they provide officers and staff of the University with materials necessary

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<sup>42</sup> Princeton University. "Just for the Records." Princeton University WordPress Service | News and information about our WordPress hosting environment. <http://blogs.princeton.edu/justrecords/> (last accessed January 22, 2012).

<sup>43</sup> Yale University Library. "Information for Yale Offices: Introduction." Yale University Library. [http://www.library.yale.edu/mssa/ua\\_intro.html](http://www.library.yale.edu/mssa/ua_intro.html) (last accessed January 23, 2012).

<sup>44</sup> Yale University. "Yale Bulletin and Calendar." Yale University. [http://www.yale.edu/opa/arc-ycb/ycb\\_info05/story112.html](http://www.yale.edu/opa/arc-ycb/ycb_info05/story112.html) (last accessed March 8, 2012).

to understand and interpret the evolution of University policies and activities. However, there is no clear indication of how these policy statements are actually implemented or if there are any procedures in place for the capture of electronic records upon their creation. Instead, the site indicates that Yale's archives has stopped accessioning electronic records.

The records classification system posted on the Yale website is function-based and allows the end user to understand appraisal and disposition criteria, but there it does not appear to have been approved by senior administration.<sup>45</sup>

In 2002 a multi-unit project began to establish a repository for the long-term preservation of electronic records at Yale University. The project obtained enough funding to fill a full-time position with the intent of ensuring effective acquisition, preservation and management of electronic records. This notice even mentions that the analysis of a potential electronic records management application is within the scope of the project. This approach reveals a custodial approach with long-term preservation as the primary concern. There is no indication of how much has been achieved since this project was launched.

The existence of a standalone policy for financial records indicates lack of coordination and administrative penetration of the central RM program.<sup>46</sup> This policy offers general statements about records management with sections addressing accountability, ownership, retention, storage and disposition, accessibility, safeguarding, and imaging. Policy 1106 deals with procedures and responsibilities for records management during legal holds but it does

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<sup>45</sup> Yale University. "Information for Yale Offices: Records schedules." Yale University Library. [http://www.library.yale.edu/mssa/ua\\_schedules.html](http://www.library.yale.edu/mssa/ua_schedules.html) (last accessed March 9, 2012).

<sup>46</sup> Yale University. "Retention of University Financial Records." Yale University Policies, Procedures and Forms. [www.yale.edu/ppdev/policy/1105/1105.pdf](http://www.yale.edu/ppdev/policy/1105/1105.pdf) (last accessed March 8, 2012).

not mention RM services as responsible for any activity.<sup>47</sup> These various policies generated by different offices (Controller, Legal Counsel, and Archives) show lack of coordination but also highlight the importance of good records management for other stakeholders, thus creating the opportunity for records professionals to provide their knowledge and expertise in a more coordinated effort. Records managers should be championing the coordinated implementation of best practices that are centrally governed and monitored.

#### **4. Columbia University**

The Columbia University RM program reports to the Library through the University Archives. The website offers little guidance to departments and units regarding records in general. The document called "Guidelines for the Management of Your Records" does not point in any specific direction, although it aims to be a policy. There is no indication of who approved the policy, or if policy implementation has taken place. The mandate is that the user should not proceed with destruction of records unless they are certain they are doing the right thing. The aggregations mentioned in the document are quite broad and the prescriptions for retention and restrictions to access are extremely loose.<sup>48</sup>

An interesting document on records management found at the university website is the "Guide to Managing Geospatial Electronic Records." This guide was developed as part of a project funded by the National Historical Publications and Records Commission (NHPRC) and conducted by the Center for International Earth Science Information Network of Columbia University. It compiles many good ideas about aspects of an electronic records

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<sup>47</sup> Yale University. "Preserving Records for Legal Purposes." Yale University Policies, procedures and Forms. [www.yale.edu/ppdev/policy/1106/1106.pdf](http://www.yale.edu/ppdev/policy/1106/1106.pdf) (last accessed March 9, 2012).

<sup>48</sup> Columbia University. "University Archives." LibraryWeb Home. [http://library.columbia.edu/indiv/uarchives/donating\\_material.html#guidelines](http://library.columbia.edu/indiv/uarchives/donating_material.html#guidelines) (last accessed January 22, 2012).

management program that should be considered if establishing one to deal with geospatial electronic records. The guide is not programmatic in nature and is mainly an expression of good intentions. The outcomes of the project are unknown<sup>49</sup>

The "E-mail Use and Retention Policy" offers guidance on how email is to be used. It also discusses how the university uses email as an official means of communication. Despite the title of this policy, it does not contain any retention specification for any type of records. It indicates though that sensitive information must not be sent over email unless attached as a password protected/encrypted file.<sup>50</sup> Another interesting note that shows the need for a centralized policy is the reference to several other e-mail policies for students, the Columbia Law School, Columbia University Medical Center, and Columbia Business School.

## 5. Stanford University

Stanford University Archives reports through Library and Academic Information Resources and is mainly concerned with records that are "historically and legally valuable."<sup>51</sup> There is just one section that refers to "Records Management Resources" on the website. It consists of a training aid designed to provide guidance to organizations considering donating their records to Stanford University Libraries. It wrongly defines records management as the process of identifying records of enduring value. It is not clear if this presentation also targets

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<sup>49</sup> Columbia University. "Guide to Managing Geospatial Electronic Records." Center for International Earth Science Information Network (CIESIN). [www.ciesin.org/ger/GuideToManagingGERv1Final.pdf](http://www.ciesin.org/ger/GuideToManagingGERv1Final.pdf) (last accessed March 9, 2012).

<sup>50</sup> Columbia University. "Email Usage and Retention Policy." Administrative Policy Library. [www.columbia.edu/cu/administration/policylibrary/policies/00bb9c6718c92f6e011933c4b6b30008/12\\_-\\_Email\\_Usage\\_and\\_Retention\\_Policy\\_-\\_final\\_1209566625075.pdf](http://www.columbia.edu/cu/administration/policylibrary/policies/00bb9c6718c92f6e011933c4b6b30008/12_-_Email_Usage_and_Retention_Policy_-_final_1209566625075.pdf) (last accessed March 9, 2012).

<sup>51</sup> Stanford University. "Stanford University Archives." Stanford University Libraries & Academic Information Resources. <http://www-sul.stanford.edu/depts/spc/uarch/index.html> (last accessed January 22, 2012).

offices of Stanford University.<sup>52</sup> The SLAC (Stanford Linear Accelerator Center) National Accelerator Laboratory<sup>53</sup> has a RM program that has been in place for over a decade but the scope of the program is limited to that specific laboratory.

## Canadian Universities

**Table 4 Ranked Medical Doctoral Universities in Canada<sup>54</sup>**

Ranking	University	Location	Enrolment
1	McGill University	Montreal, Quebec	30,707
2	University of Toronto	Toronto, Ontario	46,050
3	University of British Columbia	Vancouver, British Columbia	46,475
4	University of Alberta	Alberta	38,290
5	Queen's University	Kingston, Ontario	25,327

### 1. McGill University

The McGill University Archives (MUA) reports to the Secretary-General of the University and is responsible for the records management function.<sup>55</sup> The archival program currently has eight full-time employees.

<sup>52</sup> Mandeville-Gamble, Steven. "Introduction to Records Management for Organizations Donating Records to Stanford University." Special Collections and University Archives. [www.sul.stanford.edu/depts/spc/staff\\_resources/presentations/rec\\_manage.ppt](http://www.sul.stanford.edu/depts/spc/staff_resources/presentations/rec_manage.ppt) (last accessed March 9, 2012).

<sup>53</sup> SLAC National Accelerator Laboratory. "Archives and History Office: Electronic Records Guidance." SLAC National Accelerator Laboratory. <http://www.slac.stanford.edu/history/er.shtml> (last accessed March 9, 2012).

<sup>54</sup> Maclean's, <http://oncampus.macleans.ca/education/2011/10/26/macleans-2011-university-rankings-2/>, last accessed December 30, 2011.

<sup>55</sup> McGill University. "Records Management at the McGill University Archives > Introduction." McGill University Archives - Records Management | Reference Services | McGill History. <http://www.archives.mcgill.ca/recmanage/recmg.htm> (last accessed January 22, 2012).



A policy statement indicates that the MUA is responsible for the provision of University records management services, which include the systematic control of records in all formats from their creation, or receipt, through their processing, distribution, organization, storage, and retrieval, and to their ultimate disposition. MUA RM services include the management of records created and/or accumulated by the university as well as long-term preservation or destruction of records in accordance with the McGill University Records Retention Schedule (MURRS) and international archives and records management standards.<sup>56</sup> As per this policy, the archives is also responsible for electronic records but it is not clear how that responsibility is actually executed other than by offering some guidelines for the management of email and electronic records maintained on shared drives. These types of recommendations are not uncommon and suggest the use of a classification plan to structure the filing of electronic records to improve the readiness for a possible ERMS implementation.

In 2003 MUA launched digitalpermanence, an initiative aimed to promote collaborative and long-term management and preservation of McGill University's electronic records.<sup>57</sup> By the end of 2004 Phase I of this initiative delivered a campus-wide summary of the extent, nature and risks associated with electronic records; new retention rules were developed in collaboration with the IT department; a collaboration framework was created for the MUA and the university's IT sector to review software selection practices and a scanning policy for university offices.

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<sup>56</sup> McGill University Archives. "Policies - University Archives." McGill University Archives - Records Management | Reference Services | McGill History. [http://www.archives.mcgill.ca/about/about\\_policy.htm](http://www.archives.mcgill.ca/about/about_policy.htm) (last accessed January 22, 2012).

<sup>57</sup> McGill University Archives - Records Management | Reference Services. "digitalpermanence." McGill University Archives - Records Management . <http://www.archives.mcgill.ca/dp/practices/office.htm> (last accessed March 9, 2012).

Digital permanence appears to be a well-intended initiative that has taken the right approach, collaborating with IT on different projects to understand and define strategic approaches to improve the management of office records through engagement with records creators. The website was not updated since 2005, which is an indication that the program has not been able to secure the funding to make further progress.

## **2. University of Toronto**

The University of Toronto Libraries is responsible for the university's Archives and Records Management services. Its website concisely explains the history of the RM Program launched in 1989 through presidential regulations that sought a unified approach to the management of the university records.<sup>58</sup>

The RM programs website has a strong emphasis on its history and it explains how the program got started with an inventory project that scheduled all student records throughout the university. A year later, a "Records Management Manual" was developed based on the experience developed the year before, putting an accent on the creation of guidelines and procedures to consistently train staff on how to develop schedules and store and dispose of records. As the program progressed in 1996 UTARMS started developing the University File Plan which provided a file classification scheme that applies to both paper and electronic University records. It specifies retention periods.

The annual reports posted on the website provide the visitor with a lot of valuable and insightful information. It is revealing that the RM program got stalled on the retirement of the Chair of the Presidential Advisory committee on archives and Records Management, which

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<sup>58</sup> University of Toronto Libraries. "UTARMS, University of Toronto Libraries." University of Toronto Libraries. <http://www.library.utoronto.ca/utarms/> (last accessed January 22, 2012).

could be an indication of how RM programs cannot make much progress unless they have a committed sponsor. That same report for the period from year 2000 to 2002 reveals that progress was achieved without adequate funding as the only full-time employee carrying out RM activities was on contract. Training sessions delivered as a part of the RM program covered the management of “desktop records”.

A significant step for that period was the preparation of a draft of “Guidelines for archiving web sites” prepared by Garron Wells in order to address the growing number of websites created since the creation of the University website in 1994. These guidelines were developed to assist administrators in assessing the long-term value of websites, and were based on similar documents developed in the US, Canada and Australia. Another interesting note was the “risk assessment” guideline that was introduced.

The annual report for 2003-2004 notes that the main challenge for the program was the lack of a long-term strategy for preservation of university records regardless of format. The report asked for a university-wide strategy for information management to enable the institution to protect one of its key corporate assets: information.<sup>59</sup> At the time the program had been anticipating the impact of new privacy legislation, while trying to improve remote access to the archives holdings through digitization of finding aids. The program as depicted in the reports appears to be quite reactive (using Garron Wells own terms) and it is clear that the transfer of records to the records management and archives program occurs within a culture that validates the idea that the archives has no influence while records are still active or semi-active. It seems that the archives has to wait until units determine that records have

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<sup>59</sup> University of Toronto Libraries. "Annual Report 2003-2004." University of Toronto Libraries. <http://utarms.library.utoronto.ca/about-utarms/pdf-files/report2003-2004.pdf> (last accessed January 20, 2012).

to be transferred, usually due to a lack of space within their unit. This is a clear demonstration of how the implementation of RM, and electronic RM in particular, are a matter of cultural change that does not occur overnight or because of the publication of a new policy. The cultural change of any organization is a multidirectional effort that goes from the top down and from the bottom up. For that period the program acquired over 2730 photographs vs. 520 electronic images.

The report for the following year shows how the program was affected by the passing of the Ontario Freedom of Information and Protection of Privacy Act (FIPPA). It led to an adjustment of the five-year plan that moved towards compliance instead of satisfying researchers' needs.<sup>60</sup>

The biennial report for 2007-2009 does not provide any insights into activities related to electronic records. The introduction describes how the workload had increased with the growing pressures created by privacy legislation and records collections. The report does not indicate whether the existing limitations or misalignments between resources and workload would trigger an adjustment in collecting policies. Another interesting feature of the series of reports is how the program captures metrics for records management enquiries. This metric may assist readers to understand why there is a need among units for RM advice, but it is not indicative of the effectiveness of the program. At the end of that period, the program had six full-time employees and two part-time positions for students.

The annual report for 2009-2010 shows a program that has lost momentum regarding electronic records and only foresees an increase in activities related to accessioning

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<sup>60</sup> Garron Wells. "Stepping Up 2004-2010: Strategies for Information Management in the 21st Century." University of Toronto Libraries. [http://utarms.library.utoronto.ca/about-utarms/publications-and-links-1/pdf-files/UTARMS\\_plan\\_2010.pdf](http://utarms.library.utoronto.ca/about-utarms/publications-and-links-1/pdf-files/UTARMS_plan_2010.pdf) (last accessed January 19, 2012).

electronic records in the future as more electronic files are contained in private donors' personal papers. There is no indication that the program is involved in any university-wide software application. There are no further references to the fate of the study of the preservation of university websites. Clearly, the arguments raised by the head of the archives program were not convincing enough for the administration.

The program appears to be stalled within an old custodial model that fosters the isolation of archival programs as repositories for inactive records, whose input on areas such as organization wide taxonomies or schedules is unwanted and, eventually, not welcome, despite the efforts taken by the archives leadership to address eRM. Possibly, arguments that focus exclusively on preservation and compliance are not as convincing as those that also include efficiency and economy. In fact, driven by efficiencies the purchasing department at the University of Toronto managed to implement an SAP solution in 2003, with over 120,000 transactions per year to be recorded using that software application. Despite the ambitious five-year plan published in 2004, there is no indication of whether the archival program was involved in this implementation, which appears to be efficiency driven and led exclusively by the IT department.

### **3. University of British Columbia**

The University of British Columbia Records Management Program reports to the University Archives. The last revision of the RM Policy was approved in 2008 and is connected to a RM Manual and a Records Retention Schedule, the latter is presented as a draft that apparently does not cover all records created at the university.<sup>61</sup> The RM Manual

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<sup>61</sup> University of British Columbia. "Records Management Policy." University of British Columbia. [www.universitycounsel.ubc.ca/files/2010/08/policy117.pdf](http://www.universitycounsel.ubc.ca/files/2010/08/policy117.pdf) (last accessed January 22, 2012).

acknowledges the many challenges created by electronic records but does not provide any guidance on how these issues are to be addressed at UBC.

The UBC has implemented a digital repository but nothing indicates it is being used for eRM purposes.

#### **4. University of Alberta**

On April 1, 1998 the University of Alberta Archives published its guidelines regarding the management of university documents — “to provide guidance and assistance to faculties, departments, and administrative units in establishing good business practices to manage their information resources.”<sup>62</sup> This was done in order to meet its obligations under the Freedom of Information and Protection of Privacy provincial legislation (FOIPP). This manual is quite comprehensive. Although there is no indication it was approved by the senior administration of the university, some sections have the characteristics of a policy with prescriptive language. There is a section dealing with the classification of records that indicates that an organization-wide classification system was not developed and the responsibility was actually delegated to the units. The recommendation regarding the classification of electronic records is that it should mirror the same file plan created for analog records, but adding extensive guidelines for naming conventions. The manual also refers to a General Documents Schedules and Disposal Authority for Administrative Records created in 1985 but the schedule was not available online.

In 2006 a subcommittee of the IT Committee was created to investigate the issues and opportunities of a common strategy that could lead to the implementation of an electronic

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<sup>62</sup> University of Alberta. "Management of University Documents." University of Alberta. [www.ipu.ualberta.ca/documents/mud1.pdf](http://www.ipu.ualberta.ca/documents/mud1.pdf) (last accessed January 19, 2012).

document management application at the University of Alberta. The so called Electronic Document Management Working Group was then given the responsibility to develop a project charter and also to develop a set of system requirements. Learning Systems (Library), responsible for the Archives and Records Management function since 1995, was identified as a “key” stakeholder and therefore was represented in the committee but its input was processed as if it were just concerned with long- term preservation and retrieval of electronic records. Therefore the management of active electronic records was presented as a responsibility of IT, and the Archives was relegated to a secondary (custodial) role, wherein electronic records are basically out of their scope until they become “inactive” and deemed ready for archival retention or destruction. Two years before the formation of this committee, a request for information (RFI) had been issued as part of a procurement process for and electronic document management system.<sup>63</sup> The functional requirements included in the RFI did not take into consideration the standard requirements for document and records management systems that were available at the time — such as DOD 5015.02<sup>64</sup> (first published in 2002) or the MoReq Specifications published on March 2001.

## 5. Queen’s University

The RM program at Queen’s University reports to the University Archives. The program’s website is very well organized and has direct links to a well-structured records management policy that was first established in 2003 and is to be reviewed every five

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<sup>63</sup> University of Alberta. "Request for Information - Electronic Document Management System." University of Alberta. [www.vpit.ualberta.ca/registrar/edms/pdf/rfi.pdf](http://www.vpit.ualberta.ca/registrar/edms/pdf/rfi.pdf) (last accessed January 22, 2012).

<sup>64</sup> DTIC Online. "DOD 5015.02-STD Electronic Records Management Software Applications Design Criteria Standard ." Department of Defence chief Information Officer. [www.dtic.mil/whs/directives/corres/pdf/501502std.pdf](http://www.dtic.mil/whs/directives/corres/pdf/501502std.pdf) (last accessed January 22, 2012).

years.<sup>65</sup> There is also a link to a hierarchical, function-based classification system that also governs retention rules and was last revised in 2011. In regard to e-records, the website does not offer much information in the way of guidelines or procedures. There is a one page “best practices” document on how to manage email in relation to privacy and there are recommendations about the destruction of electronic records as not equivalent to simply “deleting” files from a workstation. There is no indication that the university has implemented an eRM program.

Overall the program promotes a life-cycle approach to the management of records in general and does not seem to be engaging with records creators to proactively capture records that could be of interest to the archives. Having delegated basic RM responsibilities to the university staff members, the program seems to expect that eventually electronic records will be disposed of through either transfer to the archives or destruction. However the program does not offer any guidance on how to transfer electronic records to the RM or archival program.

### Other North American Universities

**Table 5 Other North American Universities**

<b>University</b>	<b>Location</b>	<b>Enrolment</b>
Indiana University	Bloomington, Indiana	40,479
University of Michigan	Ann Arbor, Michigan	42,761
University of Illinois	Champaign, Illinois	42,606
University of Calgary	Calgary, Alberta	30,500

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<sup>65</sup> Queen's University Archives. "Queen's University Archives - Records Management." Queen's University Archives. <http://archives.queensu.ca/rm.html> (last accessed January 22, 2012).



## 1. Indiana University

The Indiana University (IU) Archives is responsible for the records management function and reports to the university library. During the last decade the archives generated an interesting approach to management of electronic records. This development resulted partially from a grant it obtained from the National Historical Publications and Records Commission (NHPRC). Of course, funding does not necessarily translate into successful implementation of eRM, in the same way that having an excellent ERMS does not necessarily result in a strong eRM program. Like the annual and biennial reports from the University of Toronto archival program, the series of reports and white papers published by the Indiana University Archives and Records Management program since 1999 are insightful and shed light on common issues at many universities.

To advance the implementation of an eRM program at IU three primary objectives were pursued: define a recordkeeping system; evaluate existing data and information systems as “recordkeeping systems”; and define the nature of an electronic record as complete, authentic, and reliable. Clearly great efforts were made toward developing a theoretical model in hopes that obtain enough momentum would be created to implement a university wide e-records program. An indication of the intent is the “Policy on Electronic E-Mail as Records Draft” last revised on June 27, 2001.<sup>66</sup> This policy has not yet gone into effect but it had provision for multiple scenarios in which email could be managed by adding functionality to the email system, captured on an ERMS, or simply printed out if none of the other options were available as yet, and as long as adequate metadata appeared on the paper copy. The methodology used was based on the analysis of business functions and

<sup>66</sup> Indiana University Bloomington. "Policy on Electronic E-Mail as Records - Draft." Indiana University Bloomington. [www.indiana.edu/~libarch/ER/email-policy.pdf](http://www.indiana.edu/~libarch/ER/email-policy.pdf) (last accessed January 19, 2012).

transactions. IU conducted a number of “audits” that consisted of a review of operations from a recordkeeping perspective, and surveyed the electronic tools or software applications the different units were using to fulfill their primary functions. It is not clear why the program decided not develop a university-wide records taxonomy or classification system. Instead UI continued to use the existing schedules, which are quite narrow in scope. While conducting this survey IU also collected information on functional requirements and identified the kinds of records management functionality the existing systems were lacking.

The Archives team worked with the IT team to develop a RFP for a records management application. The functional requirements had been developed based on MoReq, as they found the European requirements more workable than the American counterpart that had been developed years before at the University of Pittsburgh. In the end no ERMS was selected. In Philip Bantin’s words (he was the project lead and head of the university archives): “due to lack of funding and of the will and desire to spend \$100,000 to \$500,000 on enterprise management software [despite a] growing recognition that data and records are falling through the cracks, this concern is not being translated into a plan or a commitment to solve deficiencies in recordkeeping by establishing a true document/records management environment.”<sup>67</sup>

The project still found an opportunity to capture records created in several applications through a “next generation” portal that utilizes a distributed model for content creation.

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<sup>67</sup> Indiana University Bloomington. "Indiana University Electronic Records Project - Phase II 2000-2002." Indiana University Bloomington. [www.indiana.edu/~libarch/ER/nhprcfinalreport.doc](http://www.indiana.edu/~libarch/ER/nhprcfinalreport.doc) (last accessed January 22, 2012).

Despite the optimism expressed by Rosemary Pleva Flynn in her article,<sup>68</sup> a year later Bantin would express his lack of confidence in this project. He was convinced that his project team had developed an excellent mechanism for capturing records but the environment for transferring and managing electronic records in this new environment was not yet in place.

The UI Records Project could be considered a failed attempt to implement policies, procedures, and electronic records management tools, but the program made significant gains by positioning itself as a source of knowledge and skills for electronic records management and metadata requirements. It created partnerships with departments that otherwise would be out of reach. The fate of the electronic records program since 2002 is unclear.

## **2. University of Michigan**

The University Archives and Records Program<sup>69</sup> (UARP) at the University of Michigan has six staff members and reports to the Bentley Historical Library. The scope of work for the program is limited to records of the university and related materials in any format. A comprehensive Records Policy and Procedures Manual was first created in 1993 and updated on September 2002. Implementation procedures indicate that agreements have been reached with various units to establish an accountability or governance framework for many bodies of records, such as financial, grant, patient/client, personnel, and student records. The policy is based on a custodial paradigm. An example of this is the primary concern with preservation and how the Access Policy only deals with access permissions for records that are archival. There is no mention of the active phase.

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<sup>68</sup> Rosemary Pleva Flynn. "OneStart/EDEN: A Description of IU's Transaction Processing/Recordkeeping Environment." *Electronic Recordkeeping at IU* (University Archives). [www.indiana.edu/~libarch/ER/flynn-saa2001.pdf](http://www.indiana.edu/~libarch/ER/flynn-saa2001.pdf) (last accessed March 9, 2012).

<sup>69</sup> University of Michigan. "Records Management & Retention." U-M Office of the CIO. <http://cio.umich.edu/records/> (last accessed January 22, 2012).

Chapter 5 of the policy deals with Implementation Procedures for Records Requiring Special Consideration and contains specific procedures for managing digital records. Overall this policy recommends a multidisciplinary approach to establish and manage effective recordkeeping systems, and makes the UARP staff available to review systems at the time systems are modified, or during design of new systems. The fact that staff is made available is certainly positive, however when policy statements are weak, as in this instance of merely making staff available, they have limited authority.

The policy also recommends that the arrangement of electronic records should be done in some logical fashion and offers a series of steps to be followed in order to establish a function-based digital directory or file structure. This type of delegation of authority for the design of classification systems was found in some other universities but nothing indicates that units will have staff who can do this type of work as it requires great understanding of functional analysis.

The policy contains instructions for maintenance and long-term preservation of e-records and emphasizes the need to develop a proactive plan that should be well documented throughout its execution. The instructions do not specify if all active records should be migrated periodically or who is actually responsible for executing migrations. Eventually e-records may be transferred to the University Archives, although in some cases UARP recommends records are best retained within the environment in which they were created. The Archives is currently receiving records transfers through either a file transfer protocol (FTP) or digital storage media such as a CD.

UARP also developed comprehensive guidelines for the design and preservation of university websites based on the fact that a lot of information related to administrative

activities is conveyed via the web. They managed to implement an in-house web-archive solution using the Web Archiving Service of the California Digital Library. UARP selected these websites to document academic, administrative, research, public service and social activities. As for email management, and due to a lack of a university wide email management system, they recommend filing emails that qualify as records by using a directory structure based on functions and activities.

Other examples of the achievements of UARP are documented in several case studies published in electronic format by the Society of American Archivists. The first study was on how the university archives in partnership with the Provost's Office improved the management of the "university bulletin" or general catalogue<sup>70</sup> that in the last three decades had become more decentralized. What used to be a regularly printed controlled "bulletin" turned into a web-based publication that improved the speed in which changes could be introduced without assuring a sound recordkeeping process. This collection of university records was deemed vital but lacking centralized procedures and documentation practices had become less consistent.<sup>71</sup> Another initiative was the development of a partnership with a unit that had not been receptive earlier to the process of transitioning from a hybrid system to a digital one. The record in question was the "schedule of classes," which was frequently requested by students in order to demonstrate the university's compliance with stated degree program requirements. The concern was actually raised by the Registrar's Office when it was

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<sup>70</sup> Academic program requirements are defined in what is called the university "bulletin" or general catalogue. Program requirements outline how many credits and what subjects a student needs to complete in order to receive a degree in an academic program within a specific school or college. At the University of Michigan, this bulletin is positioned as a contract between the university and the student with regard to the definition and program requirements.

<sup>71</sup> Nancy Deromedi. "Gaps and Inconsistencies: Issues in the Dissemination of the University Bulletin at the University of Michigan." *Campus Case Studies* 1 (2008).  
<http://www2.archivists.org/sites/all/files/Case1Final.pdf> (last accessed January 22, 2012).

forced to cut costs by eliminating the printed version of the record. The procedures agreed upon dealt with the data source for the creation of the “Schedule of Classes”, when data would be captured, backup procedures established along with definitions, file format, and a transfer schedule. Here the role of the archives is still seen as custodial, but also to make sure that the records would be readily accessible online.

UARP also provided assistance to the team of stakeholders and experts that collaborated to address the issue posed by the management of “casebooks”. Casebooks are a critical group of records that is kept as evidence of faculty promotion and tenure. A decision had been made to go electronic without buying any new software application. Again a process was defined and the archives was identified as the natural custodian for this record collection. Although the new process has some minor pitfalls, many other units adopted it the following year and the archives involvement was perceived as vital by the other stakeholders during the initial and follow-up discussions.<sup>72</sup>

Slowly UARP has been moving into a proactive mode that takes it away from the traditional custodial function. Even though stakeholders and UARP believe that the archives offers safe custody, its early engagement in the design of workflows leads to the creation of better and more manageable e-records. These e-records are now being managed with preservation strategies in mind.

The Records Management and Retention Project launched in 2011 resembles the first steps of the DIRKS methodology in the type of analysis it describes. The intent of this

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<sup>72</sup> Deromedi, Nancy. "Generating and Archiving Records in Digital Form of the Promotion and Tenure Process at the University of Michigan." *Campus Case Studies* 3 (2008). <http://www2.archivists.org/sites/all/files/Case3Final.pdf> (last accessed May 2, 2010).

project is to develop an organization-wide strategy for the management of records in any format.

### 3. University of Illinois

The University of Illinois Archives reports to the Library and is responsible for the records management function.<sup>73</sup> The program has achieved substantial progress towards an improved eRM program and has managed to make available online large collections of semi-current records. The implementation of an integrated open source archival and digital content management software application enabled the archives to increase its capacity to deal with electronic records. It is apparent that different staff members in the program have different understandings of how to manage electronic records. Even though the website shows a program that is locked into a custodial model, there is evidence that it is moving forward using a need based or opportunistic approach. It may be risky not to have an organization-wide records policy, but being subject to the State Records Act of Illinois, the archives decided that references to the act should be sufficient and focused on actual implementation of best practices at the grass roots level. This strategy has been instrumental in the archives gaining respect and support from all levels of administration. William Maher, head of the archival program, suggests leaving behind the custodial model focused on processing and reference service, and instead, working on approaches that address current opportunities in a pragmatic way. He favours engaging in the design and creation of new record systems (recognizing that some records will be lost) and collaborating with other stakeholders such as campus computing, auditing and the registrar. These are pragmatic steps that will secure

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<sup>73</sup> University of Illinois at Urbana Champaign. "Records and Information Management - University of Illinois Archives." University Library at University of Illinois at Urbana Champaign. <http://www.library.illinois.edu/archives/services/records.php> (last accessed January 22, 2012).

“recognition of the archives as a central player in the institution’s information infrastructure.”<sup>74</sup> Even though the last annual report does not indicate further achievements other than the ones described by Kaczmarek,<sup>75</sup> it is clear that the program is making progress as it continues to embrace a post-custodial model.

#### 4. University of Calgary

The Information Management Program at the University of Calgary reports to the University Archives. The website makes it clear that their authority and responsibilities were delegated to the University Archives by the Board of Governors. The purposes of the Information Management Program are to create and maintain easily accessible records, provide accountability for decisions and actions, protect the rights of the University employees and students, protect and support the University in the event of litigation, enable the University to comply with government legislation related to records, formalise records retention decisions in compliance with FOIP (provincial access and privacy legislation), and to preserve permanently valuable records. Although these purposes are not numbered, the order in which they are displayed indicates the priorities of the program wherein efficiencies and effectiveness come first, followed by risk management and compliance and preservation of organizational history.<sup>76</sup>

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<sup>74</sup> William Maher. "The Constants of Change and Continuities: Perspectives on Three Decades of Academic Archives." *Journal of Archival Organization* 7, no. 1 (2009): 74-84.

<sup>75</sup> Joanne Kaczmarek. "Establishing a University Records Management Program from the Inside Out." *Archival Issues* 30, no. 1 (2006): 23-34.

<sup>76</sup> University of Calgary Archives. "Mandate and Authority ." University of Calgary Archives. <http://archives.ucalgary.ca/imp/mandate> (last accessed January 22, 2012).



The Information Asset Management Policy clearly indicates that all information assets must be managed from the moment they are created or received.<sup>77</sup> The program developed a uniform classification system that standardizes the use of common vocabulary for the classification of records. This classification system is hierarchical and based on university functions and activities. The program offers training on how to use the classification system and provides a set of procedures and guidelines for the creation, organization and maintenance of electronic records.

The Archival Program and the Information Management Program were conceived and operated separately but archivists from both programs are continually working together to the point that they have become integrally connected, fostering “partnership” with “recordkeepers” (those staff members carrying out recordkeeping activities at the unit level). These activities have turned into significant benefits for multiple units including the archives. In 2006 the University Archives was already cooperating with an industry partner to develop a comprehensive solution for the management of electronic records across the university.

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<sup>77</sup> University of Calgary. "Information Asset Management Policy." University Policies, Procedures and Forms. [www.ucalgary.ca/policies/files/policies/Information%20Asset%20Management%20Policy.pdf](http://www.ucalgary.ca/policies/files/policies/Information%20Asset%20Management%20Policy.pdf) (last accessed March 9, 2012).

## Conclusion

All of the universities chosen for this sample describe their RM programs on their websites. Most of the programs were very candid about their policies and practices. It can be reasonably inferred that those programs that do not provide a lot of information about the current state of RM do not have much progress to report. Some programs such as the RM program at Indiana University and at McGill University showed gaps related to more recent developments, as there have been no significant updates to UI's site since 2002 and McGill's since 2005. It is hoped that these two promising programs have not lost early momentum.

This thesis aims to complement and revise the previous studies of university archives that it discusses. It shows that the positioning of the records management program in the organizational structure is not a determining factor in their failure or success. Some of the most progressive archival programs in fact report to the library, although previous studies based on surveys indicated that reporting through the libraries deterred the development of RM programs.

Previous studies suggested that public organizations were more likely to comply with regulations. This thesis indicates that compliance is not the driving force behind the implementation of more robust eRM programs, and regulations on records management in North America are not compelling universities to comply. Three public universities in Florida have developed uneven RM programs, and are far from implementing eRM in compliance with current standards or existing state regulations. The implementation of access and privacy laws has had some impact on Canadian universities, but none of the universities in the US referred to privacy laws as a driving force behind improved records management. Only a few of the universities reviewed seem to have been influenced by the literature,

standards, and methodologies in the field of records management or archival studies produced beyond North America. Most of the universities reviewed remain attached to a custodial model — that has been sharply questioned for the last two decades outside North America — and that impedes further development in the area of electronic records management, appraisal and preservation. Some of these programs mention the ISO RM standard, but do not seem to have absorbed its implications. Further research into the education of North American records practitioners may shed some light on this matter. The programs that were making progress are those that thought outside the custodial model.

Most of the university records policies reviewed show a disconnect between the policies and the practices that are used in the institution where the policy applies; some of these policies were outdated, a clear indication that they do not raise a lot of interest; and some others were put in place in more recent times but without an implementation plan.

It is taking too long for North American universities to implement successful eRM programs. The right tools have been available but neglected most of the time. The positioning of the RM program in the organizational chart is irrelevant if the implementation methodology is wrong or non-existent, but committed support has to be secured from senior administration, as explained in DIRKS. Private and public universities face exactly the same challenges and are subject to similar legislation. A sound legal framework helps with implementing good RM, but not when the laws are not being enforced. The quality of a program cannot be measured by the possession of an ERMS. User specifications have to be realistic and do not have to strictly follow specifications such as MoReq or DoD 50150.2.

Many North American records professionals are making laudable efforts to deal with electronic records, but have not been able to articulate a business case for implementation of

comprehensive eRM programs in their organizations that has won their support.

Implementing eRM programs is not an easy task but records managers and archivists in Australia have been following (some with adaptations) a standardized methodology in order to achieve better and more consistent outcomes. Implementing sound eRM programs is a journey where the destination is constantly moving. Along this journey more often than not, records practitioners are tempted to think that the only way to implement better practices is through the implementation of a certified compliant and costly ERMS. Its acquisition and implementation can consume all their energies and enthusiasm. An ERMS will simplify many of the complex tasks involved in sustainable management of electronic records, but there are many more affordable ways to get an eRM program off the ground. A phased and opportunistic approach, such as the one followed by the University of Illinois, allows eRM programs to gain respect and credibility among stakeholders and obtain enough momentum to eventually secure the resources required for an ERMS. This approach (adopted by a small group of universities) puts into practice a post-custodial model with so far promising results that other universities could also enjoy if followed.

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