Paradigm shifts in recordkeeping responsibilities: implications for ISO 15489’s implementation

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Abstract

Purpose – The purpose of this paper is to point out paradigm shifts in recordkeeping responsibilities from records and information management professionals (RIM professionals) to knowledge workers, caused by advancements in information and communication technologies and by user and organizational expectations. The impact of these changes on the implementation of professional records management (RM) principles and guidelines particularly in ISO 15489 is discussed.

Design/methodology/approach – The paper looks at the issues from an academic viewpoint by reviewing ISO 15489’s RM principles presented in Part 1 and guidelines in Part 2 of the standard. The currency of the standard in capturing the changing practices that are flowing into RM approaches are then evaluated against four of the principles. These four principles are reviewed against three key paradigm shifts.

Findings – The authors present evidence of significant paradigm shifts relating to changing technology, work practices, devolution of recordkeeping responsibilities to users, their growing expectations, and increasing organizational concerns for RM accountability. These are generating pressure on RM systems to change and become more responsive. This review highlights the critical need to better appreciate the changing RM context and its implications for broader policy and professional practice.

Practical implications – The key practical implication identified in the paper relates to reconceptualisation of the roles of RIM professionals, knowledge workers and senior management for recordkeeping.

Social implications – The changing nature of RM in organizations will necessitate stronger engagement of knowledge workers and senior management with their RM services.

Originality/value – This paper focuses on the user responsibilities for RM versus traditional RIM professionals having this role. The paper offers an innovative view of professional RM practice and suggests some new directions for RIM professionals to better accommodate user needs and expectations.

Keywords Records management, ISO 15489, Electronic documents and records management systems, Information management, Standards, Classification schemes

Paper type Viewpoint

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Introduction
The International Standard for Records Management, ISO 15489 (International Organisation for Standardisation, 2001a, b) has been widely accepted as an influential and critical set of principles and guidelines that ensure records management (RM) systems are fit for purpose. First established in an era when records managers maintained tight control over the majority of records management practices and a specific range of records, it has continued to guide the move toward electronic record keeping and embedded organisational retention of information, knowledge and records. The growth in electronic document and records management systems (EDRMS)[1], social network media technologies, and Web 2.0 records have opened up further opportunities for innovative approaches to RM. The move away from a highly structured records environment to a more fluid institutionally-driven context reflecting user needs and expectations offers both opportunities and challenges for the records and information management profession (RIM).

The impact of changing organisational expectations and practices has been little discussed in the professional literature – particularly with respect to the implications for the standards and associated guidelines (International Organisation for Standardisation, 2001a, b). This paper therefore explores three key paradigm shifts that are likely to change the scope and management of organisational records, namely: technological developments; changing user expectations with regard to managing and accessing information and the requirement for greater transparency, compliance and accountability by organisations. We argue that these paradigm shifts already challenge traditional perceptions of recordkeeping responsibilities and have wider implications for the interpretation of the ISO 15489 standard and associated guidelines (International Organisation for Standardisation, 2001a, b). While the broader principles (International Organisation for Standardisation, 2001b) remain pertinent as signposts to good practice, a number of the guidelines (International Organisation for Standardisation, 2001b) could benefit from a fresh consideration as to how these paradigm shifts might be better accommodated.

Professional practice relating to assigning metadata, designing classification schemes, assigning retention periods and establishing security permissions is rapidly moving to a new level of sophistication that is largely not addressed in the guidelines. While the ISO15489 standards are not intended to provide a proscriptive approach to RM system implementation, this paper argues that the profession is at a stage where some of the basic assumptions need to be reviewed.

ISO 15489 – an overview
The industry standard, ISO 15489 Parts 1 and 2: Information and Documentation – Records Management (International Organisation for Standardisation, 2001a, b), hereafter referred to as ISO 15489 or 15489, is a voluntary code of practice. It offers guidance on how RM principles and practices can be implemented in organisations (Healy, 2010, p. 98). The international standard derives from the Australian standard, AS 4390-1996: Records Management and has since replaced it (Steemson, 1999, 2002). Cumming (2002) provides a detailed comparison of the similarities and differences between ISO 15489 and AS 4390, concluding that AS 4390 “has played a very significant role in the development and codification of the records management discipline” in Australia and globally.
ISO 15489.1-2001, *Records Management – Part 1: General* provides a high-level framework for RM, with emphasis on the requirements for the design of an RM system, the benefits of RM to the organisation, the requirement to comply with legislation and the need to assign and assume responsibility for adequate RM policies and procedures. It also identifies the requirements for RM training and support systems. ISO 15489.2-2001, *Records Management – Part 2: Guidelines* is a technical report that provides practical guidance on how to apply those principles to implement an effective RM system using the DIRKS (Design and Implementation of RecordKeeping Systems) methodology (National Archives of Australia, 2001). It provides practical guidance for the development of records processes and controls, and addresses the development of key recordkeeping tools like classification schemes, thesauri and retention schedules.

ISO 15489 is a widely accepted international standard (An, 2006; Steemson, 1999, 2002, 2005; Weinstein, 2005) commonly used by organisations as a benchmark when designing and implementing their RM regime. It provides guidance on managing paper-based or electronic records, offering best practice guidelines for the management of corporate memory and information assets. Steemson (2005) reported that increasingly “non-English speaking countries have translated” ISO 15489 and “information management training groups and consultancies worldwide have focussed on its dissemination” (Steemson, 2005, p. 44).

Internationally, 15489 was endorsed by the United States National Archives and Records Administration (NARA) (Weinstein, 2005) and has been internationally accepted and used as a best practice standard in the US, the UK, France, Jamaica, Australia and New Zealand (Alexander-Googing and Black, 2005; An, 2006; Dherent, 2006; McLeod and Childs, 2007; State Records Commission of Western Australia, 2002; Steemson, 2005; Weinstein, 2005). In fact, Archives New Zealand has funded the license purchase for their public offices as defined by their Public Records Act (Archives New Zealand, 2006). The 2009 Cohasset survey reported that 47 per cent of records and archives professionals cited the ISO 15489 as their primary source of guidance to determine their organisation’s RM requirements and practices (Williams and Ashley, 2009, p. 21). The fact that ISO 15489 complements other international quality assurance standards like the ISO 9000 series, and uses simple language to explain complex RM principles, has contributed to its global acceptance (White-Dollmann, 2004).

ISO 15489’s use and acceptance internationally and in Australia has been reported widely via case studies in practitioner publications more than in scholarly publications. Case studies since the release of the standard have reflected the practical application of the principles into organisations in Jamaica (Alexander-Googing and Black, 2005, p. 66) and more systemically in Commonwealth African nations (Tough, 2004, p. 157), Spain, China, Iceland, the Baltic states, Great Britain, the USA and France (Steemson, 2005). Examples of ISO 15489’s implementation include it being employed as a benchmarking tool to critically analyse RM issues in China (An, 2006; An and Jiao, 2004), as a guide by the National Library of France to design RM best practices for the management of electronic documents (Dherent, 2006) and to assist with managing email records of the International Committee of the Red Cross (Willemin, 2006).

Nonetheless, a concern that has emerged is that this critical international standard lacks guidance on developing or implementing the tools referred to in the standard (McLeod and Childs, 2007, p. 163). ISO 15489’s objective is to set out the strategic directions on how to implement a RM system by identifying the key principles and best
practices that make up a good RM system; it was not intended to be a “how to” guide (McLeod and Childs, 2007, p. 154). It is therefore generally perceived, and used, as a benchmarking and/or compliance standard by organisations implementing a RM program (McLeod and Childs, 2007; Steemson, 2002, 2005; White-Dollmann, 2004). ISO 15489’s (Part 2) does not include guidance on implementing change management, or on how senior management and employee support can be elicited for successful RM implementation. In fact, a reviewer of this paper noted that the methodologies outlined in the guidelines (International Organisation for Standardisation, 2001b) were of little value for implementation, a strong confirmation that it is a good time to revisit the profession’s approaches.

The recent release of the first of the ISO 30300 series of standards (International Organisation for Standardisation, 2011a, b) highlights the profession’s ongoing efforts to introduce guidelines for requirements (ISO 30301) for a “Management System for Records” (MSR) which will include implementation (ISO 30302), certification (ISO 30303) and assessment (ISO 30304) components. The latter three standards were yet to be published at the time of writing this article. The convenors of Working Groups 8 and 9, ISO TC46/SC11 (Ellis and Bustelo, 2010, June 18) noted that these 30300 series of standards “do not replace ISO 15489”. They suggest the new series is aimed at senior management to position RIM practices at the management systems level so that it is strategically aligned with similar quality management, security management and environmental management systems. The 30300 suite of standards also provide pathways for organisations to seek certification for compliance with a management system for records (MSR). This is similar to how organisations’ seek certification against the ISO 9000 series of standards to assure customers and suppliers that their products are manufactured adhering to the specified quality assurance processes. It is worth pointing out that in the introduction sections of both the ISO 30300 and 30301 standards, it is noted that “ISO 15489 is the foundation standard which codifies best practice for records management operations” (International Organisation for Standardisation, 2001a, b).

The nature of a record
ISO 15489 defines a record as:

information created, received, and maintained as evidence and information by an organisation or person, in pursuance of legal obligations or in the transaction of business (International Organisation for Standardisation, 2001a).

Yeo (2011) suggests that RIM professionals’ perceive records are primarily in the format of a document because “documents were perceived as written or printed text on paper” (p. 10). There is a widely held view that “all records are documents, but not all documents are records” (Barry, 1993; Livelton, 1996; Peterson, 1991). Yeo (2011) argues that documents “connote media and formats” (p. 10) and that the notion that “all records are documents” (p. 11) is no longer valid. Technological developments have led to electronic information content that ranges widely from in-house sources to broader electronic platforms. The range has blurred the traditional boundaries of what constitutes documents, records, data and data-centric records. For example, records are created and received in non-document formats from social network media and records can be housed in social media settings like FaceBook and Linked-In applications.
Importantly, electronic documents in.docx and.xml formats contain both text and metadata describing the context and content attached to them, thereby making them both textual and data-centric electronic documents (Yeo, 2011, p. 12). Yeo also argues that RIM professionals’ “idea that a record’s status depends on formal designation” is incorrect (Yeo, 2011, p. 16). The practice of classing records based on the fact that humans will take action to “identify” and “declare” information as records in repositories like the EDRMS is optimistic. Research by Joseph (2009, 2010a), for example, found that few EDRMS users made the effort to declare their documents as records in their EDRMS while also finding it difficult to source documents that were not declared as records. This not only poses dilemmas for knowledge workers but also records managers who take the approach of first, only managing records and second, relying on knowledge workers to change a document’s status so that it can be identified as a record in their EDRMS.

The increasing range of electronic business systems and repositories has also necessitated a more expansive view of the nature of records. Records now encompass documents, records, quality records, working drafts, data-centric records, data, photos, Web 2.0 records and a growing range of records in different media. There needs to be recognition that information is created, received and transmitted in many forms and media (audio, video and web) or may reside across multiple platforms. When the scope of information is widened to encompass information that resides in multiple line-of-business information applications or repositories it is clear that good information management also needs to expand beyond the traditional concept of a records repository, which is usually an EDRMS.

Thus, it is vital for organisations and their records managers to consider how they might best manage all corporate information content that is core to the business needs (Debowksi, 2006). To accomplish this, it will be necessary to reconsider what is meant by information, how information exists in different formats and system repositories, and how organisational support for records management might best be achieved. As a first step, better understanding of the evolving organisational context can assist.

Drivers for shifting recordkeeping responsibilities
There have been notable paradigm shifts in traditional recordkeeping responsibilities, particularly stemming from the devolution of records management roles from skilled records managers to individual knowledge workers, who now create, receive and maintain records relevant to their roles. This has operated in tandem with three drivers that are also challenging traditional perceptions of records management structures: technologies, user and organisational expectations.

Technology
Developments in information and communications technologies (ICT) and especially in social network media have changed the ways in which knowledge workers communicate and collaborate in organisations. “A 2009 Gartner study found that 31 per cent of the enterprises surveyed indicated they regularly use social media tools and social networking sites, and that 52 per cent planned to increase their budgets for social media tools and collaboration software in 2010” (Bell et al., 2010). Bell et al.’s (2010) findings support Everingham’s (2011) observation that community engagement with stakeholders (both internal and external to the organisation) is carried out using a
range of additional social network media communication channels. Recent recommendations to RIM professionals to manage Web 2.0 records have recognised the increasing importance of integrating RM for social media resources (Steve Bailey, 2008; State Records Authority of New South Wales, 2009). Further, communication and collaboration is made possible using diverse technologies and media. Mobile knowledge workers can work from anywhere and at any time to achieve their required outcomes – and this expansiveness needs to be reflected in the records management strategy that is integrated into organisational practice.

User expectations of how they manage and access corporate information
While these technological developments have altered the way mobile workers receive, create, transmit, communicate, collaborate and access corporate information, they have also changed knowledge workers’ expectations of how they might work and access their organisation’s corporate resources, drawing on a range of applications and business systems (Chiera, 2011).

The growth in portals, where a staff member can interact with various corporate information sources through a single user-access point illustrates the growing move to create user-driven and customisable platforms to manage work activities. This push is also partly driven by the increasing tendency to work 24/7/365, thereby requiring open access to work tools such as the Microsoft Office suite of applications and other corporate information systems. In effect, user expectations are guiding the ongoing development of information architecture that ensures they are satisfied with their experience and interactions with particular systems. This satisfaction can relate to the aesthetic design features of the systems, the ease with which the user understands how the system works or the appropriateness of the system in serving the information needs of the user (Alben, 1996, p. 15).

In summary, knowledge workers want business solutions that are aligned to how they work, so that their daily work experience is made easy, saves them time and effort and importantly does not frustrate their information seeking and work effectiveness. This is in line with the “Principle of Least Effort” (PLE) articulated by George Zipf in 1949 and cited by Case (2005): users tend to use systems that require the least amount of effort. As technological advancements occur, corporate systems, including EDRMS, will need to parallel those innovations to keep employees committed to deploying their capabilities. This issue is also reflected in the work of Bailey and Vidyarthi (2010, pp. 279, 87-8) who argue that future records management system designs need to take note of human-computer interaction (HCI) design principles so that user needs are better supported. Interestingly, the concept of designing around user expectations has been little explored in the professional literature to date.

Organisational expectations
Senior management in organisations may be aware of these technological developments and the types of user experiences their employees are seeking. However, these drivers need to be balanced against organisational responsibilities to adhere to and comply with standards and legislative requirements; be accountable; and be able to demonstrate transparency of business operations and decision making.

Organisations need to manage their electronic information content to protect themselves against costly e-discovery litigation processes (Kahn and Silverberg, 2008;
Penalties or high litigation process costs have been incurred on various counts: for not having good recordkeeping practices (*Coleman Holdings, Inc. v. Morgan Stanley & Co.*) (Dirking and Kodali, 2008, p. 57); for prematurely destroying evidence during litigation (*Applied Telematics v. Sprint*) (Kahn and Silverberg, 2008, p. 52); and for not implementing or adhering to retention and disposition programs (*Murphy Oil v. Fluor Daniel*) (Kahn and Silverberg, 2008, p. 52). Courts were favourable when organisations proved they had destroyed the required records in compliance with the organisation’s retention schedules (*Moore v. General Motors*) (Kahn and Silverberg, 2008, pp. 50-1). Court cases or e-discovery litigation concerning malpractice or mismanagement of corporate information by private and government organisations[2] have led to government and industry regulations and legislation[3] which pressure organisations to become disciplined about their electronic documents and records management practices (Miller, 2006, p. 40). With e-discovery and Freedom of Information (FOI) legislation failing to differentiate between documents and records, it is clear that records managers would benefit from a reconsideration of their traditional distinction of the two.

Legislation such as the US Sarbanes-Oxley Act imposes compliance not only on companies[4] but on individual executives, who can be exposed to serious penalties including jail sentences if they fail to put the right measures in place (Harvey, 2003; United States Congress, 2003b). The Gartner Group estimates that the Fortune 1000 companies have each spent about US$2 million to bring themselves into line with the Sarbanes-Oxley Act: about 20 per cent of that expenditure went on software, but employee time on email is still mismanaged (Harvey, 2003). In spite of these investments, knowledge workers are failing to find efficient ways of searching for emails and documents, thereby affecting an organisation’s efficient running of its core business.

It is clear that the traditional RM approach has not achieved the organisational outcomes and widespread engagement by users that were initially intended.

**Implications for the implementation of ISO 15489’s records management principles**

These drivers in technology, user and organisational expectations have shifted recordkeeping responsibilities from records managers to individual knowledge workers who are generally unskilled in records management practices. There has been a marked shift in the focus of the records manager’s role from opening and registering incoming and outgoing correspondence to strategic roles targeted on governance; training; quality assurance and auditing records management practices. Bailey and Vidyarthi (2010) highlight the need to redefine the role of the records managers as knowledge workers become more active contributors to the records management process:

> It is simply implausible for the records manager to seek to directly influence the creation and management of each and every record created by so many people engaged in so many business processes. Instead, he or she must work “by extension”, to define the systems, processes and rules and by doing so to create the environment and provide the tools by which hundreds or even thousands of record creators and users can then appropriately manage such records themselves (p. 280).
However, the risk in this devolution of role is that users will not be as committed to ensuring compliance when record management practices are enacted. Given these technological trends and the shifts in recordkeeping responsibilities, there is a need for RIM professionals to review how some of the RM principles are best undertaken for managing the twenty-first century organisation’s information.

Re-thinking records management concepts and tools

ISO 15489 offers eight records management principles that guide professional practice:

1. Policies.
2. Procedures.
3. Metadata standards.
4. Classification schemes and thesauri.
5. Retention and disposition schedules.
7. Training.
8. Monitoring and auditing.

However, these principles were designed for managing paper based and electronic records in the pre-Web 2.0 era, when organisational control of records was substantially overseen by trained RIM professionals. Although, all of these principles remain appropriate, we argue that a review of how they might be implemented is timely in this changed context. In reviewing the impact of the previously discussed paradigm shifts, it is evident that four of the principles are particularly affected by these emerging influences. These are discussed next.

Classification schemes

ISO 15489 defines classification as a:

systematic identification and arrangement of business activities and/or records into categories according to logically structured conventions, methods, and procedural rules represented in a classification system (International Organisation for Standardisation, 2001a, p. 2).

A number of researchers (Calabria, 2004; Foscarini, 2009; Gunlnaugsdottir, 2006; Joseph, 2010b) have identified knowledge workers’ difficulty in understanding and applying classification schemes implemented by records managers. Given the paradigm shifts in recordkeeping responsibilities to knowledge workers, assigning classification schemes to the information they create and receive is one of the important records management task knowledge workers need to perform. However, EDRMS participants in Joseph’s (2010b) research pointed out their difficulty in assigning classifications to register as well as search for information stored in their EDRMS. The difficulties participants reported included the scheme not being intuitive and/or user friendly; a lack of understanding of how the scheme worked; and poor user training and awareness of the scheme (Joseph, 2010b, pp. 275-6). There is a need to simplify classification schemes, develop user friendly classification schemes (pp. 284-6), and to better train users on the scheme’s structure and application (Joseph, 2010b, pp. 275-6).
Auto classification possibilities

Another challenge for records managers concerns providing alternatives to traditional classification approaches, so that user-based errors and omissions pose less risk to the RM process. There are a number of new options to minimise the complexity of classification to ensure more effective record categorisation in the EDRMS. Automated classification technologies are designed to reduce human intervention and error, avoid misclassification and ensure accurate and consistent classification to improve search and retrieval from the information repositories. Instead of manually classifying information in the EDRMS, it may be preferable to use these applications to undertake the indexing or classification functions that would otherwise need to be carried out by users.

Current developments in heuristics technology enable automatic capture of static metadata from structured documents and records into EDRMS, using specially developed common document templates. It is possible, using these heuristic or artificial intelligence technologies, to automate the accurate entry of metadata fields such as invoice number, date of invoice or name of supplier, to register incoming records into the EDRMS (Woodward, 2009). These technologies enable the automatic classification of common record types such as forms and invoices. There are a number of vendors who provide software with heuristic functionalities and offer integration services to EDRM systems (see, for example (Kofax Incorporated, 2011).

Although, heuristic technology would improve automatic classification and data capture of structured information into the EDRMS, its ability to perform the same for unstructured information is yet to be seen. Rules based search engines offer the capacity to automate the classification process as new business process work flows are created in the EDRMS. This option offers useful support for the classification of unstructured and structured information.

Thus, auto classification technologies offer a possible approach to ensure the organisation’s information is well managed.

Folksonomies versus taxonomies and the semantic web

In emerging web based EDRMS implementations it is possible for users to insert their own tag clouds to label the content they create, receive, and/or use for collaboration. The tag cloud functionality provides users with the opportunity to intuitively assign classification to content in their preferred way, in contrast to working with corporate classification schemes imposed on them. This method, labelled as folksonomies (Serewicz, 2010, p. 174), offers both promise and risk. The effectiveness of folksonomies for search and retrieval of corporate information in organisational settings has not yet been researched. Quattrone et al. (2011), for example, caution that:

as tags are informally defined, continually changing, and ungoverned, social tagging has often been criticised for lowering, rather than increasing, the efficiency of searching, due to the number of synonyms, homonyms, polysemy, as well as the heterogeneity of users and the noise they introduce (p. 1).

Search engine technology has constantly been improving from humble beginnings that offered Boolean logic searching, to free text searching, then to context based searching and with functionalities that enable saving and logging users’ search histories. Now, with the semantic web architecture whereby electronic information is presented in machine-readable formats so that it can be linked and searched with other web content,
the power of “semantic search engines” has increased. This is because the information on web sites is presented in smarter, marked up language instead of plain html, making it easier for meaning to be derived from each site. A good example is the FOAF – Friend of a Friend – machine readable ontology which is used extensively across social network sites. This is because the semantic web now understands meanings behind the web page. Serewicz (2010) states that “the semantic web draws on the data and information whose meaning is the basis for establishing the interoperability between systems” (p. 174). The progress in semantic web technology and in particular, linked data, has enabled search engine technologies to evolve to become semantic search engines, similar to the “linked data” technology used by Amazon.com and Facebook sites. The Amazon site for example, learns about users’ buying preferences, suggests items of interest to users to purchase and informs them about other products that were also purchased by buyers of the same product as Facebook, eBay and many other sites employ similar approaches.

From observations in development trends with the semantic web, linked data and search engine functionalities, these technologies have the potential to create RM systems that learn about users’ classification and search preferences and suggest frequently used classification terms for their registration, search and retrieval options of corporate information in web based corporate information applications.

The various classification innovations that are now possible highlight the need to review the mechanisms being used in records management. Tag clouds, folksonomies and the semantic web illustrate the increasing power that knowledge workers possess to classify and subsequently search and retrieve critical corporate information. The 2009 Cohasset survey reflects this sense of a new direction: 66 per cent of the records managers surveyed believed that with developments in search technologies, a friendly method to classify information would be an aggregated or “big bucket” approach (Williams and Ashley, 2009, p. 25).

**Metadata**

Metadata is best described in an RM context as “data describing context, content and structure of records and their management through time” (International Organisation for Standardisation, 2001a, p. 3). It has been also simplistically described as “data about data” (Reed, 2003, p. 19), as metadata is structured information that describes the characteristics of digital and non-digital information resources (Jones and Skelton, 2008, p. 83). Examples of record metadata properties include author, document or record title, date of creation, classification scheme terms and record number. Recordkeeping metadata provide labels to electronic documents and records registered and managed in business systems, like a label on a can of food describing its contents, ingredients and expiry date (Jones and Skelton, 2008, p. 84).

A primary purpose of metadata is to enable information search and retrieval. For information discovery, metadata comprise the particular set of elements that contain the data necessary for the effective retrieval of information. Metadata are also important in the management of the complete lifecycle of records registered in for example the EDRMS as they bind each record to the “context of its creator and the business activity that creates it” (Jones and Skelton, 2008, p. 82). Further, metadata are important to the management of electronic records as they ensure the “authenticity, reliability, integrity, and usability of a document as a record” (Chester, 2006, p. 12).
The ISO 23081: Metadata for Records (Parts 1 and 2) (International Organisation for Standardisation, 2006, 2007) is an extension of the RM standard ISO 15489. It is intended both as a guide and framework to understand, implement and use metadata within the framework of ISO 15489. Its scope is to assist in understanding metadata from an RM and archival perspective. ISO 23081 does not define a mandatory set of RM metadata to be implemented, since these metadata differ in detail according to organisational or specific requirements for jurisdiction. However, it does assess whether the main existing metadata sets are in line with the requirements of ISO 15489. ISO 23081 identifies two forms of recordkeeping metadata:

1. The point of capture metadata[5].


Metadata is and will continue to play an important role in the increasingly electronic information centric world. The semantic web relies on embedded metadata in electronic file formats like.docx and.xml to convert content into machine-readable formats which then enables electronic information to become linked data. It is metadata that enables the semantic search engines to study users’ information seeking behaviours and information preference patterns so that proposals for existing information and resources on the web could be drawn to users attention. Currently, terms from the corporate classification scheme are not automatically captured as metadata in the.docx and.xml file formats, although these file formats are embedded with metadata that describes the format of the container and how it is presented. There is a need to explore how classification and other helpful metadata could be automatically captured in these file formats, particularly as user records expand in form and function.

In summary, the continued growth of post Web 2.0 electronic information emphasises the continued importance of capturing comprehensive and accurate metadata. To protect the integrity of the EDRMS, reducing the reliance on users assigning metadata to information they create, receive and collaborate with, will be critical. Desirably this recordkeeping task needs to be simplified and automated where possible. This is achievable by implementing controlled metadata pick lists in EDRMS and integrating automated indexing strategies highlighted earlier.

Retention and disposition schedules (RDS)

ISO15489 states that records need to be assigned a retention period “based on an assessment of the regulatory environment, business and accountability requirements and the risk” to the organisation (International Organisation for Standardisation, 2001b, p. 11), the rationale for selecting a retention and disposal strategy is stated in Section 4.2.4.3 (International Organisation for Standardisation, 2001b, pp. 11-12).

Currently, retention and disposition schedules implemented have various retention periods assigned to different types of records held in the organisation. In general, legislation states how long a specific record needs to be retained. It is challenging to implement such varied retention periods if the “big bucket” approach to classification is implemented. A further complexity is the linkage of existing classification schemes to retention schedules. If the use of alternative classification processes is adopted, the retention strategy will also need decoupling as there may not be a clear relationship...
between classification elements and the assignment of retention periods or the flagging of records with archival value. Therefore, it is time to rethink how retention and disposition periods are conceived and implemented and perhaps to consider aggregating to common retention classes and fewer retention periods of five, ten, 15, 20 years. For example, records that must be retained for at least two years, or three years, and five years could all be grouped in the “five year” retention period.

The National Archives of Australia (NAA) has adopted this approach of merging several record classes with similar retention periods to form one record class with an equal or longer retention period. The Administrative Functional Disposal Authority (AFDA) (National Archives of Australia, 2010a) has 1,068 general retention classes but the streamlined version referred to as AFDA Express (National Archives of Australia, 2010b) has only 89 retention classes.

Implementation of RDS still remains an issue, as evidenced in US organisations. Although 88 per cent of the RM professionals in the 2009 Cohasset survey reported their organisation had a retention schedule, only 65 per cent stated their retention of electronic records was included in their schedule (Williams and Ashley, 2009, pp. 22-3). Furthermore, approximately 78 per cent reported they had not implemented retention practices for emerging sources of Web 2.0 records like blogs, web pages and instant messages (Williams and Ashley, 2009, p. 8).

The changing technologies, use and organisational expectations are challenging traditional RDS strategies, thereby recommending the need for careful review to identify suitable approaches that ensure compliance and business risk are addressed.

Security and access to records
Again, ISO 15489 states that “organisations should have formal guidelines regulating who is permitted access to records and in what circumstances” (International Organisation for Standardisation, 2001a, p. 14). This advice is important especially in regards to the management of electronic information that is vulnerable to computer hacking or possible security breaches of corporate information.

Currently, some organisations have implemented tight security models in EDRMS using a combination of user groups, caveats and classification levels (Joseph, 2010b, pp. 183-5). First, the combination of these elements makes the security model complex. Second, it is time consuming to manage and maintain accurately these security settings as staff leave, get transferred or move to other projects. Third, users do not understand how this complex information security models work. Currently, records staff are responsible in most organisations for creating new folders and assigning security levels to these folders in the EDRMS for their users. However, as recordkeeping responsibilities are transferred to users, assigning and maintaining such complex security models will become more difficult for them to understand and potentially impossible to manage.

Given that knowledge workers are likely to be assigning security permissions to information they register in electronic records management systems, it is time to simplify security models. Perhaps records managers could consider implementing security models that generally provide knowledge workers access to information across departments, but restricts information related to areas concerning privacy, personnel, commercial and/or operationally sensitive information (International Organisation for Standardisation, 2001a, p. 14). Or this could remain a records
management responsibility that is not delegated to users until better solutions are identified and tested.

**Conclusion – implications for RIM professionals implementing ISO 15489 in twenty-first century organisations**

This paper argues that ISO 15489 was written for RIM professionals in their role as principal record-keepers primarily to manage paper based and electronic records pre-Web 2.0. However, it also recognises that individual users are required to support the records management process as stakeholders as they have “a duty to create and maintain records” (International Organisation for Standardisation, 2001a, p. 1). We argue that it is this shift in ownership and practice that necessitates the review of the four highlighted RM principles. We have argued there are several key areas that need to be reviewed by the profession to successfully implement ISO 15489.

First, RIM professionals need to decide whether to continue to only manage “records” or widen the mandate to more fully manage corporate “information”. Second, the profession needs to better understand user expectations and capabilities, offering simple records management tools that are user, not system, focused. Third, RIM professionals need to be proactive in harnessing technology to automate recordkeeping processes, so that they more readily support knowledge practices. Fourth, it is time to review organisational expectations of records management and its purpose to ensure the service reflects the long term strategic information needs of organisations to be accountable, transparent and compliant. Fifth, the complex link between system development and user practice, acceptance and adoption needs to be better understood and reflected. Finally, there needs to be considerable debate over the role of the RIM professionals and knowledge workers in ensuring records are effectively managed in this new world. Devolution to users without understanding the implications of these decisions may be placing organisational systems at considerable risk.

We acknowledge that an information culture (Oliver et al., 2010, p. 44) that is embedded in the organisation is just as crucial for successful paradigm shifts in recordkeeping responsibilities. This raises the need to explore how organisational members can build better ownership and support for integration of RM practices. Perhaps it is time to include recordkeeping responsibilities in the twenty-first century’s knowledge workers’ job description to recognise these growing roles.

The discussed paradigm shifts in technologies, organisational and user expectations highlight the need for RIM professionals to simplify and rethink the implementation of RM principles. In particular, how the principles relating to classification, retention, metadata and information security are being implemented are strongly challenged by the post Web 2.0 and EDRMS environment.

These paradigm shifts also flag the need to educate and guide RIM professionals in information governance and to explore their imperative roles as auditors, quality controllers, trainers and change managers.

In summary, ISO 15489 defines RM and its core principles and practices and offers flexibility in how it is implemented internationally across jurisdictions and industry types. As HofmAn (2006) points out, RIM professionals working with the standard need to be aware that “one size does not fit all”, and complementary standards and guidance publications need to be consulted when working with ISO 15489. It is clear that many contemporary trends are absent from this important source ISO15489 (Part
2) (International Organisation for Standardisation, 2001b). The growing global community of users would benefit from an enhanced set of international guidelines from the International Standards Organisation (ISO) that recognise and explore the growing complexity of the profession and its functions. The recent development of a complementary ISO 30300 (International Organisation for Standardisation, 2011a, b) series of standards highlights the efforts of the professional community to address these challenges. It may also serve to encourage robust debate regarding the impact of these emerging paradigm shifts.

Notes

1. An EDRMS is defined as an automated, electronic document and records management system that enables organisations to manage semi-structured and unstructured information captured in paper and electronic formats (Joseph, 2010b, p. 31). It also includes ISO 15489's definition of a records system: an “information system which captures, manages and provides access to records through time”. EDRMS have functionalities that preserve the content and context of records thereby ensuring the authenticity and evidentiary value of corporate information stored in the EDRMS.

2. Such as Morgan Stanley (Leon, 2006), Enron and Arthur Andersen (Fowler and Flood, 2002; United States House of Representatives. Committee on Energy and Commerce, 2002; United States Supreme Court, 2005), and Heiner Affair (Lindeberg, 2009).

3. Examples of these compliance drivers for organisations to manage their information in the form of legislation are: Freedom of Information Acts; the Privacy Acts in different countries; various states’ Records Acts in Australia (Government of South Australia, 1997; Government of Western Australia, 2000); Health Insurance Portability and Accountability Act (HIPAA) 1996 (United States Congress, 2003a); and Sarbanes Oxley Act of 2003 (United States Congress, 2003b).

4. Refers to companies listed in the US Stock Exchange in New York, including subsidiaries of these companies trading outside the US (United States Congress, 2003b).

5. Point of capture metadata “contain information about the context of the record’s creation, including the business context driving the creation of the record and the agents or people involved in the action, as well as information about the content, structure and technical attributes of the record itself” (Jones and Skelton, 2008, p. 84).

6. Recordkeeping process metadata capture the processes about managing records such as the alterations, linkages, and uses of the record tracked over time as the record progresses through its record continuum lifecycle processes (Jones and Skelton, 2008, p. 84). Thus, recordkeeping process metadata ensure the integrity and authenticity of the record, as any modifications to the record are authoritatively documented over time” (Jones and Skelton, 2008, p. 84).

References


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