

Now 'Til Then: Adopting an IM Attitude*†

by Catherine Yasui

Introduction

One of the biggest challenges facing an organization today, whether in the public or private sector, is managing what is arguably its most vital and strategic operational asset - information. We live in an "information age" that, although far from paperless, is undeniably more electronic than ever, and where online collaboration and information exchange over the Web are the norm. Technology is providing organizations with numerous advantages that speed up the process of doing business. For example, with high-speed access professionals can search, retrieve, analyze, organize, and share information in real time, processes that in the past used to require hours, days, or possibly weeks. Websites have already morphed from static information delivery to sophisticated portals that facilitate numerous interactive business processes and services. At present, these emerging technological advantages are most readily exploited by the "Millennial Generation" of nine-to-28 year olds, who, because of their nearly constant interaction with communication and computer technologies, will likely blend effortlessly into today's business culture which is characterized by an "always on, always there" mentality and an endless onslaught of telecommunication, Web- and paper-based information.¹

For many organizations, however, as they grapple with the extremely daunting task of trying to manage the influx of both paper and electronic documents in an ever-increasing number of formats, this seemingly unstoppable flood of information is becoming more paralyzing than useful. Perhaps most daunting of all is the nearly exponential proliferation of electronic documents in recent years, with individual projects now capable of generating thousands of pages to hundreds of boxes worth of documents, much of which (including e-mail) is either being indiscriminately sorted and stored in obscure locations, or simply deleted. Proper information management is critical. Ignoring the information management challenge, or attempting "quick-fix" solutions that do not integrate well with, and capitalize on, all business processes, not only places organizations at a competitive disadvantage, it also unnecessarily exposes them, their employees, their business partners and all other stakeholders to increased administrative, operational, financial and legal risks.

This paper discusses the need for effective information management that recognizes the need for leadership and a strategy that will help integrate business processes with people, policy, procedure and technology across an organization and which clearly utilizes the skills and

* My thanks go to Dr. Luciana Duranti, founder and Director of the International Research on Permanent Authentic Records in Electronic Systems (InterPARES) Project, a multinational, collaborative and interdisciplinary research effort addressing the long-term preservation of authentic electronic records, for her pioneering spirit and support. I also thank John McDonald and Dr. Francesca Marini of the School of Library, Archives and Information Studies at The University of British Columbia for having fueled my thinking about critical electronic records and records management issues.

† All cited URLs were last accessed on 16 Dec 2006.

¹ Mello, J.P., Jr. "Millennials Pose Challenge for Marketers," *Ecommerce Times*, 28 June 2006, at: <http://www.ecommercetimes.com/story/51394.html>; German, N. "Using Wireless on the Road to Drive Good Business Practices," *Ecommerce Times*, 5 April 2006, at: <http://www.ecommercetimes.com/story/49746.html>.

resources available to generate a force of cooperative effort.² Within such an infrastructure, players understand that any inadequacy in the management of records and information during its lifecycle – from initial document creation to disposal or long-term storage³– can threaten an organization’s ability to conduct business, and lead to possible legal liability, tarnished reputations, and public backlash with demands for greater accountability.⁴ Such issues are not remedied by technology alone; they also require an understanding of the role key social factors, such as public perceptions of ‘trust,’ play in building any management strategy. Implementing a plan that unifies effort in creating and preserving the integral nature of records and which, in turn, reinforces an organization’s ability to be accountable by responding effectively and efficiently to the needs of its employees, customers, and other stakeholders, including the general public, is surely key to any organization’s reach for success. With recent evidence showing that more organizations are implementing management programs for their electronic records,⁵ albeit with great room for improvement, senior executives and administrators, whether currently ‘on-board’ or ‘in-waiting,’ can assume responsibility for creating a vision of corporate awareness and providing a strategic response for effective management of their digital assets.

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- ² The general discussion and IM-related information contained in this paper draws from a number of sources, but particularly the works of John McDonald who has written extensively on the subject of Information Management. For 25 years, he was the former senior advisor for the then National Archives of Canada and currently works as an Information Management consultant in Ottawa. Some of his key works on the subject include: (1) “Managing Records in the Modern Office: Taming the Wild Frontier,” *Archivaria* 39 (1995):70-79; (2) “Record Keeping Systems: Lessons Learned from the Experience of the Canadian Federal Government,” Australian Society of Archivists 1999 Conference, at: <http://www.archivists.org.au/events/conf99/mcdonald.html>; (3) “Information Management in the Government of Canada: a Situation Analysis,” Treasury Board of Canada Secretariat, June 2000, at: http://www.tbs-sct.gc.ca/ip-pi/im-gi/imreport/imreport-rapportgi00_e.asp; (4) “The Wild Frontier Ten Years On.” In J. McLeod and C. Hare, eds., *Managing Electronic Records* (London: Facet Publishing, 2005), pp. 1-17; and (5) McDonald, J. and K. Shearer, *Toward a Canadian Digital Information Strategy: Mapping the Current Situation in Canada* (Library and Archives Canada, Jan 2006), at: <http://www.collectionscanada.ca/scin/index-e.html>. See also, Lipchak, A. and J. McDonald (2003) “Electronic Government and Electronic Records: E-Records Readiness and Capacity Building: An Electronic Discussion, 19 Nov-12 Dec, at: <http://www.irmt.org/download/DOCUME~1/GLOBAL/discussionpaper.pdf>; Lipchak, A. (2002) “Information Management to Support Evidence-Based Governance in the Electronic Age,” *Public Policy Forum*, at: http://www.ppforum.ca/common/assets/publications/en/ow_p_11_2002b_es.pdf; and, Library and Archives Canada, Information Management portal, at: <http://www.collectionscanada.ca/information-management/index-e.html>, including Wilson, I. (2004) *Paper Mountain to Data Stream: Information Management in the Government of Canada*, at: <http://www.collectionscanada.ca/information-management/001/007001-3003-e.html>; Bearman, D. and J. Trant (1999) “Strategic Information Management: Issues,” *Workshop at the MCN Annual Conference, Philadelphia, PA*, PowerPoint at: <http://www.archimuse.com/papers/AMI.MCN9910.pdf>; Ladd, M. (2004) “One Small Step for EDRM, One Large Leap for Information Management,” *Records Management Society Bulletin* 120 (June): 29-30, at: http://www.rms-gb.org.uk/files/bulletin/RMS_Bulletin_120.pdf, and; Robertson, J. “10 Principles of Effective Information Management,” *KM Column* (Nov 2005): 1-7, at: http://www.steptwo.com.au/papers/kmc_effectiveim/index.html.
- ³ “Life cycle” is a records management and archival term that covers a number of stages including planning, creating, capturing, organizing, classifying, indexing, using & disseminating, storing, retrieving and disposing of records. See, Library and Archives Canada (n.d.) *Records and Information Life Cycle Management*, Information Management Services, at: <http://www.collectionscanada.ca/information-management/002/007002-2013-e.html>.
- ⁴ One need not look far for examples of government or corporate impropriety related to recordkeeping, including, in the U.S., the document shredding activities of Enron Corporation and Arthur Anderson, and, in Canada, the destruction of electronic records that were significant to a case involving the Canadian Red Cross and distribution of tainted blood, or the Somalia case, where electronic records were altered to cover up criminal actions by Canadian forces.
- ⁵ Cohasset Associates Inc., *2005 Electronic Records Management Survey: A Renewed Call to Action*, R. F. Williams and L.J. Ashley, comp. (Chicago: Cohasset Associates, 2005), at: <http://www.aiim.org/article-industrywatch.asp?ID=30610>. The survey and associated white paper was conducted by Cohasset Associates, Inc. and co-sponsored by the two leading professional associations serving the records and information management profession, AIIM - the Enterprise Content Management Association and ARMA International.

This paper begins with a summary of two studies that review the recent state of electronic records management in Canada and the U.S. These studies make evident that despite a clear understanding and concerted effort by many to address electronic records management issues, the need continues for organizations and invested stakeholders to raise awareness of the importance of effective electronic record keeping practices and reinforce efforts to find solutions that work in meeting business needs. This summary is followed by a consideration of factors that contribute to organizational and operational inefficiencies and hinder success in developing a workable records management program. Integral to raising awareness is ‘trust’ and this is discussed in the third section. In a wired world where free-flowing information is subject to any number of abuses, recognition of its significance to both organizations and stakeholders and of the need to incorporate it into any records management plan becomes paramount. A strategic management response known as Information Management (IM) is explored in the final section. IM emphasizes *integration* of business processes with people, policies, standards, procedures, and technology throughout an organization to help generate a cohesive and effective force that is accountable for successful management of its key information assets. Implementing an effective IM program requires strong leadership with vision that can mobilize stakeholders and capitalize on their strengths through careful, coordinated planning and program design. The IM strategy offers a valuable pragmatic approach that will help start organizations set a shared vision, address key needs, and drive forward improvements in the way that organizations create and maintain their information assets.

Then, and Now... (‘Still Wild’ after all these years)

It was with a clear recognition of the rising techno-realities affecting the modern office, that John McDonald described the corporate landscape in 1995 as a “wild frontier.”⁶

Corporate rules of the road and other mechanisms have yet to be established in the electronic world. The wild frontier is unfortunately more the norm than the exception. In the modern office, it is the office worker, not the technical specialist who works with technology applications on a daily basis. It is the office worker, not the organization, who decides what information will be created, transmitted, and stored. And it is more often than not the office worker, not the organization, who makes up the rules, if any.⁷

The untamed nature of this landscape, which was no less the situation in government as it was in private business, resulted from the combination of a lack of awareness in the use of office system technologies for business applications, and the general absence of, or intent to implement, integrated record keeping solutions. Steemson similarly noted that, “the astonishing, seemingly unchanging fact is that most parts of the business world are blissfully unaware and unconcerned about the dangers of ignoring crucial record keeping functions in

⁶ McDonald (*supra* note 2, citation 1) used the term to describe a landscape where office workers, in the absence of any office policies or effective management, acted autonomously with respect to how they created, transmitted and stored electronic documents.

⁷ McDonald, *supra* note 2, citation 1.

modern management.”⁸ A few years later, in 1999, McDonald’s assessment of the situation was as before: still “no rules of the road.”⁹

We have unquestionably come a long way from the knowledge base of ten years ago, stimulated as it has been by a decade of technological growth, global commerce and information sharing, and further molded by the effects of practice, research, legislation, and corporate malfeasance. Yet, according to McDonald’s progress report in 2005, “the path out of the wild frontier remains as elusive for most organizations as it was ten years ago.”¹⁰ His study mapped key initiatives and organizations, both public and private, dealing with the management of digital information across Canada. Despite notable progress being made in various sectors (e.g., government, libraries and archives, health and education sectors), and in addressing particular challenges related to the creation of, and access to, digital information, there is still much work to be done to ensure the integrity and long-term preservation of digital information.¹¹ According to McDonald,

Currently, the stewardship of digital information produced in Canada is disparate and uncoordinated. Planning for what is created and used is specific to the organization and its interests. The sharing of experiences in managing digital information (including identifying common interests and issues) is rare, and expertise in digital information is scattered. Digital information is extremely transient and acquisition strategies are dispersed and uncoordinated. Furthermore, there are significant technical and legislative hurdles unique to managing content in the digital realm. In the area of digital preservation, which involves extremely complex processes at both the organization and technical levels, comprehensive strategies are not yet being employed. Many feel that much of the digital information being created today will be lost forever.¹²

Similar findings in the U.S. were reported in an electronic records management survey conducted jointly in 2005 by Cohasset Associates, the Association of Records Managers and Administrators (ARMA), and the Association of Information and Image Management (AIIM).¹³ The survey drew results from a sample of 2100 respondents (i.e., records management professionals) from both public and private sector organizations. Among its many findings: 87% of respondents reported having a formal records management program,¹⁴ however, close to one-third (32%) rated their program as being only “Marginal to Fair,”¹⁵ with more than one-

⁸ Steemson, M. “Managing Records or Managing Media: Information Boom, or Bust,” keynote address to the 14th national convention of the Records Management Association of Australia (RMAA), “Preserving Yesterday, Managing Today, Challenging Tomorrow,” Perth, Australia, 17 Sept 1997, at <http://www.caldeson.com/future.html>.

⁹ McDonald, *supra* note 2, citation 2.

¹⁰ McDonald, *supra* note 2, citation 4.

¹¹ Significant research has been generated by the InterPARES project, Library and Archives Canada, US National Archives and Records Administration, US Library of Congress, the Records Continuum Research Group at Monash University, and the National Archives of the Netherlands. See also, McDonald, *supra* note 2, citation 5; Garrett, J. and D. Waters (1996) *Preserving Digital Information: Report of the Task Force on Archiving of Digital Information*, Commission on Preservation and Access (RLG), at: <http://www.rlg.org/ArchTF/index.html> and; Hedstrom, M. (1998) “Building Record Keeping Systems: Archivists are Not Alone on the Wild Frontier,” *Archivaria* 44 (Fall): 44-71;

¹² McDonald and Shearer, *supra* note 2, citation 5, p. 40.

¹³ Cohasset Associates Inc., *supra* note 5. A similar survey has been conducted every two years since 1999.

¹⁴ Cohasset Associates Inc., *supra* note 5, p. 17.

¹⁵ Cohasset Associates Inc., *supra* note 5, p. 18.

third (35%) admitting that their current program did not include electronic records.¹⁶ In addition, 49% had no records retention policy for e-mail, and “[o]ver half (53%) do not include electronic records in their legal hold orders associated with regulatory inquiries and litigation – leaving open the possibility that records critical to a legal matter could be destroyed.”¹⁷ Despite noting some measurable progress,¹⁸ one of the survey’s key conclusions was that, “[t]he majority of organizations are not prepared to meet many of their current or future compliance, legal and governance responsibilities because of the deficiencies in the way they currently manage their electronic records.”¹⁹

Records management is a rapidly growing area with a number of regulatory and litigation issues catapulting forward the understanding that effective e-records management is essential, practical, even obligatory. For example, the U.S. Sarbanes-Oxley Act of 2002,²⁰ and most recently, the new amendments to the Federal Rules of Civil Procedure of 2006,²¹ confirm the importance of handling (i.e., the preservation and production of) electronic records for purposes of discovery. The concern over e-records also stimulated important ‘think tanks,’ such as the Sedona Conference® Working Group on Electronic Document Production, to confront some of the most challenging issues around electronic data and document production.²²

Yet, the reality, as reflected in the findings of the research published by Cohasset Associates and McDonald, is that many organizations in both the U.S. and Canada are still not paying enough attention to information and records management, and/or that the “rules of the road” are, in many areas, still too vague to facilitate any meaningful implementation. Although the tide is turning with many organizations actively improving their records management performance,

¹⁶ Cohasset Associates Inc., *supra* note 5, p. 20,

¹⁷ *Government Technology* (News Release), “Survey Released About Preservation and Retention of E-Mail and Electronic Records,” Oct 28, 2005, at: <http://www.govtech.net/magazine/story.print.php?id=97083>.

¹⁸ For example, the percentage of organizations reportedly having a records management program was up slightly (by 2%) over 2003. Also, 10% -20% of respondents reported improvement with their e-records management problems, resulting in fewer risks.

¹⁹ Cohasset Associates Inc., *supra* note 5, p. 11. The *Zubulake v. UBS Warburg* case is generally considered to be the first definitive case in the United States that addressed a wide range of electronic discovery issues. Court Judge Shira A. Scheindlin issued five groundbreaking opinions that sanctioned UBS for not being able to supply all potentially informative documents in the e-discovery process, and for not complying with their litigation hold on the destruction of documents. For information on the *Zubulake v. UBS Warburg* case see *KrollOnTrack* website at: <http://www.krollontrack.co.uk/legalresources/zubulake.aspx>;

²⁰ The Sarbanes-Oxley Act of 2002 (SOX) was implemented in response to such high-profile business failures as Enron and WorldCom and is considered by some as one of the most significant changes to United States securities laws. The Act was passed to reinforce investment confidence and protect investors by improving the accuracy and reliability of corporate disclosure. An information guide and resources are available at: <http://www.soxlaw.com/>.

²¹ Most recently in the U.S., the Supreme Court approved several proposed amendments to the Federal Rules of Civil Procedure that address the discovery process for electronically stored information and stipulate that parties involved in litigation must be able to show an inventory of relevant electronic information. The amendments took effect on Dec. 1, 2006. For the text of the FRCP Amendments, see *U.S. Courts* website at: <http://www.uscourts.gov/rules/congress0406.html> or http://www.uscourts.gov/rules/EDiscovery_w_Notes.pdf. U.S. District Court Judge Shira A. Scheindlin discussed the impact of the new Federal Rules of Civil Procedure for managing records and information during the keynote address of the 51st Annual ARMA International Conference and Expo in October 2006. The keynote address and podcast is available at the ARMA International website: <http://www.arma.org/news/index.cfm?NewsID=638&Type=Industry>.

²² The Sedona Conference® Working Group on Electronic Document Production developed a set of core principles for addressing electronic data and document production since rules and concepts that were largely developed for paper documents did not accommodate the inherent differences of digitally-produced documents (i.e., how information is created, stored and managed). The Working Group’s series of principles help guide organizations in the preservation and production of electronic data and files. See the Sedona Conference® website at: <http://www.thesedonaconference.org/>.

both studies make clear that the key challenges facing organizations today necessitate a raising of awareness and consistent reinforcement of the knowledge advances made and lessons learned, to ensure effective recordkeeping practices and systems are implemented and maintained.

The Awareness Challenge

The impact of new technology, global commerce, and information-sharing have clearly been drivers that have catapulted the number and complexity of information management challenges facing organizations. This has forced many senior executives to become more awareness-savvy over the need for an enterprise-wide records management program and good governance since such can provide safeguards in litigation and be good for the bottom-line. As well, new legislative and regulatory measures in recent years, both in Canada and the U.S., have been blazing a trail to help guide governments and organizations in their efforts to improve the management and protection of information and the privacy rights of citizens,²³ and increasingly the marketplace is offering more in the way of management services (e.g., digital asset management, content management, knowledge and change management) as well as robust and integrated technology solutions designed to help streamline these efforts.²⁴

Yet, as recent studies have shown, the reality is that most organizations today are still struggling with managing the burgeoning amount of digital information, and lack effective policies and procedures for systematic control of recorded information.²⁵ Although the use of computer technology to manage information is creating new opportunities and challenges, for many this has often sparked a hunt for simple (often inappropriate) solutions to complex problems in the hopes that any attempt to solve a problem will eventually reduce its complexity, or been translated as a requirement to invest in new technologies²⁶ to solve particular problems such as inadequate data storage or web services. Unfortunately, many, if not most, of these initiatives (be they technical or about policy and procedure or organizational culture) take a decidedly “stovepipe” approach without regard for their impact across the enterprise.²⁷ This type of piecemeal, often ad hoc approach, which typically belies a lack of corporate awareness, results

²³ For example, in Canada, the Personal Information Protection and Electronics Documents Act (PIPEDA) of 2000, and the new Electronic Records as Documentary Evidence standard (2005), and in the U.S., the Gramm-Leach-Bliley Act (1999), USA PATRIOT Act (2001), Sarbanes-Oxley Act (2002), and the new amendments to the Federal Rules of Civil Procedure (2006).

²⁴ See, for example, Hummingbird Ltd.’s ‘Records, Document, Information Management System’ (RDIMS) software (used by many Canadian government departments); Open Text’s ‘Records Management Software’ (used by UK, National Archives); IBM’s DB2 software; 3M’s RFID Tracking System with the Accutrac Records Management Software program. See also, vendor reports on records management software at *BitPipe* (an online network of IT and business Web sites), at: <http://www.bitpipe.com/tlist/Records-Management-Software.html>; and, the International Council on Archives, *Market Survey of Commercially Available Off-the-Shelf Archival Management Software*, D. Lake, R.F. Loiselle and D.S. Wall, comp. (Paris: ICA, 2003), at: http://www.ica.org/biblio/cit/ICA_Study_12_Archival_Software_Survey.pdf.

²⁵ For example, research summarized by Ladd reveals that many organizations hold up to 80% of their information in an unstructured way with as little as 20% of their information structured in databases that will allow people to search and retrieve information (Ladd, M. *supra* note 2, citation 11). For a summary of information management challenges confronting organizations, see also, Robertson, J., *supra* note 2, citation 12).

²⁶ Robertson, *supra* note 2, citation 12.

²⁷ As Healey notes, “Every line of business, regardless of the sector, is maintaining information for its particular purpose, often not connecting or even remotely understanding how others could and/or should benefit from the same information. ... Duplication, and potential misunderstandings can be a source of frustration for managers and staff, not to mention clients” (Healey, R. (2006) *Strategic Information Management – It’s About Leadership, Planning, and Convergence to Enable Business Needs*, Records Management Institute, at: <http://www.rmicanada.com/metadata.htm>).

in unnecessary inefficiencies where solutions implemented in one division are not shared with (or are overlooked by) another, simply because there are no clear enterprise-wide policies on just who is responsible for doing what when it comes to managing information. This type of 'corporate blindness' can seriously hurt the bottom line by leading to duplication of effort and re-creation, or worse, possible loss of vital information that can have further legal ramifications. In addition, it can contribute to the retention of incomplete, inaccurate and even irrelevant information which means that performance, transparency and accountability cannot be accurately measured."²⁸ In effect, efforts that are poorly linked and coordinated invariably lack scope and suffer due to fractured and inconsistent organizational support, thus undermining their ability to create a powerful force for success within an organization.²⁹

The 'Trust Factor'

Another integral aspect of raising corporate awareness concerns the significance of 'trust' issues. Today's organizations, both public and private, create, exchange and use electronic records as the *de facto* form of communication, with corporations trading billions of emails each day. VeriSign (the exclusive registry for .com and .net domains) estimates that as of the first quarter in 2005 there were about 2.25 billion emails generated per day.³⁰ This is profound in view of the fact that a mere decade ago, access to the Internet was seen as restricted to "a small minority."³¹ The fact that people rely on information to make decisions and take action, means they need to know that they can trust the information that is being provided to them. Digital information forms the basis for establishing trust in many corporate partnerships.³² In 2004, business-to business (B-to-B) activity accounted for 93% of all e-commerce.³³ As well, the commercial use of websites has soared as organizations discover their value for advertising and selling products and services. Program operations and service delivery are at risk when trust in this information is eroded. Web-based information is constantly being created, transferred, collected, collated, stored and analyzed by government agencies and businesses. Interactive technologies are facilitating the ease with which online business is conducted, and the Web is allowing workers to garner information from an ever-expanding arena of sources.³⁴

²⁸ Lipchak and McDonald, *supra* note 2, citation 6.

²⁹ Robert Block's 1983 analysis of the causes of failure in systems-wide information management projects is still relevant today. Block summarized his view on successful projects as ones where managers had conducted a preliminary evaluation of a project, as well as "the rules, the players, the goals, the constraints, and the project manager's responsibility and authority, as well as the feasibility of success" (Block, R. *The Politics of Projects* (Englewood Cliffs, NJ: Yourdon Press, Prentice-Hall, 1983), as cited in Sumner, M. (1999) "Critical Success Factors in Enterprise Wide Information Management Systems Projects." In *Proceedings of ACM SIGCPR Conference on Computer Personnel Research*, p. 298).

³⁰ VeriSign (2005) *Internet Security Intelligence Briefing* 3(1), at: <http://www.verisign.com/static/030910.pdf>.

³¹ May, G. H., "The Social Implications of Information Technology." In *Inventing the Future, Communities in the Information Society*, booklet produced by Partnerships for Tomorrow for the Annual conference of the National Association for Voluntary Organisations, February 1996, at: <http://www.partnerships.org.uk/itf/socimp.html>.

³² McDonald and Shearer, *supra* note 2, citation 5, p. 15.

³³ As reported by U.S. Census E-Stats at <http://www.census.gov/eos/www/ebusiness614.htm>, e-commerce accounted for \$996 billion of manufacturing shipments in 2004, up from a revised \$843 billion in 2003 – an annual increase of 18.2%.

³⁴ Yahoo estimated that, by August of that year, more than 20 billion pages were on the Internet (Delgado, J., R. Laplanche, and V. Krishnamurthy (2005) "Bridging Structured and Unstructured Information," *The Information Management Journal* (Nov-Dec): 40-46).

However, a growing distrust has manifested itself in the wake of increased government and corporate access to personal information,³⁵ coupled with the exposure of some high-profile business and government agents' lack of accountability and abuse of recordkeeping practices. Whether information is paper-based or digital, the recognition of the importance of careful recordkeeping is critical to any effective information and records management program.³⁶ This recognition is profound particularly in view of Peter Keen's observation that the growth of e-commerce and the Internet can be slowed down by only one thing: a loss of consumer confidence.³⁷ Consequently, systems security and measures that properly capture and securely maintain information must be in place to uphold business ethics and values in the eyes of consumers and other stakeholders.

If, as Hoffman *et al.* propose, profitable online relationships are to be established between businesses and customers then the most effective way is to "earn their trust."³⁸ Metzger³⁹ and Ratnasingham *et al.*⁴⁰ concur that trust is a key factor for relationship success and can be critical in any social exchange. In fact, "[t]he prominence of trust in e-business has been widely touted by practitioners and academicians alike."⁴¹ With trust and security emerging as the two most important issues related to e-commerce,⁴² the imperative for businesses today is to incorporate trust into their overall information management infrastructure by ensuring the authenticity and reliability of the information, integrity of transactions, and protection of personal information, so as to minimize repudiation by all possible stakeholders, be they employees, consumers, or the public at large. Trust, therefore, is inextricably tied into the trustworthiness of the information and the information systems' ability to produce reliable and

³⁵ The U.S. government has introduced a proposal that would require companies such as AOL, Google, Microsoft and other Internet firms to keep data on searches, e-mail, and other records revealing users' online activities. This would open up troves of information to hackers and identity thieves and put consumers at risk. (Ridder, K. "Risks of Keeping User Data Outweigh Benefits," *San Jose Mercury News*, 10 June 2006, at: <http://nl.newsbank.com/nlsearch.asp>). In fact, since the beginning of 2005, it is reported that more than 53 million individual records had been exposed by hackers and insider thieves, or simply been lost or misplaced (Regan, K., "Can Legislation Stop Identity Theft?," *E-Commerce Times*, 1 March 2006, at: <http://www.ecommercetimes.com/story/49099.html>).

³⁶ There are numerous articles that outline the importance of records, recordkeeping, and the importance of good records management. See for example, the ARMA International website for information on the fundamentals of records and information management (which includes a summary sheet that defines 'record', outlines their importance, and specifies who should be responsible for their management), at: <http://www.arma.org/rim/fundamentals/index.cfm>; Phillips, J. T. (1999) "Information Management in New Business Models," *The Information Management Journal* (July): 58-60, at: <http://www.allbusiness.com/periodicals/article/376368-1.html>, provides an established CEO's/consultant's perspective of the record challenges that businesses [in 1999] face in embracing new business models and the new roles and responsibilities that information managers now face. This is a particularly apt summary with respect to issues surrounding the transition from paper-based to digital records, and the consequences that result when traditional information management policies and procedures are not properly addressed.

³⁷ Keen, P.G.W. (2000) "Ensuring e-trust," *Computerworld* 34 (March 13), as cited in Ratnasingham, P., P.A. Pavlou, and Y. Tan, "The Importance of Technology Trust for B2B Electronic Commerce," 15th Bled Electronic Commerce Conference eReality: Constructing the eEconomy, Bled, Slovenia, June 17-19, 2002, p. 385, at: [http://www.bledconference.org/proceedings.nsf/Proceedings/3EDD0CB3DFA76AA6C1256E9F0037A3DA/\\$File/ratnasingam.pdf](http://www.bledconference.org/proceedings.nsf/Proceedings/3EDD0CB3DFA76AA6C1256E9F0037A3DA/$File/ratnasingam.pdf).

³⁸ Hoffman D.L., T.P. Novak, and M. Peralta (1999) "Building Consumer Trust Online," *Communications of the ACM*, 42(4): 80-85.

³⁹ Metzger, M.J. (2004) "Privacy, Trust, and Disclosure: Exploring Barriers to Electronic Commerce," *JCMC* 9(4) (July), at: <http://jcmc.indiana.edu/vol9/issue4/metzger.html>.

⁴⁰ Ratnasingham *et al.*, *supra* note 37, citation 2.

⁴¹ Heil, G., W. Bennis, and D. Stephens (2000) *Douglas McGregor, Revisited: Managing the Human Side of the Enterprise* (New Jersey: John Wiley & Sons); and Keen, *supra* note 37, citation 1.

⁴² Ruppel, C., L. Underwood-Queen, and S.J. Harrington (2003) "e-Commerce: The Roles of Trust, Security, and Type of e-Commerce Involvement," *e-Service Journal* 2(2): 25-45, abstract at: http://www.e-sj.org/e-SJ2.2/esj2_2_ruppel.pdf.

authentic information.⁴³ Trustworthiness encompasses “correctness, reliability, security (including secrecy, confidentiality, integrity, and availability), privacy, safety, and survivability.”⁴⁴ These elements are not mutually exclusive, and some care is needed to cover all dimensions. The National Research Council’s *Trust in Cyberspace* asserts that,

Of ultimate concern is how people perceive and engage a system. People place some level of trust in any system, although they may neither think about that trust explicitly nor gauge the amount realistically. Their trust is based on an aggregation of dimensions, not on a few.⁴⁵

Effective record keeping lends itself to the creation, use, maintenance, and transfer of authentic and trustworthy records, which, when combined with open access, provide the means by which transparency, accountability and effective management are demonstrated. Such records can provide legally verifiable evidence of actions, decisions and transactions. Most, if not all, organizations require records for conducting business, delivering services, protecting rights, measuring deliverables, and, importantly, for establishing trust. If an organization, whose core business outputs are information-based products, can ensure the integrity and accessibility of its records, then its stakeholders will have confidence in them as the source and/or carrier of good information that will allow them to conduct research, make decisions, and design policies.

Between Now and Then ... The Bigger Picture is ‘Integration’

Thornton May’s vision of information management in the year 2035 contrasts starkly with how he evaluates the situation today:

... the dirty secret of modern life is that professionals and organizations TODAY are not particularly good at or particularly concerned about Information management. [...] Between now and then a fundamental change in attitude toward information and information management has to take place. This change in attitude won’t just happen by itself.⁴⁶

The reality is that many people perceive information management to be a technology (or IT) issue. Despite the overwhelming expectations of doing business online, the key fact is that the management of information in an electronic environment is *not* just a technology issue. In particular, projects designed to deploy the simplest of technologies as a means of addressing business priorities are, more often than not, largely ineffective. A strategic management

⁴³ *Authenticity* refers to “the trustworthiness of a record as a record; i.e., the quality of a record that is what it purports to be and that is free from tampering or corruption,” while *reliability* refers to “the trustworthiness of a record as a statement of fact. It exists when a record can stand for the fact it is about, and is established by examining the completeness of the record’s form and the amount of control exercised on the process of its creation” (InterPARES 2 Project *Terminology Glossary*, at: http://www.interpares.org/ip2/ip2_terminology_db.cfm).

⁴⁴ Schneider, F.B., ed. (1999) *Trust in Cyberspace*. Committee on Information Systems Trustworthiness, Commission on Physical Sciences, Mathematics, and Applications, National Research Council (Washington, D.C.: National Academy Press), p. 14.

⁴⁵ *Ibid.*

⁴⁶ May, T., “In 2035 Information and Information Management Will Matter,” *AIIM E-DOC Magazine*, July/Aug 2005:63, at: http://www.edocmagazine.com/article_new.asp?ID=30376.

response requires integrating policy, procedures, people, *and* technology across departments, and linking these directly to business processes. This, in turn, allows for project initiatives to be part of a more integrated and successful vision for the organization in pursuit of its business objectives. Records management is, after all, about business process that transect an entire organization, often involving various departments, offices and individuals. Therefore, the implementation of a successful records management program requires a strategic plan that envelops and integrates awareness, responsibilities, activities, and accountabilities in a clear and responsible manner. Creating this type of comprehensive information infrastructure is the value behind what is recognized as Information Management (IM).⁴⁷

IM takes an enterprise-wide, integrative approach that starts with strategic planning and keeps a focus on the overall picture of building links and connecting solutions between multiple resources within an organization.⁴⁸ The IM model is both theory and practice-based. The building blocks for an effective IM program involve an understanding of fundamental concepts (e.g., what is a record, authenticity, accuracy and trustworthiness, lifecycle management, etc.). In conjunction, both technical and behavioral dimensions require a solid foundation in the understanding of business processes and information environments to aid organizations in generating effective policies and procedures, standards and practices, systems and technologies, and in harnessing peoples' knowledge, skills and abilities to help make it all happen. According to J. Dietel, getting a handle on the "fundamentals of the business," is key since "[i]nformation about the critical aspects of the particular business – rather than about forms and formats – is among the most important criteria for success as a records manager."⁴⁹ He adds that "[i]f the information in corporate records does not relate to the particular business goals and purposes, it has little meaning to the business future."⁵⁰

⁴⁷ Over the past three decades, much confusion has revolved around the concept of "information," thus its elusive nature has made reaching an agreement on what is known as "information management" rather difficult. Information Management (IM) generally serves as an umbrella term, which, as Healey defines it, "consists of all activities related to information in all carriers – electronic and physical media – and in a wide variety of sub-domains including, Web, library, records management, access to information and privacy, archives, document management and content management" (Healey, *supra* note 27). McDonald and Shearer (*supra* note 2, citation 5) have updated the term and define a "digital information strategy" (based as it is on IM principles) as "planning, organizing, [and] controlling the resources required for the creation/capture, organization, description, access/retrieval/ use, and preservation of digital information." Further, it involves an organization's "ability to preserve the authenticity, accessibility, and understandability of their digital assets over time. See also, Treasury Board of Canada, Secretariat, Policy on the Management of Government Information – Definitions, at: http://www.tbs-sct.gc.ca/pubs_pol/ciopubs/TB_GIH/mgih-grdg1_e.asp#appa.

⁴⁸ Macevičiūtė and Wilson indicate that many organizations have wrongly subsumed IM under Knowledge Management (KM) when, in fact, IM has a stronger theoretical base (Macevičiūtė, E. and T.D. Wilson (2002) "The Development of the Information Management Research Area," *Information Research* 7(3), at: <http://informationr.net/ir/7-3/paper133.html>. Blair describes KM as "a process that has been heavily influenced by the growth and application of computer technology to IM and is, in large part, concerned with establishing, maintaining, and facilitating communication between both experts and novices" (Blair, D.C. (2002) "Knowledge Management: Hype, Hope, or Help?" *Journal of the American Society for Information Science and Technology* 53(12): 1019-1028, as cited in Gu, Y. (2004) "Information Management or Knowledge Management? An Informetric View of the Dynamics of Academia," *Scientometrics*, 61(3): 286). Grey tries to provide distinguishing characteristics between KM (i.e., more "people-focused" and abstract) and IM (i.e., has more to do with "objects" and work processes), but indicates that these distinctions are often blurred (Grey, D. (1998) *Knowledge Management and Information Management: The Differences*, at: <http://www.smithweaversmith.com/km-im.htm>. KM shares the same focus on user perspective as IM, and both emphasize the quality of the content and how this can benefit both user and organization. Development of an IM infrastructure accounts for the value of human capital and not only encourages similar ideas, but, is flexible enough to incorporate KM into all areas of the infrastructure.

⁴⁹ Dietel, J.E. (2003) "Recordkeeping Integrity: Assessing Records' Content After Enron," *Information Management Journal* 37(May/June): 43-51, at: http://www.findarticles.com/p/articles/mi_qa3937/is_200305/ai_n9260364.

⁵⁰ *Ibid.*

In practice, this means starting with a plan that connects the management of information over the organization with its business goals and processes. It will take leadership to engage staff and garner support in evaluating what information is critical to business processes and workflow (e.g., what activities make up the component parts of the business process, what information is needed, how is it used, who needs to share in this information, etc.), and determining risks/constraints (e.g., costs, time, fluctuating business demands, complexity of technology, and, significantly, barriers that can be created through limited awareness and understanding of the value and nature of “records” and recordkeeping, as well as a lack of effective policies that assign accountability).⁵¹ Clear communication that specifies the players and their responsibilities, and the modes (e.g., Intranet) by which communication is conducted and information disseminated at all points is key to the successful implementation of such a plan. Project design, which can be based at the team versus organization level, must be carefully prepared with real and tangible benefits in mind and be based on how effectively they address business needs.⁵² Determining and prioritizing the key needs or issues is dependent on the organization’s vision for its information management program and, to a large extent, the strategies implemented to reach those goals. Robertson cautions, however, that “organisations are simply too complex to consider all the factors when developing strategies or planning activities,”⁵³ thus flexibility and small (often parallel) changes that have visible results, are best. Throughout, communication must be consistent and clear by all stakeholders so that the program’s vision and project objectives are understood, decisions are based on informed judgment, and targets are maintained. Organizations with strong leadership and disciplined ways of managing their information assets will have more successful results with greater assurance that information will be more accurate, complete, relevant, authentic, reliable and accessible over the long-term.

Conclusion

Over the last ten years, and particularly in the new millennium, collaborative research efforts have expanded globally along with strategies to implement effective records management programs that address the vital digital assets of organizations. But even with technology and globalization being key drivers of change, and despite growing awareness of the need for effective e-records management, many organizations today have not been implementing a program to deal effectively with their burgeoning electronic records. The IM infrastructure model presented in this paper promises much in return for those who recognize its value. Enhancing connectivity by integrating and linking processes across the organization, and between all those contributing to the online creation, dissemination, and maintenance of information is essential because reaping maximum benefits requires that professionals know what and how others in their department contribute to the workflow and how different departments across an organization participate in the different stages of a business process.

⁵¹ Some writers have noted certain ‘barriers’ that organizations face in implementing an IM plan (e.g., Wilson, I.E. (2000) *Information Management in the Public Sector Environment*, PowerPoint at: http://www.imforumgi.gc.ca/present/infoman_e/tsld001.htm), or have expressed them as critical issues that organizations need to address to gauge their “readiness” to implement an IM process (e.g., Lipchak and McDonald, *supra* note 2, citation 6).

⁵² Robertson, *supra* note 2, citation 12. Robertson does not disregard the value of “behind the scene” initiatives, but thinks these need to be linked into changes that do deliver more visible and tangible results.

⁵³ *Ibid.*, p. 4.

Well managed information is no less a strategic resource for government and businesses as it is for other organizations since it supports effective implementation and delivery of an organization's policies, programs and services. In addition, it enables better decision-making (within the organization and, externally, with researchers and other stakeholders who utilize the information), protects the organization and its stakeholders' legal rights and obligations, provides openness and accountability which in turn help it earn public trust, and provides a reliable corporate memory. Undoubtedly, however, one size will not fit all, so policies need to be designed to fit distinct organizational environments so that coordinated information management strategies can be tightly integrated with specific organizational goals. Moreover, development and implementation of an effective IM strategy requires strong leadership, collaboration and coordination and a willingness to invest in a broader vision of information – adopting an IM attitude - that recognizes the importance of information as a key asset in building organizational success.

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