

# AC<sup>+</sup>erm Project

Systematic Literature Review:  
People Aspects



Arts & Humanities  
Research Council



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The AC<sup>+</sup>erm Project – Accelerating positive change in electronic records management' – is a research project carried out by the School of Computing, Engineering and Information Sciences in Northumbria University from 2007 to 2010. It aimed to investigate and critically explore issues and practical strategies to support accelerating the pace of positive change in managing electronic records.

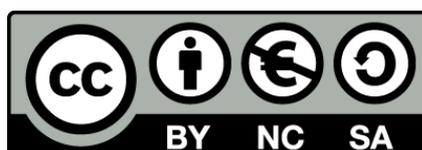
The project focused on designing an organisation-centred architecture from three perspectives: (i) people, including vision, awareness, culture, drivers and barriers; (ii) working practices including processes, procedures, policies and standards; and (iii) technology in terms of the design principles for delivering effective recordkeeping.

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# AC<sup>+</sup>erm Output

## Systematic Literature Review Synthesis – People Aspects

### Background *General*

We have carried out a systematic literature review (SLR) of journal literature on electronic records management (ERM) published from 1996 to February 2009. SLRs aim for a more objective, rigorous approach to reviewing the literature. The objectivity and rigour comes from establishing elements *a priori* and following a standard process, particularly for assessing the quality of the literature and extracting relevant data.

We searched for variants of the term 'electronic records management' in the following databases: LISA (covering information studies and technology, library science and publishing); EBSCO's Business Source Premier (including coverage of business, management, engineering, law, health and art); and Web of Science (covering the sciences, social sciences & the arts and the humanities). We have reviewed 1,189 from a total of 1,756 items and selected 536, to date, for detailed review.

Information from the reviewed items have been organised into an Access database. Components of the database include: tickboxes for subject focus and for coverage of specific topics (such as model for ERM, change management) and a textual summary. Assessing the quality of the item has been through the use of tickboxes for resource type, approach type and reviewer evaluation. The use of tickboxes means that we can choose items from the database that cover specific topics only. The items on a specific topic are then synthesised by identifying themes from the summary and organising the items under appropriate headings.

Selected outputs from the SLR have been used to inform the initial questions for our Delphi studies as well as to provide practical information to enable action by users of the outputs.

### *This Output*

Contains items of literature which have been coded as having a main focus of 'people' or as containing coverage of specific people topics, i.e. vision, people, partnerships, capacity building, change management. The items were chosen from the database on 2008/04/03. This output informed the questions for Round 1 of the People Delphi Study.

**Nature of Output** Brief summaries of items from the literature, organised under headings with bibliographic details.

## **SYSTEMATIC LITERATURE REVIEW – SYNTHESIS OF PEOPLE ASPECTS – 2008/04/03**

Articles that have been coded as having a main focus of ‘people’ or as containing coverage of specific people topics, i.e. vision, people, partnerships, capacity building, change management.

Total number of articles: 55

Example of item ID code: #3 2005 HMM

- Character: # case examples, \* research, \$ individual expert opinion
- Number = ID number from EndNote bibliographic database
- Date
- Weighting: Resource H M L / Approach H M L /Reviewer’s Evaluation H M L, where H = High, M = Medium, L = Low

Notes:

- Some items are duplicated under different headings.
- Under each heading, items are in chronological order

## CONTENTS

	Page no:
Glossary	3
<b>1 Societal issues</b>	<b>4</b>
<b>2 E-government / ERM infrastructure</b>	<b>5</b>
<b>3 ERM</b>	<b>9</b>
<b>4 ERM research</b>	<b>11</b>
<b>5 Records professionals and other professionals</b>	<b>14</b>
5.1 New roles and associated skills for records professionals	14
5.2 Differing views on ERM between records professionals and other professionals	22
5.3 Training in RM for other professionals	24
5.4 Partnership working	27
<b>6 Users / staff</b>	<b>30</b>
6.1 Wide range of staff and other stakeholders (patients, external contractors) using complex database systems	30
6.2 Managing personal digital materials	30
6.3 Attitudes and perceptions	31
6.4 Awareness raising and training	37
<b>7 Design</b>	<b>43</b>
<b>8 ERM implementation</b>	<b>47</b>
8.1 Cost of ERM and lack of desire to fund this	47
8.2 ERM causes change / ERM requires change	47
8.3 ERM implementation – Critical success factors	54
<b>9 ERMS implementation</b>	<b>64</b>
9.1 Many of the problems facing ERMS implementation are behavioural rather than technical	64
9.2 Implementing ERMS is about cultural change	64
9.3 ERMS implementation – Critical success factors	67
<b>References</b>	<b>78</b>

## GLOSSARY

CPD	continuing professional development
ERK	electronic recordkeeping
ERM	electronic records management
ERMS	electronic records management systems
IM	information management
IS	information system
RIM	records and information management
RK	recordkeeping
RM	records management

## 1 SOCIETAL ISSUES

### Covers:

- role of recordkeeping in society
- societal importance of recordkeeping
- ethics and other social issues

### \$603 2000 HMM

- *Role of recordkeeping in society*

Reviews collaborative ERM research initiatives in Australia in mid-late 1990s. RK issues of primary concern: reliability, accessibility & accountability of online business and government, persistence and accessibility of e-records over time (archives). Initial work has been to develop policies and standards to provide a framework for individual organisational also to encourage education and research programmes "including research and development in the recordkeeping community". Australia looked at developments in Canada and the USA. Notes increased R&D funding opportunities available. Highlights how "researchers have generated theories and models about recordkeeping that are being applied and tested by practitioners in rapidly emerging and changing information environments" as well as being used "as pedagogical tools". "Although such research has continued to draw on theories, models, and methods of the disciplines of archival science, history, and law, it has also looked to sociology and information science. The focus of much of this theory and model building has been on fundamental questions about the role of recordkeeping in society, the recordkeeping accountability nexus, and the nature of records as evidence of social and organisational activity" (p358)

*McKemmish, S. (2000) 'Collaborative research models: a review of Australian initiatives', American Archivist, 63 (2), pp. 353-367.*

### \$665 2006 HML

- *Societal importance of recordkeeping and the special demands of electronic records are not understood*

*Ethics and societal issues related to ERM should be given more coverage and weight*  
Review of: J. McLeod & C. Hare (eds) *Managing Electronic Records*. Ethics and societal issues are important and related to ERM and should be given more coverage and weight. P.62 "most ARM professionals see a near total lack of understanding on the part of society of the importance of recordkeeping and the special demands of electronic records."

*Barry, R. (2006). Review of McLeod, J. & Hare, C. (eds), Managing Electronic Records. Records Management Journal. 16: 57-66.*

## 2 E-GOVERNMENT / ERM INFRASTRUCTURE

### Covers:

- the wide range of stakeholders involved in e-government
- RM not considered in e-government initiatives
- building ERM into national e-government programmes
- building national ERM infrastructure
- lack of resources for ERM infrastructure
- ERM education and awareness raising with policy makers

### \$745 1999 MML

- *Building national ERM infrastructure*

Pre-digital texts have survived through their durability. Electronic records already outnumber these materials, but much greater risk of loss. Proliferation of electronic publishing brings problems comparable to those of printing revolution in 15C Europe. Digital creative process an issue to scholars, as word-processed documents are often only saved in final form, with no drafts preserved. Congress has given US Archivist an extension to develop plan for government agencies not only about disposition but also about storage which will allow future access for archival processing and research use. Paper can be left for years before processing, but ERs need to be migrated through hardware and software. Question is, how is this to happen?

*Zeidberg, D. S. (1999) 'The archival view of technology: resources for the scholar of the future', Library Trends, 47 (4), pp. 796-805.*

### \$406 2000 HMM

- *The wide range of stakeholders involved in e-government*
- *RM not considered in e-government initiatives*

"looks at issues facing recordkeeping in an electronic transactions environment, relating this to Australian Federal government operations. It also challenges some of the archives and records professions' views and expectations about how others might see the importance in the detail of electronic recordkeeping, especially in an era of "light-touch legislation to enable the development and uptake of e-commerce" (abstract). Discusses how RK principles were not considered in Australian government's development of the Electronic Transactions Act 1999 to support e-commerce by providing "that electronic and paper transactions are treated equally by the law through the specification of certain minimum requirements." (p97) Believes that economics, and the "immense potential loss of information and evidence inherent in ecommerce is the trigger for governments to realise sound recordkeeping practices are needed." Explores how records professionals were not involved in developing the ET Act and, that instead of bemoaning the fact they need to find ways of "strengthening their position" (p103) which will involve raising the profile of RK, and making it accessible to others (speaking a language that can be understood). Also discusses stakeholders & their roles in e-commerce (government, law & policy makers, RK professionals, industry groups, the public, government agencies, government archives & records agencies).

*Stuckey, S. & Liddell, A. (2000) 'Electronic business transactions and recordkeeping: serious concerns; realistic responses', Archives and Manuscripts, 28 (2), pp. 92-109.*

### \$231 2001 HML

- *Building ERM into national e-government programmes*
- *Building national ERM infrastructure*
- *ERM education and awareness raising with policy makers*

Malaysian Government's implementation of e-government (EG) and the National Archives of Malaysia's efforts to address related RM issues. Though going ahead with e-government via

the Multimedia Super Corridor (MSC) project and therefore requires the use of e-records and e-transactions, government administration is still using legacy systems. National Archives has through lobbying got government to recognise that they need to be part of the MSC mechanism, and becoming a member of the Government IT and Internet Council. Also conducting campaigns of education and awareness-raising with policy makers. Getting involved with international bodies to bring in training, knowledge and expertise. A proposal submitted to government to set up an electronic records centre, jointly with international experts. Setting up a National Committee on Preservation of Electronic Records. Reorganised its administrative structure and set up the Electronic Records Management and Information Technology Division. Published standards and guidelines on email management. Now need to set up policies. Research on the Malaysian context is also needed to inform what is required. P.103 Repositioning of the National Archives of Malaysia within the EG mechanism.

*Johare, R. (2001) 'Electronic records management in Malaysia: the need for an organizational and legal framework', Records Management Journal, 11 (2), pp. 97-109.*

#### \$413 2001 HMM

- *Building national ERM infrastructure*

Ten challenges for the archival profession. 7. "Generating more basic and applied research on archival aspects of information management". Research must be integral component; significant progress has been made in developing research infrastructure, but research community still small. Lack of adequate funding. Issues need to be made easily understandable by funding bodies, associated with national issues – security, privacy, info life-cycle, citizen access, intellectual property rights; showing relationship between records, information, and knowledge. Much vital research will be carried out beyond archival discipline, need to influence decision makers and ensure that others understand archival concerns. 8. "Strengthening our national archival organization". Growth of SAA central to profession's capacity to address challenges CP. 9. "Augmenting the range of skills, knowledge, and resources engaged in the archival enterprise" CP. Archival programmes need non-archivists in and beyond related fields, and a wide diversity of experience and expertise. Increase public awareness, influence policy and laws, build links with kindred organizations. Need suitable technological infrastructure / capacity for managing recorded information. Archivists need education and expertise beyond the purely archival, with CPD throughout career.

*Hickerson, H. T. (2001) 'Ten challenges for the archival profession', American Archivist, 64 (1), pp. 6-16.*

#### \$498 2001 MLH

- *Building national ERM infrastructure*
- *Lack of resources for ERM infrastructure*

Article deals with a 1997 review of electronic records policy in Archives New Zealand (ANZ), and the major issues identified during the consultation phase, and the steps that will be taken to create a five-year strategy document, speculating on possible directions. Policy position in 1997 document: (1) encouragement and education for ER creation / management; Policy launched and heavily promoted 1997. Enthusiastic reception, but not possible to implement in 1997. 1998 review identified implementation problems. Noted that NZ not alone in finding difficulty in implementing ER policy, and that minimal resources available for ER development. Strategy project included background research on NZ and international ER developments, as well as focus groups with ANZ staff at most levels. Key themes from consultations: (a) desire for specific practical advice/guidance; (c) credibility issues for ANZ in terms of perceived competence i.r.o. ERK; (d) strong preference for ANZ to act as learning partner with agencies; Discussion paper from consultation will form basis of next stage, to

produce five-year ER strategy doc, in contrast to previous policy doc. Key factors in strategic development: (f) development of knowledge and expertise at ANZ;  
Broad directions: developing ANZ capacity to take custody of ERs.

*Cauchi, J. (2001) 'Whither Archives New Zealand's electronic records policy?', Archifacts, (Oct 2001), pp. 42-52.*

#### \$520 2005 HLM

- *Building national ERM infrastructure*

Written by the Archivist of the United States and sets out the US national agenda for managing e-records. Article centres on purpose of national recordkeeping, and the current ways in which NARA is acting to enable this purpose to be carried out effectively. NARA has had to move from a focus on paper records to realizing that it must take the lead in developing ways of managing, preserving and providing access to electronic records, which form the bulk of modern government records. It does this to ensure that citizens and state can access the records essential to claiming their entitlements or carrying out their function, and to promote democracy and civic / historical understanding. Having been involved in the development of ISO 15489, NARA has incorporated the standard in its activities, promoting its benefits to agencies and officials and through Records Administration Conference (RACO) programme. NARA's training programme redesigned (2004) to stress importance of managing records as information assets and of asset and risk management. Training offered to government and international organization employees and federal contractors. In 2005, targeted training will also be delivered to federal IT, management, and legal staff. Web-based basic course for all federal employees and contractors also being developed. ISO 15489 to be integrated into revision of NARA RM regulations

*Weinstein, A. (2005) 'NARA enters new "ERA" of electronic records management', Information Management Journal, 39 (5), pp. 22-24.*

#### \$523 2006 HMM

- *Building national ERM infrastructure*

Author is the Director of the French National Archives and article based on keynote speech at event hosted by the Archives. Over last 3–4 decades, archivists have been aware of the need to get involved in managing information at an earlier stage, and not just collecting it into archives at the end of its active use. In the case of electronic records, this is needed so that necessary metadata relating to classification, creation, use, and format can be captured. But poor IM common in both the public and corporate sectors – poor filing, classification, preservation, lack of system for e-records and e-mails, inaccessibility of material on personal drives. No simple mapping of the English-language concept of 'record' to the French uses of 'document' and 'archive'. 'Records management' used in its English form as no exact equivalent. Different structures for handling the interface between RM and archiving. "Different worlds" p78 will have to meet: EDMS, documentation professionals (French 'documentalistes' approx. English 'information officers'), and archives. Software relating to the first two activities/groups has been gradually acquiring functionality to deal with the electronic records life-cycle; archival practice has for long been involved in developing standards and procedures related to the life-cycle, description, provenance, and business context, but still often works with manual rather than digital tools. Although involved with intermediate and accessioned archives, French public sector archivists have little interaction with current records. Since 2001, there is an increasing engagement with semi-current records in the form of retention schedules, the provision of semi-current archival services in public administration, and setting up networks. Occasionally, archivists are intervening at creation, as in the Ministries of Foreign Affairs and of Justice, and in some private businesses. Future developments will bring the different worlds closer, and they are already being drawn together through a flourishing electronic document software supply market in the world of GEIDE (Gestion électronique d'informations et de documents existant). To facilitate this, a better understanding of 'records management' will have to be disseminated. The existing expertise in the sphere of 'documentation', particularly relating to file-plans and

indexing, will need to be exploited. There will also have to be increased understanding and exploitation of archival activities and expertise: metadata and descriptive standards, long-term preservation, migration, authenticity, and public access.

*de Boisdeffre, M. (2006) 'The importance of records management in France', Records Management Journal, 16 (2), pp. 76-81.*

### 3 ERM

#### Covers:

- ERM is about people, process, and technology
- ERM requires a complete cultural change
- international standards / requirements for ERM

#### \$695 2002 HML

- *International standards / requirements for ERM*

MoReq a generic specification for ERMS, developed for the EC's Interchange of Data between Administrations (IDA) initiative. Covers private and public sectors and intended for wide audience: potential and existing ERMS users; RM training providers; academic institutions (teaching resource); ERMS suppliers/developers; RM service providers. Intended for use across Europe. Important document, the pinnacle of EC-sponsored ERM work since 1996 (first DLM Forum) and within context of IDA, a major Europe-wide e-government initiative. "MoReq, published under the banner of IDA initiative, can be regarded as the definitive European Commission statement on the state-of-the-art of managing electronic records p15."

*Cain, P. (2002). Model requirements for the management of electronic records (MoReq): a critical evaluation. Review of Fresko, M. & Waldron, I., Model requirements for the management of electronic records (MoReq). Records Management Journal. 12: 14-18.*

#### \$198 2003 HHM

- *ERM requires a complete cultural change*

Review of 'Better Access to Electronic Information for the Citizen: ... INSAR, Supplement V' by K. Schürer. This study carried out by Essex University on behalf of EC, to respond to call from DLM for comprehensive study of relationship between public administration and archive services re EDRM. Summarises results of survey of state archives across EU, with more detailed case studies of Finland, Germany, Netherlands, Sweden, UK. Issue of cultural change might have been given fuller treatment – institutional secrecy often defines relationship between archivists and creators, and complete change needed to RK culture of civil services in most countries. Also poor oversight and failure to respect procedures. Despite report title, does not discuss citizen info entitlements in depth, and discussion of relationship between administration and archives limited.

*Barata, K. (2003). Better access to electronic information for the citizen: the relationship between public administration and archives services concerning electronic documents and records management. Review of Schurer, K., INSAR Supplement V. Journal of the Society of Archivists. 24: 107-108.*

#### \$765 2004 HLL

- *ERM is about people, process, and technology*

Interviews with three chief information officers: CIO1 = School + Storage Networking Industry Association; CIO2 = Law firm; CIO3 = National Archives and Records Administration (NARA). APPROACH TO MANAGING E-RECORDS. CIO1: waking up to the need for a strategy for ERM. CIO2: have an ERM policy. CIO3: Piloting software, but current policy is printing and filing. KEY TO ERM. CIO1: leadership buy-in. articulating cost-benefits and risks. Capture metadata in transparent way. Flexible for individual organisation's needs. CIO2: Deletion of spam/junk etc. CIO3: p.32 "simultaneously dealing with people, process, and technology." User buy-in. integration of RM into enterprise activities. Integrated software (RM and office etc.). BIGGEST CHALLENGE IN ERM. CIO1: cost and lack of desire to fund this. CIO2: Selective deletion of records. CIO3: integrated software. easy natural methods of filing. BIGGEST CHALLENGES OF COMPLIANCE. CIO1: Email can contain high-evidentiary

material, but how identify, capture and archive? CIO2: confidentiality. CIO3: Federal Records ACT and NARA RM regs. WHO SETS ERM POLICIES/PROCEDURES. CIO1. Multi-departmental. CIO2. legal counsel, records dept, IT all together. CIO3. Multidepartmental. lead by RM. WHAT HELP REQUIRED FROM RM / IT. CIO1. p.34 "I want the philosophical and legal framework of a clearly articulated records management policy to drive our technology, not vice-versa." CIO2. RM staff to become more familiar with IT. RM to become responsible for e-records as well as paper. CIO3. RM set policies/strategies, IT helps to implement them. RELATIONSHIP BETWEEN RM / IT. CIO1. Good multidepartmental working. CIO2. Both IT and RM report to me, and library too. CIO3. Both IT and RM report to the CIO. SKILLS. CIO1. RM skills: understand best practice and policies for type of organisation working in and media using. IT: humility, listening, IT appropriate for the organisation. CIO2. RM: IT knowledge, assertion, proactive. IT: inform RM about IT, open up applications for RM input. CIO3. RM: Understand business process. Know IT speak. IT: Understand RM and technologies that can do RM. Communicate in non-technical language. STUDY: Recent study commissioned by ARMA from Forrester Consulting no other details given. Results: p.31 "\* Records and information (RIM) professionals are losing their influence in records management as ERM emerges. \* Business and IT perceive few challenges to ERM, other than organizational priorities and budget; unlike business and IT, RIM professionals see many challenges surrounding RIM. \* Business and IT do not fully understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

*Swartz, N. (2004) 'From the mouths of CIOs', Information Management Journal, 38 (5), pp. 30-36.*

## 4 ERM RESEARCH

### Covers:

- building national ERM research capacity
- need for ERM research
- lack of ERM research
- collaboration in ERM research
- ERM research looks to the disciplines of archival science, history, law, sociology and information science

### \$160 1997 HMM

- *Building national ERM research capacity*

Provision of US federal grants to facilitate ERM and digital preservation – NHPRC (National Historical Publications and Records Commission), affiliated with NARA (National Archives and Records Administration). NHPRC has designated research in e-records a top priority, with a need to connect theory to practice, facilitating tests impossible without grant money. Funding has enabled projects to make significant contributions; and the grants have stimulated discussion of ER issues among RK professionals.

*Ray, J. M. (1998) 'Search for tomorrow: the electronic records research program of the U. S. National Historical Publications and Records Commission', Journal of Government Information, 25 (4), pp. 367-373.*

### \$421 2000 HLH

- *Building national ERM research capacity*

The achievements of the US NHPRC ((National Historical Publications and Records Commission)) in furthering research, knowledge and education particularly in the field of electronic records. Greatest challenge is to address issues relating to ERs and effectively utilize new technologies. Need to achieve critical mass in some areas, incl better education for RK professionals; this is being incorporated in graduate programmes but CPD needed for those already qualified. Need to involve other stakeholders, and to be able to explain ER challenges to them – notably computer scientists and computer science educators, since question of long-term access to software-dependent objects fundamental to ability to manage ERs. NHPRC particularly interested at present in research relating to preservation/access, user/creator support, identification of barriers to development, and necessary knowledge base for archivists dealing with ER. Clear that better education needed for archivists, allied professionals, and others with responsibility for records. Growing need for general and specialized CPD, with approaching retirement dates for 'baby boomers' and resulting top-level vacancies.

*Newhall, A. C. (2000) 'The NHPRC in the new records age', American Archivist, 63 (1), pp. 67-89.*

### \$603 2000 HMM

- *Collaboration in ERM research*
- *ERM research looks to the disciplines of archival science, history, law, sociology and information science*

Reviews collaborative ERM research initiatives in Australia in mid-late 1990s. RK issues of primary concern: reliability, accessibility & accountability of online business and government, persistence and accessibility of e-records over time (archives). Initial work has been to develop policies and standards to provide a framework for individual organisational also to encourage education and research programmes "including research and development in the recordkeeping community". Australia looked at developments in Canada and the USA. Notes increased R&D funding opportunities available. Highlights how "researchers have generated

theories and models about recordkeeping that are being applied and tested by practitioners in rapidly emerging and changing information environments” as well as being used “as pedagogical tools”. “Although such research has continued to draw on theories, models, and methods of the disciplines of archival science, history, and law, it has also looked to sociology and information science. The focus of much of this theory and model building has been on fundamental questions about the role of recordkeeping in society, the recordkeeping accountability nexus, and the nature of records as evidence of social and organisational activity” (p358)

*McKemmish, S. (2000) 'Collaborative research models: a review of Australian initiatives', American Archivist, 63 (2), pp. 353-367.*

#### \$703 2000 HMM

- *Lack of ERM research*

Whole article is about problems caused by resistance to change and lack of ERM skills among records professionals. Despite three decades of electronic records, records professionals still struggle with ERs. Maybe looking for the wrong thing (e.g. ‘magic bullet’ from ER research), or need to redefine mission to take into account wider concerns than cultural heritage and business. Also, main technological focus on search and retrieval rather than preservation has failed to provide long-term solutions. Argues that the issue “is partly a quest for authority, sources that provide if not unequivocal at least strong indicators of what, how, and why archivists should approach ... ERM” no page nos. Need for different kind of authority arises from newness of ERs, challenges they pose to traditional archival theory and practice, need to collaborate with other disciplines with vested interests in records to manage ERs. Recordkeeping needs to be multidisciplinary, not merely interdisciplinary as it largely is now. Or ERM may have moved to a different field, e.g. KM. Not all archivists are responsible for ERs; some not only not involved, intellectually or administratively, but actively resistant to change in practice (insisting on printing to paper) and in theory (limiting authorities to ‘classic’ texts such as Jenkinson or Schellenberg). One way of seeing if archivists have looked for new authority in line with changes in recordkeeping systems is to examine sources cited in the literature on ERM. 1992 analysis conducted by Gilliland-Swetland concluded that although authors read widely in IS and Library literature, largest set of material was archives journals n16 for citation. Some think that archival theory has matured in relation to ERs and that a consensus on practice has emerged which will enable improved education in new technologies for RK professionals. But not that simple: archives too dispersed and academic programmes still too immature to provide coherence, concentration and “critical mass”. Complaints about use of jargon ignore necessity of archives to communicate with other disciplines to solve ERM problems. Analyzes citations from 61 North American journal articles on ER from 1990 to 1999. Henry’s claim that prominent “new paradigm” ER theorists particularly reference only themselves shown to be untrue; all archival literature is inward-looking, but “new paradigm” writers use wider range of sources. Total of 1,170 sources cited; pattern of citation by disciplinary affiliation Table 1 demonstrates inward-facing stance (over 60% are in Archival Science). Even more pronounced when analyzed by disciplinary affiliation of journal Table 2, journals producing five or more citations Table 3, and most cited authors Table 4, and publications cited eight or more times Table 5. Only 69% of citations are to publications less than five years old Table 6. While it is natural that archivists as records experts look to themselves for authority, problems in need to have wide knowledge of IT and practical experience of ERM. “Archivists seem content on waiting for someone or something to provide the answer ... for electronic records management”. Problem may be in way archivists themselves value records, as something old to preserve, so that they did not interest themselves in records prior to taking custody of them. Not viable with ERs; old distinctions – current/non-current, custody/non-custody, records/archives – may no longer apply. Various examples and arguments about how archivists at state and local government level, in universities, in local repositories, are ignoring the issues and do not have the skills or facilities to manage ERs. Penn 1993 describes a “leadership void” in addressing ERM from the 1960s onwards, but ignores reasons for failure of leadership – the fact that ‘leaders’

reflected practice in their own institutions. Very few interesting ERM projects, and most of these draw on Pitt/UBC projects; may be too little, too late, or not used by records professionals. Praiseworthy examples are CTG (SUNY – State University of New York) Models for Action project and Indiana University project, which took Pittsburgh functional requirements as starting point and approached records needs by testing and modifying these and other assumptions and highlighting needs for further work. This type of project needs to become the norm, but only twenty or so are being carried out worldwide while most archivists ignore ERM or hope that one of the projects will provide the ‘magic bullet’. InterPARES may have an impact on national archives, but these are very different from corporate and local levels. Archivists at all level need to have knowledge of working with ERM, “the authority ... that derives from informed experience”.

*Cox, R. J. (2000) 'Searching for authority: archivists and electronic records in the new world at the fin-de-siecle', First Monday, 5 (1).*

#### \$231 2001 HML

- *Building national ERM research capacity*

Malaysian Government's implementation of e-government (EG) and the National Archives of Malaysia's efforts to address related RM issues. Though going ahead with e-government via the Multimedia Super Corridor (MSC) project and therefore requires the use of e-records and e-transactions, government administration is still using legacy systems. National Archives has through lobbying got government to recognise that they need to be part of the MSC mechanism, and becoming a member of the Government IT and Internet Council. Also conducting campaigns of education and awareness-raising with policy makers. Getting involved with international bodies to bring in training, knowledge and expertise. A proposal submitted to government to set up an electronic records centre, jointly with international experts. Setting up a National Committee on Preservation of Electronic Records. Reorganised its administrative structure and set up the Electronic Records Management and Information Technology Division. Published standards and guidelines on email management. Now need to set up policies. Research on the Malaysian context is also needed to inform what is required. P.103 Repositioning of the National Archives of Malaysia within the EG mechanism.

*Johare, R. (2001) 'Electronic records management in Malaysia: the need for an organizational and legal framework', Records Management Journal, 11 (2), pp. 97-109.*

#### \$413 2001 HMM

- *Need for ERM research*

Ten challenges for the archival profession. 7. “Generating more basic and applied research on archival aspects of information management”. Research must be integral component; significant progress has been made in developing research infrastructure, but research community still small. Lack of adequate funding. Issues need to be made easily understandable by funding bodies, associated with national issues – security, privacy, info life-cycle, citizen access, intellectual property rights; showing relationship between records, information, and knowledge. Much vital research will be carried out beyond archival discipline, need to influence decision makers and ensure that others understand archival concerns. 8. “Strengthening our national archival organization”. Growth of SAA central to profession’s capacity to address challenges CP. 9. “Augmenting the range of skills, knowledge, and resources engaged in the archival enterprise” CP. Archival programmes need non-archivists in and beyond related fields, and a wide diversity of experience and expertise. Increase public awareness, influence policy and laws, build links with kindred organizations. Need suitable technological infrastructure / capacity for managing recorded information. Archivists need education and expertise beyond the purely archival, with CPD throughout career.

*Hickerson, H. T. (2001) 'Ten challenges for the archival profession', American Archivist, 64 (1), pp. 6-16.*

## 5 RECORDS PROFESSIONALS AND OTHER PROFESSIONALS

### 5.1 New roles and associated skills for records professionals

#### Covers:

- RIM / RM / archival professions struggling with ERM
- RIM professionals' RM role threatened by other professions as ERM emerges
- new role for RIM professionals to play in e-environment
- need to develop national RM / archival professional infrastructure for ERM
- need to build ERM skills into the RM / archival profession
- training and CPD programmes on ERM for the RM / archival profession
- RIM professions need training in IT
- disjunction between RM theorist and RM practitioner understanding of ERM aspects
- split between archivists and record managers detrimental in face of challenges of ERM

#### \$1106 1996 HML Critique of 720

- *RIM/RM/archival professions struggling with ERM*
- *New role for RIM professionals to play in e-environment*
- *Training and CPD programmes on ERM for the RM/archival profession*
- *Split between archivists and record managers detrimental in face of challenges of ERM*

Response to article by Menkus which claimed inactivity on ERM for last 25 years until recent 'rediscovery'. Menkus suggests that records managers have new things to learn and new organizational roles to play. Provides brief history of RM and life-cycle, then describes ERM in these terms, seeing little difference in the processes. Argument is that while records managers need to acquaint themselves with record-creating technologies, nature of RM has not changed. Current electronic formats have their paper equivalents. Presents reassuring picture and message that the traditional records manager can easily make the transition into the electronic environment. Critique: M's assertion that nothing has happened in last 25 years may well apply to RM profession, but not to archival, where the same period saw a great deal of activity. Late 1960s saw first attempts to manage 'machine-readable' records. During 1970s and 1980s: debates about validity of applying archival principles to electronic systems; first manuals of codified practice; efforts to establish electronic archives programmes; sustained CPD workshops and institutes to provide skills for archivists. 1990s has seen broad new developments in the archival profession, particularly definition of records as transactions with structure, content, and context. There have been proposals to drop custodial approach, with archival opinion divided on issue; but future RK systems may dictate a post-custodial approach that can maintain integrity of records. What unifies both sides is that fundamental nature of records must be preserved, with mechanisms and details to be worked out later. M's point that: "Both archivists and records managers, for very different reasons ... have stressed the administration of the physical, paper record as the priority of their programs rather than reflecting on the continuing value of records for evidence, accountability, and memory purposes." This stress a hindrance in seeing larger responsibilities and cause of relegation to clerical functions. Need to stress characteristics and importance of records, particularly in relation to records and RK systems role in supporting organizational and social activities. Avoiding this has led to records managers focussing on efficiency and economy, and archivists on cultural and research values, rather than stressing role of records in capturing essential evidence and providing foundation for accountability and corporate memory. Re-defining ERM is very important. Need to develop coherent approach in response to increasing prevalence of electronic information and ERKS, declining costs, legal environment. Use of technology to maintain corporate memory has

been recommended by non-records professionals; archivists / records managers should have been doing this. Records at centre of corporate memory: artificial distinction between archives and RM programmes should be eliminated. M's scenario has ERM ignored by RM profession, but principles unchanged. Instead, period of great activity leading to breakthroughs in concept of records and roles of records professionals. RKs need to stress records and RK systems, not just acquaint themselves with IT developments.

*Cox, R. J. (1997) 'Electronic systems and records management in the information age: an introduction', Bulletin of the American Society for Information Science, 23 (5), pp. 7-9.*

\$720 1996 HML Critiqued by 1106

- *Training and CPD programmes on ERM for the RM/archival profession*

"After 25 years of what has amounted essentially to inaction, electronic records management finally appears to have been rediscovered" [no page numbers available – html]. Need to manage electronic records first raised by Everett Alldredge, US Deputy Archivist, in late 1960s but largely ignored since. Pace of technological development means big catch-up requirement for records managers. Need for re-education and new professional relationships, maybe for new ER speciality within RM certification programmes. ERM involves "more changes in form than in substance". With electronic as with paper records, there is no way of forcing people to create or keep what they don't want to. Records manager's role unchanged: organize and facilitate retention of records to be kept and disposal of those to be destroyed. ERs should be scheduled in same way as paper, identifying and describing records series and owners within databases and ascribing appropriate retention periods. May involve revising existing schedules or drawing up new ones. Becoming involved in ERM provides opportunities and challenges to RM professionals, and will enable them to add value to, and play a more meaningful role within, their organizations.

\$463 1997 MLM

- *RIM/RM/archival professions struggling with ERM*
- *RIM professionals' RM role threatened by other professions as ERM emerges*

Descriptive of the state of play of ERM at the time: The speed of change in the development of electronic records has caused archivists and records managers to re-evaluate their approaches for managing these records and prompted new writing and research. From 1960s to 1980s, ERM was largely ad hoc, though with leadership from National Archives in US and Canada. Inability to cope with rapid changes led to professional insecurity among recordkeepers. Research efforts first started with NHPRC co-sponsoring a conference on ER research issues in 1991, which drew up a research agenda that influenced NHPRC priorities in funding projects focussed more on consensus regarding the role of RK (between RM professionals) than on solving all ERM issues. Similar conferences in 1996 (University Michigan) and 1997 (University Pittsburgh) evidence the need for RKs to work quickly and co-operate with other IM/IT professionals. Further work using functional requirements will involve recordkeepers' having to ally themselves with other partners among the many groups involved in IT and IM strategy, development, and practice

*Cox, D. R. J. (1996) 'Re-defining electronic records management', Records Management Quarterly, 30 (4), p. 8.*

\$703 2000 HMM

- *RIM/RM/archival professions struggling with ERM*
- *RIM professionals' RM role threatened by other professions as ERM emerges*
- *Need to build ERM skills into the RM/archival profession*

Whole article is about problems caused by resistance to change and lack of ERM skills among records professionals. Despite three decades of electronic records, records professionals still struggle with ERs. Maybe looking for the wrong thing (e.g. 'magic bullet')

from ER research), or need to redefine mission to take into account wider concerns than cultural heritage and business. Also, main technological focus on search and retrieval rather than preservation has failed to provide long-term solutions. Argues that the issue “is partly a quest for authority, sources that provide if not unequivocal at least strong indicators of what, how, and why archivists should approach ... ERM” no page nos. Need for different kind of authority arises from newness of ERs, challenges they pose to traditional archival theory and practice, need to collaborate with other disciplines with vested interests in records to manage ERs. Recordkeeping needs to be multidisciplinary, not merely interdisciplinary as it largely is now. Or ERM may have moved to a different field, e.g. KM. Not all archivists are responsible for ERs; some not only not involved, intellectually or administratively, but actively resistant to change in practice (insisting on printing to paper) and in theory (limiting authorities to ‘classic’ texts such as Jenkinson or Schellenberg). One way of seeing if archivists have looked for new authority in line with changes in recordkeeping systems is to examine sources cited in the literature on ERM. 1992 analysis conducted by Gilliland-Swetland concluded that although authors read widely in IS and Library literature, largest set of material was archives journals n16 for citation. Some think that archival theory has matured in relation to ERs and that a consensus on practice has emerged which will enable improved education in new technologies for RK professionals. But not that simple: archives too dispersed and academic programmes still too immature to provide coherence, concentration and “critical mass”. Complaints about use of jargon ignore necessity of archives to communicate with other disciplines to solve ERM problems. Analyzes citations from 61 North American journal articles on ER from 1990 to 1999. Henry’s claim that prominent “new paradigm” ER theorists particularly reference only themselves shown to be untrue; all archival literature is inward-looking, but “new paradigm” writers use wider range of sources. Total of 1,170 sources cited; pattern of citation by disciplinary affiliation Table 1 demonstrates inward-facing stance (over 60% are in Archival Science). Even more pronounced when analyzed by disciplinary affiliation of journal Table 2, journals producing five or more citations Table 3, and most cited authors Table 4, and publications cited eight or more times Table 5. Only 69% of citations are to publications less than five years old Table 6. While it is natural that archivists as records experts look to themselves for authority, problems in need to have wide knowledge of IT and practical experience of ERM. “Archivists seem content on waiting for someone or something to provide the answer ... for electronic records management”. Problem may be in way archivists themselves value records, as something old to preserve, so that they did not interest themselves in records prior to taking custody of them. Not viable with ERs; old distinctions – current/non-current, custody/non-custody, records/archives – may no longer apply. Various examples and arguments about how archivists at state and local government level, in universities, in local repositories, are ignoring the issues and do not have the skills or facilities to manage ERs. Penn 1993 describes a “leadership void” in addressing ERM from the 1960s onwards, but ignores reasons for failure of leadership – the fact that ‘leaders’ reflected practice in their own institutions. Very few interesting ERM projects, and most of these draw on Pitt/UBC projects; may be too little, too late, or not used by records professionals. Praiseworthy examples are CTG (SUNY – State University of New York) Models for Action project and Indiana University project, which took Pittsburgh functional requirements as starting point and approached records needs by testing and modifying these and other assumptions and highlighting needs for further work. This type of project needs to become the norm, but only twenty or so are being carried out worldwide while most archivists ignore ERM or hope that one of the projects will provide the ‘magic bullet’. InterPARES may have an impact on national archives, but these are very different from corporate and local levels. Archivists at all level need to have knowledge of working with ERM, “the authority ... that derives from informed experience”.

Cox, R. J. (2000) *'Searching for authority: archivists and electronic records in the new world at the fin-de-siecle'*, *First Monday*, 5 (1).

\$389 2000 HML

- *RIM professionals' RM role threatened by other professions as ERM emerges*

P.4 "The ubiquitous nature of IT and its fast development cycles have created confusion about the boundaries of specific professions and even their very nature." e.g. IT specialists, librarians, archivists, record managers, corporate systems staff. p.4 "much of the confusion about how these bodies deal with information seems to stem from semantic confusion surrounding the terms data, information, knowledge, record and document." see p7-14 for definitions. IT convergence is part of the issue causing these blurring of boundaries, i.e. the convergence of information management professions. P.6 "until very recently, a general ignorance of the value and importance of information within the organization." p.7 "We are now witnessing a profound change in the way in which organizations perceive, understand, and manage information. There is now a clear recognition of the value of information, the creation of new information, the retrieval of existing information, the storage of important information, and the disposal of redundant information. There is also greater awareness of the cost of not getting the right information to the right person at the right time. To fully reap the benefits of this change, a coordinated approach to the work done by the various information workers in the organization is essential." For records managers two concerns: their place in wider IM, and the skills to handle e-records. The IM professions have similar objectives and use similar technologies. Can they however define themselves as separate in this new world, or will they merge or will some become redundant? Professions are seeking to define their unique roles. P.16 "The ways in which data, information, and knowledge (as represented in documents) are dealt with by the various professions is perhaps more different and more distinct than before because of these new insights." What ever happens, it is important for these groups to work in partnership. Information management (IM) p. 10 "the enterprise wide planning, budgeting, organizing, staffing, directing, training and controlling of information, IM includes the management of various information resources". An umbrella term for all the individual professions. Often problematically IM is seen as the same as IT. Information resources management (IRM) p.10 "the planning, organizing, directing, and controlling of information resources within organizations" but intimately related to the supporting IT. Document management - includes but is not only records. P. 13 "viewing records (and documents) management as a continuum, which includes archival management" Knowledge management p.14 "encompasses what the individuals in the organization actually know about the business, its objectives, how it works, its relationship with competitors and customers, niche markets, and the like."

*Myburgh, S. (2000) 'The convergence of information technology and information management', Information Management Journal, 34 (2), pp. 4, 6-8, 10, 12-14, 16.*

\$421 2000 HLH

- *Need to develop national RM/archival professional infrastructure for ERM*
- *Need to build ERM skills into the RM/archival profession*
- *Training and CPD programmes on ERM for the RM/archival profession*

The achievements of the US NHPRC ((National Historical Publications and Records Commission)) in furthering research, knowledge and education particularly in the field of electronic records. Greatest challenge is to address issues relating to ERs and effectively utilize new technologies. Need to achieve critical mass in some areas, incl better education for RK professionals; this is being incorporated in graduate programmes but CPD needed for those already qualified. Need to involve other stakeholders, and to be able to explain ER challenges to them – notably computer scientists and computer science educators, since question of long-term access to software-dependent objects fundamental to ability to manage ERs. NHPRC particularly interested at present in research relating to preservation/access, user/creator support, identification of barriers to development, and necessary knowledge base for archivists dealing with ER. Clear that better education needed for archivists, allied professionals, and others with responsibility for records. Growing need for general and

specialized CPD, with approaching retirement dates for 'baby boomers' and resulting top-level vacancies.

*Newhall, A. C. (2000) 'The NHPRC in the new records age', American Archivist, 63 (1), pp. 67-89.*

\*444 2001 HH/H

- *RIM/RM/archival professions struggling with ERM*

ERM in hospitals and teleradiology - Based on PhD research. RM professionals have only recently started to grasp the full possibility of using electronic systems to capture records, including those that had not previously been amenable to capture. Electronic recordkeeping not only facilitates information access, it also brings information together in new ways. These factors impact both on the understanding of existing records and on user expectations. With increasing use of electronic methods, records managers need to reassess records in the context of new communication patterns and functions that these facilitate within organizations. Article examines trends in medical arena, particularly radiology. Records managers need to take into account the different functionality and new potential of electronic records and not treat them as merely replacing physical formats. They will need to re-analyze records series when they have changed to digital format, and understand the changing work practices. Changing technology and practice can also bring changes in organizational status and power relations.

*Yakel, E. (2001) 'An institutional view of electronic records management: hospitals and teleradiology', Information Management Journal, 35 (1), pp. 26, 28, 30, 32-23.*

\$404 2001 HMM

- *RIM professionals' RM role threatened by other professions as ERM emerges*

P.16 "Ironically, the rising importance of digital information presents both unprecedented opportunities and unprecedented challenges for information professionals." Perspectives of digital information: unrestrained enthusiasm, tempered enthusiasm, balanced view. P.16 "Many of the developments in the information field are playing out a high speed within what might be called the digital triangle: e-commerce, e-business and e-government." p.17 "Technology has made it easy to create, store, transmit, manipulate, customize, and use information. In a sense, as a society we have enough information technology but need more information savvy to filter, select, manage, and apply it wisely. That situation would appear to be a good opportunity for the ascendancy of information professionals. Instead, it is a time when many of the traditional information professions are re-examining their traditions and earnestly searching for new roles that will align information management with enterprise purposes." Factors that cause these problems include 1-7 headings copied from article: 1. Developments are open ended, change is constant. P.17 "by 2006, about one-half of the U.S. workforce will be employed by industries that are either major producers or intensive users of information technology and services." 2. Criteria for relevance is changing - pertinence, speed, ease of access and use. 3. The stakes are high. P.17 "Information management has moved from a secondary, support operation to one that is front line and high consequence and high profile." 4. Information is formless and formatless. P.17-18 "Digital information is not a good fit for the traditional 'containers', including records and books. ... Leaders of government and business are increasingly disinclined to draw distinctions among different types of information (e.g. records, documents, reports, books, e-mail, Web sites etc.). Hey all are, or at least seem like, sub-parts of the broad strategic resource: information." 5. Our field is becoming boundaryless. P.19 "It is increasingly challenging to describe what records managers do and how that differs from what other information professionals do. At the outer edge of their work, records managers overlap with systems analysts, legal experts, and program managers." 6. Measures of outcomes are lacking. i.e. the impact of their work on the bottom line, which puts them at a disadvantage. 7. Many professional associations trail rather than lead. So where should the information professionals engage with / influence this new situation? headings 1-6 copied from paper. 1. Where information policy is made. 2. Where information systems are designed. 3. Where

record meets information. P.20 "show the connection between records issues and the information initiative that the agency or office is undertaking." 4. Where customer meets institution. Transactions, customer information for competitive advantage, customer access to organisation-generated information etc. 5. Where the institution has its public face. RM and archiving of Web sites. 6. Where law and information intersect. RIM should be a partner of the organisation's legal office. The idea of an information proficient organisation p.22 "the ability of companies and other organizations to make optimal, systematic use of information to achieve strategic business goals". bullet points quoted from article \* Inspired, energetic, visionary leadership. \* A CEO and other executives who are information savvy. \* A notion of empowerment that includes valuing initiative, encouraging people to take responsibility for advancing organizational objectives, and providing people with the information need to act. \* An individual or office designated to lead and coordinate deployment and application of information resources. \* Information professionals who play clear, influential roles. \* Carefully developed, written information policies and plans. \* Defined information priorities that foster enterprise strategic advantage. \* Provisions for systematic management of records and archives. \* Routinely collects, analyzes, and uses information in key areas relating to customers, products, changes in the business environment, and other carefully defined areas. \* A corporate culture conducive to information sharing and use. & Uses appropriate information technology and analyzes specific information and application needs before developing technological solutions. \* Enterprise-wide provision for continuing education and updating and upgrading of skills so that employees can understand the strategic use of information and can take advantage of information technology. P.24 "The notion of information proficiency ... appears to be a way of giving information professionals a new base of operation within the swirling changes brought by e-business and e-government." RIM professionals should become advocates for the idea.

*Dearstyne, B. W. (2001) 'E-business, e-government, and information proficiency', Information Management Journal, 35 (4), pp. 16-20, 22, 24.*

\$445 2001 HML

- *RIM professionals' RM role threatened by other professions as ERM emerges*

Entire article focuses on using privacy rights to help RIM professionals reclaim ERM territory encroached on by IT. The emergence of electronic records brings the risk of records managers being sidelined by IT experts, who have the skill and power (though not the perspective and training) to make this a reality PE. Focusing on protecting privacy rights could give records managers the opportunity to avoid this fate. The right to privacy is a complex issue, and privacy concerns focus increasingly on information collected and stored in electronic form. Records managers, concerned as they are with managing electronic records, are partially responsible for protecting the personal information contained in them. The greatest advantage of electronic data objects – that they can be widely and easily shared to increase business efficiency – is the very thing that threatens the right to privacy of the individuals whose details are thus made accessible. IT and RM perspectives are very different ... Thus considerations of privacy do not come into the IT view of a record, which is focused on maintaining the integrity of the data, but form a natural part of the record manager's role. By formally accepting privacy protection as an element of responsibility, RIM can gain a unique and more crucial role within an organization. While some companies try to avoid privacy regulation through the use of 'opt-out' clauses, the burden of responsibility to maintain individuals' privacy should in fact lie with the organization. Trust is central to privacy concerns; where individuals feel their trust has been violated, records can provide evidence for or against this. RIM professionals should be aware of privacy concerns and ensure that correct oversight takes place."The case for linking electronic records and privacy is clear and distinct" p24

*Booz, C. R. (2001) 'Electronic records and the right to privacy', Information Management Journal, 35 (3), pp. 18, 20-12, 24.*

\$413 2001 HMM

- *Need to develop national RM/archival professional infrastructure for ERM*
- *Need to build ERM skills into the RM/archival profession*
- *Training and CPD programmes on ERM for the RM/archival profession*

Ten challenges for the archival profession. 7. "Generating more basic and applied research on archival aspects of information management". Research must be integral component; significant progress has been made in developing research infrastructure, but research community still small. Lack of adequate funding. Issues need to be made easily understandable by funding bodies, associated with national issues – security, privacy, info life-cycle, citizen access, intellectual property rights; showing relationship between records, information, and knowledge. Much vital research will be carried out beyond archival discipline, need to influence decision makers and ensure that others understand archival concerns. 8. "Strengthening our national archival organization". Growth of SAA central to profession's capacity to address challenges CP. 9. "Augmenting the range of skills, knowledge, and resources engaged in the archival enterprise" CP. Archival programmes need non-archivists in and beyond related fields, and a wide diversity of experience and expertise. Increase public awareness, influence policy and laws, build links with kindred organizations. Need suitable technological infrastructure / capacity for managing recorded information. Archivists need education and expertise beyond the purely archival, with CPD throughout career.

*Hickerson, H. T. (2001) 'Ten challenges for the archival profession', American Archivist, 64 (1), pp. 6-16.*

\*224 2001 HH/H

- *Disjunction between RM theorist and RM practitioner understanding of ERM aspects*

Provides empirical evidence for possible disjunction between theorist and professional practitioner understanding in relation to central elements of primary ERM models. Survey to study RM practitioners' perceptions. There are a number of major ERM research projects - None have examined extent to which records users/creators/managers understand project outcomes and definitions, or how understanding actually maps to practice and perceptions. Article examines practitioner terminology in relation to authenticity with aim of using this to build framework to assist in mapping correspondences between theoretical constructs and actual language/constructs. Methodology: Questionnaire posted to eight listserv groups for various information professionals. 104 responses (42 rec mgrs/archivists, 30 librarians, 6 analysts/programmers, 5 administrators, 4 info managers, 2 attorneys, 15 others). Responses indicated that a large majority of subjects had considered authenticity issues relating to paper (76%) and electronic (80%) records, but that far fewer had ever been in a situation where they had been called upon to prove authenticity (44.23%, 31.73%). Proportions similar for paper and electronic records, though issues for former centre around supporting litigation and for latter around authenticating, validating and ensuring accuracy. Responses also indicate that electronic records less likely to be seen as self-validating, so outside confirmation of accuracy etc more often sought. Findings: concepts and language used not only differ between disciplines, but also fail to coincide with those of project theoreticians – practitioners see authenticity in terms of accuracy, originality and verification rather than evidence, warrant, auditability etc. Understanding linked closely to working practice and context of experience. Significant difference between language used by practitioners and theorists, even where same terms.

*Park, E. G. (2001) 'Understanding 'authenticity' in records and information management: analyzing practitioner constructs', American Archivist, 64 (2), pp. 270-291.*

\$765 2004 HLL

- *RIM professionals' RM role threatened by other professions as ERM emerges*
- *RIM professions need training in IT*

Interviews with three chief information officers: CIO1 = School + Storage Networking Industry Association; CIO2 = Law firm; CIO3 = National Archives and Records Administration (NARA). APPROACH TO MANAGING E-RECORDS. CIO1: waking up to the need for a strategy for ERM. CIO2: have an ERM policy. CIO3: Piloting software, but current policy is printing and filing. KEY TO ERM. CIO1: leadership buy-in. articulating cost-benefits and risks. Capture metadata in transparent way. Flexible for individual organisation's needs. CIO2: Deletion of spam/junk etc. CIO3: p.32 "simultaneously dealing with people, process, and technology." User buy-in. integration of RM into enterprise activities. Integrated software (RM and office etc.). BIGGEST CHALLENGE IN ERM. CIO1: cost and lack of desire to fund this. CIO2: Selective deletion of records. CIO3: integrated software. easy natural methods of filing. BIGGEST CHALLENGES OF COMPLIANCE. CIO1: Email can contain high-evidentiary material, but how identify, capture and archive? CIO2: confidentiality. CIO3: Federal Records ACT and NARA RM regs. WHO SETS ERM POLICIES/PROCEDURES. CIO1. Multi-departmental. CIO2. legal counsel, records dept, IT all together. CIO3. Multidepartmental. lead by RM. WHAT HELP REQUIRED FROM RM / IT. CIO1. p.34 "I want the philosophical and legal framework of a clearly articulated records management policy to drive our technology, not vice-versa." CIO2. RM staff to become more familiar with IT. RM to become responsible for e-records as well as paper. CIO3. RM set policies/strategies, IT helps to implement them. RELATIONSHIP BETWEEN RM / IT. CIO1. Good multidepartmental working. CIO2. Both IT and RM report to me, and library too. CIO3. Both IT and RM report to the CIO. SKILLS. CIO1. RM skills: understand best practice and policies for type of organisation working in and media using. IT: humility, listening, IT appropriate for the organisation. CIO2. RM: IT knowledge, assertion, proactive. IT: inform RM about IT, open up applications for RM input. CIO3. RM: Understand business process. Know IT speak. IT: Understand RM and technologies that can do RM. Communicate in non-technical language. STUDY: Recent study commissioned by ARMA from Forrester Consulting no other details given. Results: p.31 "\*\* Records and information (RIM) professionals are losing their influence in records management as ERM emerges. \* Business and IT perceive few challenges to ERM, other than organizational priorities and budget; unlike business and IT, RIM professionals see many challenges surrounding RIM. \* Business and IT do not fully understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

*Swartz, N. (2004) 'From the mouths of CIOs', Information Management Journal, 38 (5), pp. 30-36.*

\$523 2006 HMM

- *Need to build ERM skills into the RM/archival profession*

Author is the Director of the French National Archives and article based on keynote speech at event hosted by the Archives. Over last 3–4 decades, archivists have been aware of the need to get involved in managing information at an earlier stage, and not just collecting it into archives at the end of its active use. In the case of electronic records, this is needed so that necessary metadata relating to classification, creation, use, and format can be captured. But poor IM common in both the public and corporate sectors – poor filing, classification, preservation, lack of system for e-records and e-mails, inaccessibility of material on personal drives. No simple mapping of the English-language concept of 'record' to the French uses of 'document' and 'archive. 'Records management' used in its English form as no exact equivalent. Different structures for handling the interface between RM and archiving. "Different worlds" p78 will have to meet: EDMS, documentation professionals (French 'documentalistes' approx. English 'information officers'), and archives. Software relating to the first two activities/groups has been gradually acquiring functionality to deal with the electronic records life-cycle; archival practice has for long been involved in developing standards and procedures related to the life-cycle, description, provenance, and business

context, but still often works with manual rather than digital tools. Although involved with intermediate and accessioned archives, French public sector archivists have little interaction with current records. Since 2001, there is an increasing engagement with semi-current records in the form of retention schedules, the provision of semi-current archival services in public administration, and setting up networks. Occasionally, archivists are intervening at creation, as in the Ministries of Foreign Affairs and of Justice, and in some private businesses. Future developments will bring the different worlds closer, and they are already being drawn together through a flourishing electronic document software supply market in the world of GEIDE (Gestion électronique d'informations et de documents existant). To facilitate this, a better understanding of 'records management' will have to be disseminated. The existing expertise in the sphere of 'documentation', particularly relating to file-plans and indexing, will need to be exploited. There will also have to be increased understanding and exploitation of archival activities and expertise: metadata and descriptive standards, long-term preservation, migration, authenticity, and public access.

*de Boisdeffre, M. (2006) 'The importance of records management in France', Records Management Journal, 16 (2), pp. 76-81.*

## 5.2 Differing views on ERM between records professionals and other professionals

### Covers:

- other professions/stakeholders have different perceptions of ERM compared with RIM professionals
- business and IT perceive few challenges to ERM, RIM professions see many challenges
- business and IT do not fully understand what ERM is
- librarians do not understand RM requirements

\$406 2000 HMM

- *Other professions/stakeholders have different perceptions of ERM compared with RIM professionals*

"looks at issues facing recordkeeping in an electronic transactions environment, relating this to Australian Federal government operations. It also challenges some of the archives and records professions' views and expectations about how others might see the importance in the detail of electronic recordkeeping, especially in an era of "light-touch legislation to enable the development and uptake of e-commerce" (abstract). Discusses how RK principles were not considered in Australian government's development of the Electronic Transactions Act 1999 to support e-commerce by providing "that electronic and paper transactions are treated equally by the law through the specification of certain minimum requirements." (p97) Believes that economics, and the "immense potential loss of information and evidence inherent in e-commerce is the trigger for governments to realise sound recordkeeping practices are needed." Explores how records professionals were not involved in developing the ET Act and, that instead of bemoaning the fact they need to find ways of "strengthening their position" (p103) which will involve raising the profile of RK, and making it accessible to others (speaking a language that can be understood). Also discusses stakeholders & their roles in e-commerce (government, law & policy makers, RK professionals, industry groups, the public, government agencies, government archives & records agencies).

*Stuckey, S. & Liddell, A. (2000) 'Electronic business transactions and recordkeeping: serious concerns; realistic responses', Archives and Manuscripts, 28 (2), pp. 92-109.*

\*730 2001 HH/H

- *Librarians do not understand RM requirements*

While library records / archives have in the past been used in writing library history, they now need also to provide evidence for accountability of libraries as public bodies. Primary

purpose of research: "to determine the extent to which library records were being maintained and the major categories of records" p6. Secondary goals: (a) determining specific RK policies / plans; (b) awareness of current legislation; (c) day-to-day use of non-current records/archives. Also, how librarians deal with ERs and ERKS. Methodology. Survey population: 44 public libraries in south-western Pennsylvania participating in Electronic Information Network (EIN). Questionnaires. Lack of awareness of legislation (Electronic Communications Privacy Act 1986). Also lack of awareness of wider municipal policies, to which libraries should be subject – extent of inconsistencies not known, but will surely emerge in future. Also, manual and guides for librarians for internet, along with other policies, often apply only to patrons and not to library staff / records. Survey shows that although records are being maintained, best practices are not being followed. Inconsistent practices and not a current managerial focus; RK not understood as a form of accountability. Little awareness of records as vital to business continuity. Surveys personally addressed to library directors, but not known who actually completed them; even so, number of "unsure" response to matters concerning policy, legislation, and ERM disturbing. Given that most libraries said directors were responsible for records, this shows real managerial problems. May show lack of attention in library education to importance of RK. Part of daily operational activities that is often overlooked, but librarians nonetheless accountable as public servants.

*Menkus, B. (1996) 'Defining electronic records management', Records Management Quarterly, 30 (1), pp. 38-42.*

\$765 2004 HLL

- *Business and IT perceive few challenges to ERM, RIM professionals see many challenges*
- *Business and IT do not fully understand what ERM is*

Interviews with three chief information officers: CIO1 = School + Storage Networking Industry Association; CIO2 = Law firm; CIO3 = National Archives and Records Administration (NARA). APPROACH TO MANAGING E-RECORDS. CIO1: waking up to the need for a strategy for ERM. CIO2: have an ERM policy. CIO3: Piloting software, but current policy is printing and filing. KEY TO ERM. CIO1: leadership buy-in. articulating cost-benefits and risks. Capture metadata in transparent way. Flexible for individual organisation's needs. CIO2: Deletion of spam/junk etc. CIO3: p.32 "simultaneously dealing with people, process, and technology." User buy-in. integration of RM into enterprise activities. Integrated software (RM and office etc.). BIGGEST CHALLENGE IN ERM. CIO1: cost and lack of desire to fund this. CIO2: Selective deletion of records. CIO3: integrated software. easy natural methods of filing. BIGGEST CHALLENGES OF COMPLIANCE. CIO1: Email can contain high-evidentiary material, but how identify, capture and archive? CIO2: confidentiality. CIO3: Federal Records ACT and NARA RM regs. WHO SETS ERM POLICIES/PROCEDURES. CIO1. Multi-departmental. CIO2. legal counsel, records dept, IT all together. CIO3. Multidepartmental. lead by RM. WHAT HELP REQUIRED FROM RM / IT. CIO1. p.34 "I want the philosophical and legal framework of a clearly articulated records management policy to drive our technology, not vice-versa." CIO2. RM staff to become more familiar with IT. RM to become responsible for e-records as well as paper. CIO3. RM set policies/strategies, IT helps to implement them. RELATIONSHIP BETWEEN RM / IT. CIO1. Good multidepartmental working. CIO2. Both IT and RM report to me, and library too. CIO3. Both IT and RM report to the CIO. SKILLS. CIO1. RM skills: understand best practice and policies for type of organisation working in and media using. IT: humility, listening, IT appropriate for the organisation. CIO2. RM: IT knowledge, assertion, proactive. IT: inform RM about IT, open up applications for RM input. CIO3. RM: Understand business process. Know IT speak. IT: Understand RM and technologies that can do RM. Communicate in non-technical language. STUDY: Recent study commissioned by ARMA from Forrester Consulting no other details given. Results: p.31 "\*\* Records and information (RIM) professionals are losing their influence in records management as ERM emerges. \* Business and IT perceive few challenges to ERM, other than organizational priorities and budget; unlike business and IT, RIM professionals see many challenges surrounding RIM. \* Business and IT do not fully

understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

Swartz, N. (2004) 'From the mouths of CIOs', *Information Management Journal*, 38 (5), pp. 30-36.

### 5.3 Training in records management for other professionals

#### Covers:

- RM professionals need to make records management understandable to others
- extend RM/ERM knowledge to other professions

\$1106 1996 HML Critique of 720

- *Extend RM/ERM knowledge to other professions*

Response to article by Menkus which claimed inactivity on ERM for last 25 years until recent 'rediscovery'. Menkus suggests that records managers have new things to learn and new organizational roles to play. Provides brief history of RM and life-cycle, then describes ERM in these terms, seeing little difference in the processes. Argument is that while records managers need to acquaint themselves with record-creating technologies, nature of RM has not changed. Current electronic formats have their paper equivalents. Presents reassuring picture and message that the traditional records manager can easily make the transition into the electronic environment. Critique: M's assertion that nothing has happened in last 25 years may well apply to RM profession, but not to archival, where the same period saw a great deal of activity. Late 1960s saw first attempts to manage 'machine-readable' records. During 1970s and 1980s: debates about validity of applying archival principles to electronic systems; first manuals of codified practice; efforts to establish electronic archives programmes; sustained CPD workshops and institutes to provide skills for archivists. 1990s has seen broad new developments in the archival profession, particularly definition of records as transactions with structure, content, and context. There have been proposals to drop custodial approach, with archival opinion divided on issue; but future RK systems may dictate a post-custodial approach that can maintain integrity of records. What unifies both sides is that fundamental nature of records must be preserved, with mechanisms and details to be worked out later. M's point that: "Both archivists and records managers, for very different reasons ... have stressed the administration of the physical, paper record as the priority of their programs rather than reflecting on the continuing value of records for evidence, accountability, and memory purposes." This stress a hindrance in seeing larger responsibilities and cause of relegation to clerical functions. Need to stress characteristics and importance of records, particularly in relation to records and RK systems role in supporting organizational and social activities. Avoiding this has led to records managers focussing on efficiency and economy, and archivists on cultural and research values, rather than stressing role of records in capturing essential evidence and providing foundation for accountability and corporate memory. Re-defining ERM is very important. Need to develop coherent approach in response to increasing prevalence of electronic information and ERKS, declining costs, legal environment. Use of technology to maintain corporate memory has been recommended by non-records professionals; archivists / records managers should have been doing this. Records at centre of corporate memory: artificial distinction between archives and RM programmes should be eliminated. M's scenario has ERM ignored by RM profession, but principles unchanged. Instead, period of great activity leading to breakthroughs in concept of records and roles of records professionals. RKs need to stress records and RK systems, not just acquaint themselves with IT developments.

Cox, R. J. (1997) 'Electronic systems and records management in the information age: an introduction', *Bulletin of the American Society for Information Science*, 23 (5), pp. 7-9.

\$406 2000 HMM

- *RM professionals need to make records management understandable to others*

“looks at issues facing recordkeeping in an electronic transactions environment, relating this to Australian Federal government operations. It also challenges some of the archives and records professions’ views and expectations about how others might see the importance in the detail of electronic recordkeeping, especially in an era of “light-touch legislation to enable the development and uptake of e-commerce” (abstract). Discusses how RK principles were not considered in Australian government’s development of the Electronic Transactions Act 1999 to support e-commerce by providing “that electronic and paper transactions are treated equally by the law through the specification of certain minimum requirements.” (p97) Believes that economics, and the “immense potential loss of information and evidence inherent in ecommerce is the trigger for governments to realise sound recordkeeping practices are needed.” Explores how records professionals were not involved in developing the ET Act and, that instead of bemoaning the fact they need to find ways of “strengthening their position” (p103) which will involve raising the profile of RK, and making it accessible to others (speaking a language that can be understood). Also discusses stakeholders & their roles in e-commerce (government, law & policy makers, RK professionals, industry groups, the public, government agencies, government archives & records agencies).

*Stuckey, S. & Liddell, A. (2000) 'Electronic business transactions and recordkeeping: serious concerns; realistic responses', Archives and Manuscripts, 28 (2), pp. 92-109.*

\$421 2000 HLH

- *Extend RM/ERM knowledge to other professions*

The achievements of the US NHPRC ((National Historical Publications and Records Commission)) in furthering research, knowledge and education particularly in the field of electronic records. Greatest challenge is to address issues relating to ERs and effectively utilize new technologies. Need to achieve critical mass in some areas, incl better education for RK professionals; this is being incorporated in graduate programmes but CPD needed for those already qualified. Need to involve other stakeholders, and to be able to explain ER challenges to them – notably computer scientists and computer science educators, since question of long-term access to software-dependent objects fundamental to ability to manage ERs. NHPRC particularly interested at present in research relating to preservation/access, user/creator support, identification of barriers to development, and necessary knowledge base for archivists dealing with ER. Clear that better education needed for archivists, allied professionals, and others with responsibility for records. Growing need for general and specialized CPD, with approaching retirement dates for ‘baby boomers’ and resulting top-level vacancies.

*Newhall, A. C. (2000) 'The NHPRC in the new records age', American Archivist, 63 (1), pp. 67-89.*

\$413 2001 HMM

- *Extend RM/ERM knowledge to other professions*

Ten challenges for the archival profession. 7. “Generating more basic and applied research on archival aspects of information management”. Research must be integral component; significant progress has been made in developing research infrastructure, but research community still small. Lack of adequate funding. Issues need to be made easily understandable by funding bodies, associated with national issues – security, privacy, info life-cycle, citizen access, intellectual property rights; showing relationship between records, information, and knowledge. Much vital research will be carried out beyond archival discipline, need to influence decision makers and ensure that others understand archival concerns. 8. “Strengthening our national archival organization”. Growth of SAA central to profession’s capacity to address challenges CP. 9. “Augmenting the range of skills, knowledge, and resources engaged in the archival enterprise” CP. Archival programmes need non-archivists in and beyond related fields, and a wide diversity of experience and

expertise. Increase public awareness, influence policy and laws, build links with kindred organizations. Need suitable technological infrastructure / capacity for managing recorded information. Archivists need education and expertise beyond the purely archival, with CPD throughout career.

*Hickerson, H. T. (2001) 'Ten challenges for the archival profession', American Archivist, 64 (1), pp. 6-16.*

\$765 2004 HLL

- *Extend RM/ERM knowledge to other professions*

Interviews with three chief information officers: CIO1 = School + Storage Networking Industry Association; CIO2 = Law firm; CIO3 = National Archives and Records Administration (NARA). APPROACH TO MANAGING E-RECORDS. CIO1: waking up to the need for a strategy for ERM. CIO2: have an ERM policy. CIO3: Piloting software, but current policy is printing and filing. KEY TO ERM. CIO1: leadership buy-in. articulating cost-benefits and risks. Capture metadata in transparent way. Flexible for individual organisation's needs. CIO2: Deletion of spam/junk etc. CIO3: p.32 "simultaneously dealing with people, process, and technology." User buy-in. integration of RM into enterprise activities. Integrated software (RM and office etc.). BIGGEST CHALLENGE IN ERM. CIO1: cost and lack of desire to fund this. CIO2: Selective deletion of records. CIO3: integrated software. easy natural methods of filing. BIGGEST CHALLENGES OF COMPLIANCE. CIO1: Email can contain high-evidentiary material, but how identify, capture and archive? CIO2: confidentiality. CIO3: Federal Records ACT and NARA RM regs. WHO SETS ERM POLICIES/PROCEDURES. CIO1. Multi-departmental. CIO2. legal counsel, records dept, IT all together. CIO3. Multidepartmental. lead by RM. WHAT HELP REQUIRED FROM RM / IT. CIO1. p.34 "I want the philosophical and legal framework of a clearly articulated records management policy to drive our technology, not vice-versa." CIO2. RM staff to become more familiar with IT. RM to become responsible for e-records as well as paper. CIO3. RM set policies/strategies, IT helps to implement them. RELATIONSHIP BETWEEN RM / IT. CIO1. Good multidepartmental working. CIO2. Both IT and RM report to me, and library too. CIO3. Both IT and RM report to the CIO. SKILLS. CIO1. RM skills: understand best practice and policies for type of organisation working in and media using. IT: humility, listening, IT appropriate for the organisation. CIO2. RM: IT knowledge, assertion, proactive. IT: inform RM about IT, open up applications for RM input. CIO3. RM: Understand business process. Know IT speak. IT: Understand RM and technologies that can do RM. Communicate in non-technical language. STUDY: Recent study commissioned by ARMA from Forrester Consulting no other details given. Results: p.31 "\*\* Records and information (RIM) professionals are losing their influence in records management as ERM emerges. \* Business and IT perceive few challenges to ERM, other than organizational priorities and budget; unlike business and IT, RIM professionals see many challenges surrounding RIM. \* Business and IT do not fully understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

*Swartz, N. (2004) 'From the mouths of CIOs', Information Management Journal, 38 (5), pp. 30-36.*

\$523 2006 HMM

- *Extend RM/ERM knowledge to other professions*

Author is the Director of the French National Archives and article based on keynote speech at event hosted by the Archives. Over last 3–4 decades, archivists have been aware of the need to get involved in managing information at an earlier stage, and not just collecting it into archives at the end of its active use. In the case of electronic records, this is needed so that necessary metadata relating to classification, creation, use, and format can be captured. But poor IM common in both the public and corporate sectors – poor filing, classification, preservation, lack of system for e-records and e-mails, inaccessibility of material on personal drives. No simple mapping of the English-language concept of 'record' to the French uses of 'document' and 'archive. 'Records management' used in its English form as no exact

equivalent. Different structures for handling the interface between RM and archiving. "Different worlds" p78 will have to meet: EDMS, documentation professionals (French 'documentalistes' approx. English 'information officers'), and archives. Software relating to the first two activities/groups has been gradually acquiring functionality to deal with the electronic records life-cycle; archival practice has for long been involved in developing standards and procedures related to the life-cycle, description, provenance, and business context, but still often works with manual rather than digital tools. Although involved with intermediate and accessioned archives, French public sector archivists have little interaction with current records. Since 2001, there is an increasing engagement with semi-current records in the form of retention schedules, the provision of semi-current archival services in public administration, and setting up networks. Occasionally, archivists are intervening at creation, as in the Ministries of Foreign Affairs and of Justice, and in some private businesses. Future developments will bring the different worlds closer, and they are already being drawn together through a flourishing electronic document software supply market in the world of GEIDE (Gestion électronique d'informations et de documents existant). To facilitate this, a better understanding of 'records management' will have to be disseminated. The existing expertise in the sphere of 'documentation', particularly relating to file-plans and indexing, will need to be exploited. There will also have to be increased understanding and exploitation of archival activities and expertise: metadata and descriptive standards, long-term preservation, migration, authenticity, and public access.

*de Boisdeffre, M. (2006) 'The importance of records management in France', Records Management Journal, 16 (2), pp. 76-81.*

#### 5.4 Partnership working

##### Covers:

- need cooperation / closer working between RM/IM/IS/IT professionals
- need to bring records managers, archivists and information officers into the 'same world'
- relationships between record managers and other stakeholders may prevent partnership working

\$463 1997 MLM

- *Need cooperation / closer working between RM/IM/IS/IT professionals*

Descriptive of the state of play of ERM at the time: The speed of change in the development of electronic records has caused archivists and records managers to re-evaluate their approaches for managing these records and prompted new writing and research. From 1960s to 1980s, ERM was largely ad hoc, though with leadership from National Archives in US and Canada. Inability to cope with rapid changes led to professional insecurity among recordkeepers. Research efforts first started with NHPRC co-sponsoring a conference on ER research issues in 1991, which drew up a research agenda that influenced NHPRC priorities in funding projects focussed more on consensus regarding the role of RK (between RM professionals) than on solving all ERM issues. Similar conferences in 1996 (University Michigan) and 1997 (University Pittsburgh) evidence the need for RKs to work quickly and co-operate with other IM/IT professionals. Further work using functional requirements will involve recordkeepers' having to ally themselves with other partners among the many groups involved in IT and IM strategy, development, and practice

*Cox, D. R. J. (1996) 'Re-defining electronic records management', Records Management Quarterly, 30 (4), p. 8.*

\$700 2000 HMH

- *Need cooperation / closer working between RM/IM/IS/IT professionals*

Electronic records retention: fourteen basic principles. Three basic functional requirements for ERMS: (1) Automatic migration of docs and data from on-line to off-line media as dictated

by stage in life-cycle; (2) Automatic deletion at end of retention period; (3) Permanent retention of archival records. Need for closer relationship between records managers and IT/IS specialists, best accomplished by working in partnership to develop and implement systems. (6) Determine retention periods based on conceptually sound methodology. This involves: Three principles and Four further rules: (iv) develop consensus among responsible parties. (13) Retain e-mail under stringent records management controls. Users assume that their e-mails are private, and the nature of e-mail encourages informal modes of expression. (14) Retain PC-based electronic records based on official records status. PC-based data a problem as users tend to regard them as personal.

*Stephens, D. O. (2000) 'Electronic records retention: fourteen basic principles', Information Management Journal, 34 (4), p. 38+ (11 pages).*

\*456 2000 HHM

- *Relationships between record managers and other stakeholders may prevent partnership working*

Pharmaceutical industry heavily regulated and, for commercial reasons, receptive to the use of new technology such as the use of electronic signatures for submitting to regulatory authorities. Survey carried out for MSc dissertation. "Relationships between major players and records managers may work against establishing productive partnerships".

*Whitman, J. (2000) 'Electronic signatures in the pharmaceutical industry: wider issues dominate over the technical and practical?', Records Management Journal, 10 (1), pp. 35-48.*

765 2004 HLL

- *Need cooperation / closer working between RM/IM/IS/IT professionals*

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understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

Swartz, N. (2004) *'From the mouths of CIOs'*, *Information Management Journal*, 38 (5), pp. 30-36.

#### \$523 2006 HMM

- *Need to bring records managers, archivists and information officers into the 'same world'*

Author is the Director of the French National Archives and article based on keynote speech at event hosted by the Archives. Over last 3–4 decades, archivists have been aware of the need to get involved in managing information at an earlier stage, and not just collecting it into archives at the end of its active use. In the case of electronic records, this is needed so that necessary metadata relating to classification, creation, use, and format can be captured. But poor IM common in both the public and corporate sectors – poor filing, classification, preservation, lack of system for e-records and e-mails, inaccessibility of material on personal drives. No simple mapping of the English-language concept of 'record' to the French uses of 'document' and 'archive. 'Records management' used in its English form as no exact equivalent. Different structures for handling the interface between RM and archiving. "Different worlds" p78 will have to meet: EDMS, documentation professionals (French 'documentalistes' approx. English 'information officers'), and archives. Software relating to the first two activities/groups has been gradually acquiring functionality to deal with the electronic records life-cycle; archival practice has for long been involved in developing standards and procedures related to the life-cycle, description, provenance, and business context, but still often works with manual rather than digital tools. Although involved with intermediate and accessioned archives, French public sector archivists have little interaction with current records. Since 2001, there is an increasing engagement with semi-current records in the form of retention schedules, the provision of semi-current archival services in public administration, and setting up networks. Occasionally, archivists are intervening at creation, as in the Ministries of Foreign Affairs and of Justice, and in some private businesses. Future developments will bring the different worlds closer, and they are already being drawn together through a flourishing electronic document software supply market in the world of GEIDE (Gestion électronique d'informations et de documents existant). To facilitate this, a better understanding of 'records management' will have to be disseminated. The existing expertise in the sphere of 'documentation', particularly relating to file-plans and indexing, will need to be exploited. There will also have to be increased understanding and exploitation of archival activities and expertise: metadata and descriptive standards, long-term preservation, migration, authenticity, and public access.

de Boisdeffre, M. (2006) *'The importance of records management in France'*, *Records Management Journal*, 16 (2), pp. 76-81.

## 6 USERS / STAFF

### 6.1 Wide range of staff and other stakeholders (patients, external contractors) using complex database systems

\$701 2001 HMM

- *Wide range of staff and other stakeholders (patients, external contractors) using complex database systems*

Electronic record challenges for clinical systems. Article deals with US legal requirement, particularly FDA's Electronic Records/Electronic Signatures Rule 21 CFR 11 (Part 11). Clinical practice "heavily data-oriented" and interactions and effects within systems are complex and not always obvious. p721. Variety of staff involved: While lab systems tend to have very few users, large clinical d/b systems are interacted with by multiple staff, both users and systems / facilities support, sometimes at multiple locations. Lab/manufacturing systems used primarily by permanent employees, clinical systems by far wider user base, including temporary staff, contractors, and patients. Has implications for training, support, access, and security. (7) Identifying systems owners for cross-functional systems. "It cannot be stated enough that representation and involvement from the business end users are critical in a successful implementation of a validated system" p728. Part 11 compliance not the sole responsibility of IT/IM. Not always easy to determine system owner; high-level management sponsor and cross-functional project team key. (8) Delegation to external parties. It is necessary to ensure that the activities of external contractors / parties are validated in line with the sponsor's obligations and requirements. Outsourced functions can include research (the use of Contract Research Organizations – CROs), system development, support, and validation activities (though the sponsor's obligations under the Rule mean that the latter cannot be wholly outsourced)

*Olson, L. (2001) 'Electronic record challenges for clinical systems', Drug Information Journal, 35 (3), pp. 721-730.*

### 6.2 Managing personal digital materials

\$522 2006 MML

- *Managing personal digital materials*

Personal electronic archives. Research libraries - Another emerging area is the development of collecting policies for documents created in the new media, "electronic personal archives" of text and images created in digital form. Compared to the government and corporate sectors, there are very few guidelines for dealing with electronic texts and artefacts acquired from individuals. Personal digital materials present major problems compared with their physical equivalent: they come in a variety of hardware and software, often obsolete, which is difficult to access and cannot simply be stored – unusable – in a box. UK Paradigm Project, carried out by Oxford and Manchester universities on the electronic personal papers of a number of politicians; the project hoped to develop guidance and best practice CP

*Burrows, T. (2006) 'Personal electronic archives: collecting the digital me', OCLC Systems and Services, 22 (2), pp. 85-88.*

### 6.3 Attitudes and perceptions

#### Covers:

- cognitive aspects of IT use / ERM
- end-users' attitudes to computer use and e-records
- user acceptance of electronic records / ERM
- computers have brought individualisation to the conducting of business processes
  
- personalisation of corporate records in e-environment: end users see the records as 'theirs', not as a corporate resource
- control of e-communication conflicts with the spontaneity and informality that make it so useful and popular in the first place
- information management is not a high priority for staff
- staff perceive ERM as a threat

\*268 1998 HH/H

Staff perceive ERM as a threat

Ethnographic study of use of AP Lotus NOTES in a small semi-autonomous section of the Irish civil service. Role of unit was to examine disagreements about claims for services or benefits. Three months of ethnographic participant-observation by a single researcher looking at work practices and social interactions followed by interview with all staff members. All staff also completed two structured questionnaires: (i) use of different communication modes (face-to-face, email, phone) for work and social interaction; (ii) ranking a list of work and social contacts. A 2 month log of email traffic was examined. P.235 "meta-information contained in paper case files is perceived as necessary for the work of the organization, thus restricting the use of electronic case files in NOTES as a shared information system. However, this reliance on paper files derives not only from the information rich properties of paper documents, but also from the desire of some workers to protect their occupational status by defining, as necessary for their job, information which is only available in paper documents and which only they can interpret. This dependence on paper documents also reduces the amount of information that can be share within the organization ... only if the perceived threat posed by the information system were reduced in some way would user innovations in work practices and greater sharing of information within the organization become possible."

*Komito, L. (1998) 'Paper work and electronic files: defending professional practice', Journal of Information Technology, 13 (4), pp. 235-246.*

\*40 1999 HHM

- *End-users' attitudes to computer use and e-records*

Theory of what changes will result from electronic market places. In Economics, public administration and society. Then explored these via questionnaire study in the city of Pfullendorf, Germany. 153 companies, 228 citizens, 136 students, all civil servants. 27% companies using Web as info provision but not for transactions. Citizens positive towards e-info (although 75% get info via phone), but not yet confident in use of online services. Recommendations made to city: Advice for companies on Internet technology should be provided. Should found a technology and innovation centre, to act as a facilitator of the setting up of online services and transactions.

*Semar, W. (1999) 'An empirical study of the impact of electronic market places', Australian Academic and Research Libraries, 30 (1), pp. 30-39.*

\$442 1999 HMM

- *Personalisation of corporate records in e-environment: end users see the records as 'theirs', not as a corporate resource*

Personal business records in an electronic environment. Ownership. An organization owns all records created or maintained within it. This remains the case with electronic records, but the situation is less clear-cut and policy much harder to enforce. This arises from the ease with which files can be copied, by the fact that many employees now work from home, and because of the perception of the PC as actually 'personal'. The organization is still responsible for all of these 'personal' copies held at home or on hard drives, perhaps inaccessible or past their retention period. Employee mind-set will need to be changed as well, so that they are persuaded to apply RK principles to electronic records as they did to paper records.

*Sanders, R. L. (1999) 'Personal business records in an electronic environment', Information Management Journal, 33 (4), pp. 60-63.*

\$700 2000 HMH

- *Personalisation of corporate records in e-environment: end users see the records as 'theirs', not as a corporate resource*
- *Control of e-communication conflicts with the spontaneity and informality that make it so useful and popular in the first place*

Electronic records retention: fourteen basic principles. Three basic functional requirements for ERMS: (1) Automatic migration of docs and data from on-line to off-line media as dictated by stage in life-cycle; (2) Automatic deletion at end of retention period; (3) Permanent retention of archival records. Need for closer relationship between records managers and IT/IS specialists, best accomplished by working in partnership to develop and implement systems. (6) Determine retention periods based on conceptually sound methodology. This involves: Three principles and Four further rules: (iv) develop consensus among responsible parties. (13) Retain e-mail under stringent records management controls. Users assume that their e-mails are private, and the nature of e-mail encourages informal modes of expression. (14) Retain PC-based electronic records based on official records status. PC-based data a problem as users tend to regard them as personal.

*Stephens, D. O. (2000) 'Electronic records retention: fourteen basic principles', Information Management Journal, 34 (4), p. 38+ (11 pages).*

\*625 2001 HH/H

- *End-users' attitudes to computer use and e-records*

"longitudinal study into primary care practitioners' views of an electronic medical records (EMR) system for maternity patients" (p103) in a New Zealand hospital context. METHOD: Study adapted Davis' Technology Acceptance Model (TAM). RESULTS: No significant differences in terms of demographic data; respondents had limited existing experience of EMRs. GENERAL ATTITUDES: low level of confidence in EMRs; use of system dependent on personal costs (time & money); would need to demo BENEFITS to THEM & PATIENTS before they would use; less keen to use if only beneficiary were the organisation. Perceived ease of use & usefulness were both very important; system's ability to improve patient care & reduce or simplify respondents' work were more important than admin/legal benefits. 4 aspects of SYSTEMS ACCEPTABILITY examined: (i) classes of people with access – most favoured differential access to system and data content; (ii) type of info entered – less consensus on related info (e.g. sexual health, social history) being entered; (iii) security – very important to be confident about data security & accuracy; (iv) use of info stored – to be used for patient care but less certain about use for audit, research or teaching, admin or finance. INTERESTING: 82% "indicated that in some circumstances they would only enter limited and incomplete information into the system" and pass sensitive information by phone or in person (p105). Consistence with other research findings shows that "end-user participation in the initial system design would incline them to use the system" (106).

“responses highlight the importance of considering not only the technical characteristics of the system, but also organizational politics and professional loyalties when implementing information systems.” DISCUSSION section: “For many years now it has been recognized that systems which are technically adequate often fail because of a lack of user acceptance. Proponents of Soft System Methodologies (Checkland & Scholes 1991) have long argued that the technical aspects of an information system cannot be considered in isolation from the social and organisational context in which the system is embedded since the social and the technical systems influence each other in a reciprocal manner. This cause of failure is particularly common with complex inter-organizational systems or distributed systems... which link either different organizations or different branches of the same organization. Such systems are prone to various technical and organizational problems such as different and incompatible technologies, inadequate training and support for the small units, different working practices and different attitudes towards computerization.” Davis’ model need adapting to include system acceptability characteristics in terms of system design; individual and organisational characteristics also need to be considered.

*Handy, J., Hunter, I. & Whiddett, R. (2001) 'User acceptance of inter-organizational electronic medical records', Health Informatics Journal, 7 (2), pp. 103-107.*

#### \$436 2004 HMM

- *Control of e-communication conflicts with the spontaneity and informality that make it so useful and popular in the first place*

The whole article focuses on the legal aspect of managing e-communications: messaging technologies - e-mail, voice mail, instant messaging. In addition, control of messaging conflicts with the spontaneity and informality that make it so useful and popular in the first place, and these conflicting needs have to be balanced by each organization.

*Montana, J. C. (2004) 'E-mail, voice mail, and instant messaging: a legal perspective', Information Management Journal, 38 (1), pp. 37-38, 40-41.*

#### \*31 2004 HHM

- *Information management is not a high priority for staff*

Research into management of e-records in SMEs in South Africa. Questionnaires and interviews with 24 SMEs. P.18 "For most staff members information organization is an additional duty and is done when there is time available." p.19 "Most businesses have not realized that poorly designed information organization systems are the reason for the difficulties experienced in retrieving information. Those that have realized that these systems may be the problem do not know what to do about it."

*Denner, L. & van der Walt, M. S. (2004) 'The organization of electronic information in selected small, medium and micro enterprises (SMMEs) in South Africa', Knowledge Organization, 31 (1), pp. 4-25.*

#### #793 2004 MLM

- *Information management is not a high priority for staff*

Use of data-cleansing initiatives and software to ensure reliability of business data. Data quality a business issue, not an IT issue: business units should be responsible for the quality of the data in the processes they own'. CIOs should appoint a 'data steward' – either many at local level or a central 'data czar' with overall responsibility. Case examples: Higan & Hartshorn LLP (law firm). Needed to improve data quality, particularly in light of rapid growth. Difficulty in getting lawyers and senior partners to support initiative and agree to manage / own their own data. Per CIO, biggest obstacle was getting employees to “understand the implications of their data and visualize how the quality of their data affects business processes. That takes a lot of effort” np, 2, quoting Bill Gregory of H&H. Elsewhere (e.g. Landstar System Inc), there can be a much more positive attitude to taking ownership of data. Cleaning the data was a three-year process. Started with talking to business unit heads to understand processes and requirements, then creation of relational data model. Finally, the 'architect' took in the units' data and began cleaning and de-duplicating it

D'Agostino, D. (2004) 'Getting Clean', *CIO Insight*, (42), pp. 72-76.

\*618 2004 HHL

- *End-users' attitudes to computer use and e-records*

Questionnaire survey. 479 returns out of 878 (54% response rate). 2 acute hospitals. Hospital staff's experience of and attitudes toward computer use and the EPR (electronic patient record). 91% used computer at work. 29% felt confident in use of info databases. 62% knew what the EPR was. 50% agreed with positive statements about computer use and benefits. Nursing staff tended to be less confident in computer use and more wary of computers compared to doctors and secretarial/admin staff.

*Kirshbaum, M. N. (2004) 'Are we ready for the electronic patient record? Attitudes and perceptions of staff from two NHS trust hospitals', Health Informatics Journal, 10 (4), pp. 265-276.*

#502 2005 HH/H

- *Computers have brought individualisation to the conducting of business processes*
- *Personalisation of corporate records in e-environment: end users see the records as 'theirs', not as a corporate resource*

Full-scale overhaul of recordkeeping procedures culminating in implementation of EDRMS, working to ISO 15489 as standard. PRONI started on one of three lead EDRM implementation projects in Northern Ireland Civil Service (NICS) in summer 2003, the first phase of a NICS-wide implementation. Project team had four staff plus project manager and project support officer; RM and IT input recognized as critical from the outset. RM input rapidly led to full-time assignment of one team member to RM issues, with IT called on as needed. Unlike other two lead projects, PRONI implementation was across entire agency (90 staff). Advantages of this for technological side, but disadvantages / challenges from cultural and RM perspectives: complete classification scheme had to be developed and adopted and staff training on new system and ways of working with information carried out in very short time. Objectives: (1) improve internal RM procedures; (2) implement EDRMS; (3) provide lessons for full NICS implementation. Project methodology: PRINCE II. Importance of benefits realization stage integral to project; adoption of project management approach revealed organizational commitment to building on implementation and realizing benefits, unlike many projects where the impetus is lost once the project phase is over. Identified continuing responsibility as lying with PRONI's RM unit. Early on, RM procedures examined to fulfil one of the project objectives, i.e. regaining corporate control over RM processes, using methodology contained in ISO 15489 and DIRKS. Tenders for EDRM software had to meet TNA functional requirements. Three stages in PRONI project: preparation (14 months); implementation (3 months); operation (4 months). Central lesson is that preparation and laying of foundations key to project success: planning, training, allocating resources, re-introducing good RM procedures. Two activities arising from ISO 15489 carried out at this stage, information audit and ER questionnaire. Project launched to users via ER questionnaire; staff were asked about quantity of email they stored, whether they had structured their Outlook folders with sub-folders, and about volume of documents on their hard drives. This info could easily have been got by IT, but questionnaire was used instead to highlight to staff that 'their' ERs were a corporate resource and that scope of project included all electronic info held in PRONI. Questionnaire was sent out by the Chief Executive, and was very helpful in starting the cultural change as staff started discussing information and information duplication issues. Audit showed: "PRONI, like any other organisation, had adopted bad habits in record keeping due to a lack of internal training and the individualisation computers had brought to conducting business processes" p144. To help project team and put in place mechanism to aid cultural change, representatives sought from each work section: these were consulted, updated and trained throughout project. Communication was instituted – updates to senior managers, articles in internal magazines, competitions, awareness sessions, updates to intranet. Also liaising with other lead projects

and giving presentations / workshops. Developing the functional classification scheme “the single most critical component of an EDRM project” p144. Pilot of scheme revealed gaps in new scheme and some aspects confusing to staff. Also highlighted lack of training in basic RM, now identified as project priority and which PRONI, unlike many other organizations, had in-house RM expertise to deliver over two weeks in form of intensive one day sessions for all staff mixing information and practical sessions. Course was popular (80–85% approval rating). Need to follow up with training for absent staff and to incorporate in induction programme. Best way to achieve necessary staff familiarity with BCS and acceptance of cultural change is to involve them in development process and allow time for change to take root. Focus groups held with staff from each area after basic course. Mapping info from these discussions along with business plans helped team to carry out ISO 15489 steps in analyzing organizational business activities and identify records requirements.

In moving to new system, decision had already been made not to back-scan or mass-migrate existing data on network drives. Familiarization of staff with new classification / file structure effected in data transfer and clean-up exercise in summer 2004, starting with staff either moving documents from their hard drives to shared space or printing hard copies for registered files. Work teams then reviewed material now on shared drives to delete duplicates and out-of-date material or print off to registered file where appropriate. Transfer of remaining material to new ERM environment had to be justified in detail to the records manager. Meanwhile file classification carried out, to allow application of retention periods, as specified by ISO 15489. In September 2004, a “familiarisation drive” was opened and old shared drive made read-only. “The data transfer process was a big cultural change as staff found it hard to let go of ‘their’ information and it was a slow process for them to accept the corporate value of records” p146. Imposition of deadlines helped focus attention of staff, but this meant that deadlines had to be adhered to strictly to keep momentum, and time commitment from staff was a major issue, particularly at this stage of project, where getting input from time-pressed senior staff was especially difficult. Realized that time commitment from senior managers and from business sections should have been indicated in business plans to clarify resource implications. Also realized that Chief Exec and PA would need ongoing one-to-one training on searching and overall use of corporate file-plan. Implementation started in October 2004, using Tower Software’s TRIM Context. “The configuration workshop was a difficult process with a lot of software jargon and the records management implications being debated” p146. One-to-one meetings held with section reps (“power users”) to explain procedure for exporting files from temporary familiarisation drive to EDRMS, which was welcomed as an improvement on the existing shared environment, with its enhanced search-and-retrieval functionality and the ability to store emails. EDRMS provider gave the ‘power users’ training in the software, with a model office and database, prior to going live in January 2005. Continuing management and roles discussed during implementation, with need for continued RM and administrative input recognized as essential, with IT staff happy to take background support role. EDRMS provider gave system administration training to project team members and section reps likely to stay with PRONI and thus provide continuity of knowledge. End-user training outsourced to SureSkills, briefed with significant input on training needs from project team. System went live mid-January, with software installed on PCs while staff were on training course, “an essential lesson we had learnt from other implementations” p147. Knowledge of other implementation experiences also determined timing and level of ‘floorwalking’ done by external provider, delaying it until users had assimilated enough of the new system to be able to avail of this support: initially, floorwalking done by project team – time-consuming, but enabled highlighting of issues and rapid response. Implementation also brought up significant issue of document naming conventions; each work area asked to develop local guidelines. Project team compiled ‘handy hints’ document delivered in follow-up training and put on intranet. User reaction to EDRMS generally favourable, 60% using it regularly (expected level, as roughly 40% of staff do not create filing on a day-to-day basis but need to access documents). Formal operating phase of project for four months after going live, allowing project team to provide continuing support and contribute to NICS-wide implementation phase. An essential aspect of the

project's remit was to provide a "lessons-learned" report, which was written in the form of a post-implementation review as required by ISO 15489. RM skills essential in regaining corporate control of records, and change management aspects also critical. Further work identified includes specific training, development of RM schedules and guidance, dissemination of PRONI implementation experience to wider public sector. Benefits gained: analysis of RM procedures and recovery of control; RM policy; BCS; less duplication; better-trained staff; culture of sharing information. Real benefit of being a lead implementer was for PRONI – as the agency responsible for government records – to "get its own house in order" and allowing it to perform its function properly.

*Smyth, Z. A. (2005) 'Implementing EDRM: has it provided the benefits expected?', Records Management Journal, 15 (3), pp. 141-149.*

\*58 2005 HHM

- *Cognitive aspects of IT use / ERM*
- *User acceptance of electronic records / ERM*

To extend the Technology Acceptance Model TAM by considering Internet self efficacy (ISE) as an antecedent to perceived ease of use (PEOU), perceived usefulness (PU), as well as behavioural intention (BI) in the context of accepting Web-based electronic medical records. Article focuses on understanding user acceptance issue. Importance of understanding user behaviour; empirical evidence shows greater success in technology adoptions where end users involved in process, and long-term success dependent on user acceptance. Self-efficacy strongly related to end-user competence, which comprises depth, breadth and finesse in knowledge of and approach to technologies. Also a determinant of attitudes towards computers – the greater the SE, the more positive, and linked to BI. Research design: participants - senior trainees and qualified staff members in assistive healthcare roles responsible for patient records in clinic. Data collection by questionnaire, including a link and user guide to target test EMR system. Overall response rate 49%; 86 participants. 13% had awareness of some EMR systems; 8% hands-on experience of web based records; rest familiar with paper records. 69% had neutral attitudes to paper systems. 84% had >3 years' internet experience. 69% were positive about surfing net. The study hypotheses are strongly supported by the results, which indicate that ISE has significant impact on PEOU, PU and BI, with a greater impact on PEOU than PU. Synthesis with other studies suggest impact of SE on usefulness significant in internet-related settings but not in traditional non-web contexts. PEOU has stronger effect on BI than on PU, a contrast to most existing studies. Study results important in context of move from provision of software as product to software as service, and possibly generalizable to other emerging e-business technologies. Findings have important managerial implications. Cognitive factors already recognized as biggest obstacle to widespread adoption of EMR; three factors critical in relation to computer use – user confidence, adoption of positive attitude in workplace, adequate skills and proficiency. Study confirms this. Results suggest that enhancing SE may be more effective option for technology acceptance than in enhancing usability/utility (which often requires much modification and thus harder to do). As SE a measure of belief/confidence rather than actual skills, susceptible to manipulation.

*Liu, L. & Ma, Q. (2005) 'The role of Internet self-efficacy in the acceptance of Web-based electronic medical records', Journal of Organizational and End User Computing, 17 (1), pp. 38-57.*

#283 2005 HMM

- *User acceptance of electronic records / ERM*

Role of end-users in implementing enterprise-wide ERMS. Two approaches: (i) user guided to decide that item is a record and to place it in the file plan; (ii) make the RM decisions automatically in the background and transparent to users. US research p.48 "indicates that the highest quality and accuracy occurs when records management is as non-intrusive as possible to the desktop end user and does not interfere with the normal work routines of

professional staff in the enterprise." Four case examples of US governmental agencies: US Government Accountability Office (GAO), US Office of the Comptroller of the Currency (OCC) Department of Treasury, US Nuclear Regulatory Commission (NRC), unnamed intergovernmental agency (Anon). How these examples have made their RM non-intrusive to the desktop end user.

*Sprehe, J. T. & McClure, C. R. (2005) 'Lifting the burden', Information Management Journal, 39 (4), pp. 47-48, 50-52.*

## 6.4 Awareness raising and training

### Covers:

- staff do not understand they are responsible for information and its quality
- staff lack knowledge of RM/ERM
- building ERM capacity in an organisation
- training in ERM for all stakeholders
- staff need training in RM basics

### #793 2004 MLM

- *Staff do not understand they are responsible for information and its quality*

Use of data-cleansing initiatives and software to ensure reliability of business data. Data quality a business issue, not an IT issue: business units should be responsible for the quality of the data in the processes they own'. CIOs should appoint a 'data steward' – either many at local level or a central 'data czar' with overall responsibility. Case examples: Higan & Hartshorn LLP (law firm). Needed to improve data quality, particularly in light of rapid growth. Difficulty in getting lawyers and senior partners to support initiative and agree to manage / own their own data. Per CIO, biggest obstacle was getting employees to "understand the implications of their data and visualize how the quality of their data affects business processes. That takes a lot of effort" np, 2, quoting Bill Gregory of H&H. Elsewhere (e.g. Landstar System Inc), there can be a much more positive attitude to taking ownership of data. Cleaning the data was a three-year process. Started with talking to business unit heads to understand processes and requirements, then creation of relational data model. Finally, the 'architect' took in the units' data and began cleaning and de-duplicating it

*D'Agostino, D. (2004) 'Getting Clean', CIO Insight, (42), pp. 72-76.*

### \$439 2004 HMM

- *Staff lack knowledge of RM/ERM*
- *Training in ERM for all stakeholders*

In the e-record world p.3 "all of the different players and stakeholders need to be trained or educated afresh or for the first time. Empowered users need to learn about their new responsibilities, what constitutes records and the methods of managing the records they create and/or use; record professionals need updated knowledge and skills sets to meet the new challenges; IT and other systems administrators need to understand the fundamentals of records management and senior managers need to appreciate their role and responsibility for supporting good records management practice and its relationship with risk management, corporate governance and competitive advantage." ISO 165489 has a clause on responsibilities and a clause on training that demonstrates the requirement for such training as in quote. Model for training needs: role related to area of functional activity; level of activity - strategic, tactical or supervisory, operational; overall dimension that we are all record creators and users. Everyone needs a macro level of understanding. Then for each person there is a micro level determined by type of systems interaction, level and role. Case example: RM training activities at School of Informatics, University of Northumbria. (i) Masters level course for records specialists by distance learning. Increasing their skills set; networks established and last beyond course; practitioners at both strategic and tactical levels; also students new to RM. (ii) Rm3 partnership with Liverpool University Centre for

Archives Studies. Staff in government departments on site UG training. Students have different levels of recordkeeping responsibility. Mostly supervisory and operational staff. Also develop a community of learning that continues. (iii) Developed workplace learning for staff in the Document Archives, BBC. Mostly operational and some supervisory staff. Raised the profile of the RM function from operational to strategic. (iv) Work-based learning via NVQs - qualifications at operational, supervisory and strategic levels. However this approach failed to attract candidates. (v) UK part of the e-Term project (Education and Training for Electronic Records management) under the EU's Leonardo programme. One week intensive seminar at macro level for IT, administration and archives and records management staff at tactical and strategic levels. (vi) RM training for Irish university staff in the context of FoI. Aimed at admin staff at supervisory/operational levels but also attracted staff from systems, library, academics, managers, senior managers. (vii) Developing an ERM training package as part of a JISC funded project. (viii) PhD study evaluating international best practice in training record keepers, with the aim of developing a model for Malaysian government staff. Literature review and high level survey found: p.7 "The data did not reveal any single implemented comprehensive model which embraced the various groups of record keepers. Indeed little had been done in terms of education and training specifically for electronic records management ... The current provision appears to be a combination of in-house 'on the job' training programmes combined with specialized courses. With regard to the training and education needed by the stakeholder groups in order to manage electronic records in government, there was no clearly defined and accepted body of knowledge nor an agreed training curriculum, except for the e-Term programme ... It also appeared that the lack of serious interest on the part of archival institutions and professional organizations in supporting the small number of universities worldwide offering courses in records management, was hindering the development of a best practice education and training programme for record keepers in the e-environment." Interim data on Malaysian Government staff (36 questionnaire respondents from 12 ministries) showed: some staff did not realise their ministry held e-records; if they did, quite a few did not think they had responsibility for their care, particularly IT staff; over half of the staff had received relevant training, particularly via workshops and seminars and via customised programmes.

*Hare, C., Johare, R. & McLeod, J. (2004) 'Education and training for records management in the electronic environment: the (re)search for an appropriate model', Information Research, 9 (3), p. No page numbers.*

#### #748 2005 HMM

- *Building ERM capacity in an organisation*

ERMS implementations. cases all come from the US government sector. While information is now appreciated as an asset, resourcing for RM has often been inadequate. "Records managers often face an uphill battle to incorporate ... ERM into their programs" p58. However, the ingenious records manager can build an effective programme, even with minimal resources. "Integrating ERM is not primarily a battle with management for resources; it is a culture war for the hearts and minds of the people who create and use records" p58. People usually sceptical about outsiders telling them to change ways of working, and co-operation of business staff necessary to successful implementation. Starting with small changes or implementation projects stands a better chance of success than major enterprise-wide efforts. Three case studies. Case 1: Digitizing bank examiner work papers. Enhancing existing technological resources to improve ERM; piloting with small section. Records manager in federal banking agency needed to convert manual records system into ERM system. Looked for a unit that was already doing its business electronically, and found that bank examination staff were using software package developed with other bank regulators to create and store papers related to examination work. Accuracy and integrity of such records essential as bank ratings depend on examination results. Records manager asked IT to develop small bit of code so that whenever a set of papers was saved by an examiner, a copy would automatically go to a folder controlled and accessible only by the records manager. While recognized that this was not full ERMS, several goals achieved:

records manager got control of important set of ERs, and established relationship with IT and business unit. Seamless process for bank examiners to send ERs to records manager. Metadata developed for project was used as the foundation for agency-wide metadata standards. Cost was a fraction of what a full EDRMS would have been. "By undertaking a small, low budget project, the records manager was able to demonstrate that the ERM system was workable and to make a more informed recommendation for an enterprise-wide system." p59. Case 2: Implementing ERM in a small federal agency. Working collaboratively to build effective processes. Before carrying out an implementation, small records staff (two) set up series of hour long "show and tell" sessions for work groups to find out what people in business units did. Included session where fundamentals of RM were explained and related to context of audience, and another where business units described their processes and interactions and the documentation they created and used, and also included advice on retention. Sessions regular and limited to one hour; if discussion not complete, an additional session was scheduled. RM team took notes and circulated for comment by e-mail or at subsequent session. Goals were to (a) develop paper and ER retention schedules RM; (b) design / implement beginning of ERM programme; (c) give business units sense of ownership in RM policies / procedures. RM team did not impose, but reached solutions through collaboration. "Understanding how the business units operated and establishing rapport were vital factors in the success of the records management program!" p59. This collaborative process did not add to budget, but only required small allotments of time commitment. No need for consultants or for busy staff to have to give up a lot of time. "All participants were better informed about agency business processes, making changes easier to implement effectively" p59. Case 3: Presenting the case to management. Using full functionality of existing technology to improve ERM processes and build capacity. Law librarian of federal agency legal division undertook project that, while not itself an ERM project, paved the way for later ERM implementation. Long-standing central filing system, managed by file clerks. Legal division sent all paper docs deemed to be records to central filing, keeping copies of some as part of a local library. Software package used to synopsise legal cases. Documents created using WP programme, but many docs received were paper. Attorneys spent a lot of time searching the library of records and complained at having to retype material that was not electronically available. Law librarian asked attorneys how processes could be improved. Attended demos of RM applications; gathered info on operating systems used within agency; researched products on-line; reviewed software product already used by division, which had several features not currently used incl scanning and electronic document storage. Reported advantages, disadvantages and costs of a variety of possible implementations, recommending expanding use of existing package because it was flexible, already familiar to staff, and had track record for service. Law librarian did not consider this system real ERMS, but was aware that agency-wide ERMS was in the offing; when it came to implementation, law staff were already informed and comfortable with good EDM /ERM practices. Records managers have assets other than staff and budgets: one is credibility, which can be assured if they keep up to date with developments, legislation, etc. Others include careful planning, and managing expectations (resisting temptation to promise too much). Another tactic is selling business benefits of ERM, as opposed to just risk: all staff benefit in carrying out their tasks more effectively if the records on which they rely are well managed. Accountability and accessibility of information are also enhanced. CP Several interim measures are open where resources are few: providing users with definitions and guidance; persuade business units to store records in a secure location (separate system or read-only in separate part of existing system); help business units to develop metadata standards; explain that limiting acceptable file formats helps storage and retrieval. "Effective communication is vital and inexpensive" p60. Users must always be consulted, and made comfortable and familiar with terms used. Can be done through soliciting user groups to engender co-operation. Records managers should use suggested ideas that have merit and explain why other suggestions cannot or will not be used. Staff with investment in system more likely to use it. Records managers have incentive to work with IT an business units to modify or extend existing systems to provide ERM

capabilities. Need to co-operate to identify certification criteria. Time, money and stress will be saved thereby when it comes to full implementation, because ground will have been laid “both culturally and technically” p60. No programme comes about in one go; records managers who take incremental, low-cost, high-value steps will contribute significantly to successful outcome.

*Young, J. (2005) 'Electronic records management on a shoestring: three case studies', Information Management Journal, 39 (1), pp. 58-60.*

#502 2005 HH/H

- *Staff need training in RM basics*

Full-scale overhaul of recordkeeping procedures culminating in implementation of EDRMS, working to ISO 15489 as standard. PRONI started on one of three lead EDRM implementation projects in Northern Ireland Civil Service (NICS) in summer 2003, the first phase of a NICS-wide implementation. Project team had four staff plus project manager and project support officer; RM and IT input recognized as critical from the outset. RM input rapidly led to full-time assignment of one team member to RM issues, with IT called on as needed. Unlike other two lead projects, PRONI implementation was across entire agency (90 staff). Advantages of this for technological side, but disadvantages / challenges from cultural and RM perspectives: complete classification scheme had to be developed and adopted and staff training on new system and ways of working with information carried out in very short time. Objectives: (1) improve internal RM procedures; (2) implement EDRMS; (3) provide lessons for full NICS implementation. Project methodology: PRINCE II. Importance of benefits realization stage integral to project; adoption of project management approach revealed organizational commitment to building on implementation and realizing benefits, unlike many projects where the impetus is lost once the project phase is over. Identified continuing responsibility as lying with PRONI's RM unit. Early on, RM procedures examined to fulfil one of the project objectives, i.e. regaining corporate control over RM processes, using methodology contained in ISO 15489 and DIRKS. Tenders for EDRM software had to meet TNA functional requirements. Three stages in PRONI project: preparation (14 months); implementation (3 months); operation (4 months). Central lesson is that preparation and laying of foundations key to project success: planning, training, allocating resources, re-introducing good RM procedures. Two activities arising from ISO 15489 carried out at this stage, information audit and ER questionnaire. Project launched to users via ER questionnaire; staff were asked about quantity of email they stored, whether they had structured their Outlook folders with sub-folders, and about volume of documents on their hard drives. This info could easily have been got by IT, but questionnaire was used instead to highlight to staff that ‘their’ ERs were a corporate resource and that scope of project included all electronic info held in PRONI. Questionnaire was sent out by the Chief Executive, and was very helpful in starting the cultural change as staff started discussing information and information duplication issues. Audit showed: “PRONI, like any other organisation, had adopted bad habits in record keeping due to a lack of internal training and the individualisation computers had brought to conducting business processes” p144. To help project team and put in place mechanism to aid cultural change, representatives sought from each work section: these were consulted, updated and trained throughout project. Communication was instituted – updates to senior managers, articles in internal magazines, competitions, awareness sessions, updates to intranet. Also liaising with other lead projects and giving presentations / workshops. Developing the functional classification scheme “the single most critical component of an EDRM project” p144. Pilot of scheme revealed gaps in new scheme and some aspects confusing to staff. Also highlighted lack of training in basic RM, now identified as project priority and which PRONI, unlike many other organizations, had in-house RM expertise to deliver over two weeks in form of intensive one day sessions for all staff mixing information and practical sessions. Course was popular (80–85% approval rating). Need to follow up with training for absent staff and to incorporate in induction programme. Best way to achieve necessary staff familiarity with BCS and acceptance of cultural change is to involve them in development process and allow time for change to take

root. Focus groups held with staff from each area after basic course. Mapping info from these discussions along with business plans helped team to carry out ISO 15489 steps in analyzing organizational business activities and identify records requirements. In moving to new system, decision had already been made not to back-scan or mass-migrate existing data on network drives. Familiarization of staff with new classification / file structure effected in data transfer and clean-up exercise in summer 2004, starting with staff either moving documents from their hard drives to shared space or printing hard copies for registered files. Work teams then reviewed material now on shared drives to delete duplicates and out-of-date material or print off to registered file where appropriate. Transfer of remaining material to new ERM environment had to be justified in detail to the records manager. Meanwhile file classification carried out, to allow application of retention periods, as specified by ISO 15489. In September 2004, a “familiarisation drive” was opened and old shared drive made read-only. “The data transfer process was a big cultural change as staff found it hard to let go of ‘their’ information and it was a slow process for them to accept the corporate value of records” p146. Imposition of deadlines helped focus attention of staff, but this meant that deadlines had to be adhered to strictly to keep momentum, and time commitment from staff was a major issue, particularly at this stage of project, where getting input from time-pressed senior staff was especially difficult. Realized that time commitment from senior managers and from business sections should have been indicated in business plans to clarify resource implications. Also realized that Chief Exec and PA would need ongoing one-to-one training on searching and overall use of corporate file-plan. Implementation started in October 2004, using Tower Software’s TRIM Context. “The configuration workshop was a difficult process with a lot of software jargon and the records management implications being debated” p146. One-to-one meetings held with section reps (“power users”) to explain procedure for exporting files from temporary familiarisation drive to EDRMS, which was welcomed as an improvement on the existing shared environment, with its enhanced search-and-retrieval functionality and the ability to store emails. EDRMS provider gave the ‘power users’ training in the software, with a model office and database, prior to going live in January 2005. Continuing management and roles discussed during implementation, with need for continued RM and administrative input recognized as essential, with IT staff happy to take background support role. EDRMS provider gave system administration training to project team members and section reps likely to stay with PRONI and thus provide continuity of knowledge. End-user training outsourced to SureSkills, briefed with significant input on training needs from project team. System went live mid-January, with software installed on PCs while staff were on training course, “an essential lesson we had learnt from other implementations” p147. Knowledge of other implementation experiences also determined timing and level of ‘floorwalking’ done by external provider, delaying it until users had assimilated enough of the new system to be able to avail of this support: initially, floorwalking done by project team – time-consuming, but enabled highlighting of issues and rapid response. Implementation also brought up significant issue of document naming conventions; each work area asked to develop local guidelines. Project team compiled ‘handy hints’ document delivered in follow-up training and put on intranet. User reaction to EDRMS generally favourable, 60% using it regularly (expected level, as roughly 40% of staff do not create filing on a day-to-day basis but need to access documents). Formal operating phase of project for four months after going live, allowing project team to provide continuing support and contribute to NICS-wide implementation phase. An essential aspect of the project’s remit was to provide a “lessons-learned” report, which was written in the form of a post-implementation review as required by ISO 15489. RM skills essential in regaining corporate control of records, and change management aspects also critical. Further work identified includes specific training, development of RM schedules and guidance, dissemination of PRONI implementation experience to wider public sector. Benefits gained: analysis of RM procedures and recovery of control; RM policy; BCS; less duplication; better-trained staff; culture of sharing information. Real benefit of being a lead implementer was for PRONI – as the agency responsible for government records – to “get its own house in order” and allowing it to perform its function properly.

Smyth, Z. A. (2005) 'Implementing EDRM: has it provided the benefits expected?', *Records Management Journal*, 15 (3), pp. 141-149.

#333 2006 HML

- *Staff lack knowledge of RM/ERM*
- *Staff need training in RM basics*

The development of RM at the French National Library. Driven by new president and a new CEO taking up post in 2002: president = preserving the history of the French National Library and other French libraries; CEO = reform of public institutions. Set up a new service devoted to RM and archives attached to the CEO. CSF: p.98 "This position in the organisational hierarchy means the author is free to intervene at any level necessary, without a long and hard process of seeking support or authority." Used DIRKS. Interviews with staff to understand functions and activities and e-tools used. Then meetings with secretaries p. 98 "understand how they manage their jobs, their ideas for improvement and to explain best practices. The difficulty at the National Library is that the background and expertise of the secretaries varies greatly from one office to another. Some of them are experienced, but others had previously been technical personnel ... They wanted information and to learn how to do better, but a large number of them were unable to suggest new ideas or to imagine new processes in their job." Then separate training with managers. Needed to train in basic RM principles and procedures. Built with staff meetings a classification scheme. Used Lotus Notes. External training for all staff covering best practices and processes as well as Lotus Notes use. Two levels of training: first level mandatory for all users on managing emails and e-diaries and searching databases; second level for document creators. P. 101 "Training has been essential and is a significant investment which must continue and become a permanent feature." Informal team of people with different competencies from across the organisation. Strong support from president and CEO. Managers see the benefits.

*Dherent, C. (2006) 'Document management at the French National Library', Records Management Journal*, 16 (2), pp. 97-101.

## 7 DESIGN

### Covers:

- need for user-friendly ERMS
- discussion and understanding among designers and end-users when designing ERMS
- specification of socio-organizational requirements through metadata when designing ERMS

### #166 2002 HMM

- *Need for user-friendly ERMS*

US Dept of Education: Use of neural network software to categorize records according to retention period. With breakdown of traditional IM systems consequent on growth of PC and e-mail, it is now assumed that info can only be managed at folder, not document level; however, users resist the necessary filing practices, which have proved largely impossible to enforce. Previous attempts to deploy desktop RM applications had failed due to user resistance, and regular (re)training was required because of constant staff turnover. The project was devised to see if neural network technology (Hummingbird's Knowledge Manager Workstation) could do the work instead. In networking the software, previous user resistance taken into account by having it operate in the background. Under old paradigm, records managers spent a lot of time educating and persuading staff to do their filing; now electronic fileplans unnecessary so less time spent on that. Also gives records managers more power and control – instead of devising systems which it is then up to others to apply, they design systems and oversee implementation with expert staff.

*Schewe, D. B. (2002) 'Classifying electronic documents: a new paradigm', Information Management Journal, 36 (2), pp. 54, 56-59.*

### \$765 2004 HLL

- *Need for user-friendly ERMS*

Interviews with three chief information officers: CIO1 = School + Storage Networking Industry Association; CIO2 = Law firm; CIO3 = National Archives and Records Administration (NARA). APPROACH TO MANAGING E-RECORDS. CIO1: waking up to the need for a strategy for ERM. CIO2: have an ERM policy. CIO3: Piloting software, but current policy is printing and filing. KEY TO ERM. CIO1: leadership buy-in. articulating cost-benefits and risks. Capture metadata in transparent way. Flexible for individual organisation's needs. CIO2: Deletion of spam/junk etc. CIO3: p.32 "simultaneously dealing with people, process, and technology." User buy-in. integration of RM into enterprise activities. Integrated software (RM and office etc.). BIGGEST CHALLENGE IN ERM. CIO1: cost and lack of desire to fund this. CIO2: Selective deletion of records. CIO3: integrated software. easy natural methods of filing. BIGGEST CHALLENGES OF COMPLIANCE. CIO1: Email can contain high-evidentiary material, but how identify, capture and archive? CIO2: confidentiality. CIO3: Federal Records ACT and NARA RM regs. WHO SETS ERM POLICIES/PROCEDURES. CIO1. Multi-departmental. CIO2. legal counsel, records dept, IT all together. CIO3. Multidepartmental. lead by RM. WHAT HELP REQUIRED FROM RM / IT. CIO1. p.34 "I want the philosophical and legal framework of a clearly articulated records management policy to drive our technology, not vice-versa." CIO2. RM staff to become more familiar with IT. RM to become responsible for e-records as well as paper. CIO3. RM set policies/strategies, IT helps to implement them. RELATIONSHIP BETWEEN RM / IT. CIO1. Good multidepartmental working. CIO2. Both IT and RM report to me, and library too. CIO3. Both IT and RM report to the CIO. SKILLS. CIO1. RM skills: understand best practice and policies for type of organisation working in and media using. IT: humility, listening, IT appropriate for the organisation. CIO2. RM: IT knowledge, assertion, proactive. IT: inform RM about IT, open up applications for RM input. CIO3. RM: Understand business process. Know IT speak. IT:

Understand RM and technologies that can do RM. Communicate in non-technical language. STUDY: Recent study commissioned by ARMA from Forrester Consulting no other details given. Results: p.31 "Records and information (RIM) professionals are losing their influence in records management as ERM emerges. \* Business and IT perceive few challenges to ERM, other than organizational priorities and budget; unlike business and IT, RIM professionals see many challenges surrounding RIM. \* Business and IT do not fully understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

*Swartz, N. (2004) 'From the mouths of CIOs', Information Management Journal, 38 (5), pp. 30-36.*

#### #283 2005 HMM

- *Need for user-friendly ERMS*

Role of end-users in implementing enterprise-wide ERMS. Two approaches: (i) user guided to decide that item is a record and to place it in the file plan; (ii) make the RM decisions automatically in the background and transparent to users. US research p.48 "indicates that the highest quality and accuracy occurs when records management is as non-intrusive as possible to the desktop end user and does not interfere with the normal work routines of professional staff in the enterprise." Four case examples of US governmental agencies: US Government Accountability Office (GAO), US Office of the Comptroller of the Currency (OCC) Department of Treasury, US Nuclear Regulatory Commission (NRC), unnamed intergovernmental agency (Anon). How these examples have made their RM non-intrusive to the desktop end user.

*Sprehe, J. T. & McClure, C. R. (2005) 'Lifting the burden', Information Management Journal, 39 (4), pp. 47-48, 50-52.*

#### \*510 2005 HMM

- *Discussion and understanding among designers and end-users when designing ERMS*
- *Specification of socio-organizational requirements through metadata when designing ERMS*

The use of IM modelling and methodologies in EDMS design to overcome shortcomings of technology-driven approaches. Approach facilitates discussion and understanding among designers and end-users and specification of socio-organizational requirements through metadata.

*Paganelli, F. & Pettenati, M. C. (2005) 'A model-driven method for the design and deployment of Web-based document management systems', Journal of Digital Information, 6 (3).*

#### \$872 2006 MM/M

- *Need for user-friendly ERMS*

Choosing the right EDMS software is important but "the technology itself is less important than the people who will use it and the business processes it will support. Implementing EDMS software and expecting the technology to change organizational culture would be a mistake. The old 80-20 rule applies to implementation; for the most success, focus just 20 percent of the efforts on the technology and 80 percent on the cultural issue". An interesting application of the Pareto rule. "An implementation can be judged successful when the system captures the official records of the firm, the records are managed throughout their life cycle, and the EDMS has become so ingrained in the firm's culture that employees can't imagine working any other way. That is because document management is a part of every employee's job. Whereas filing was once the speciality of file clerks, the function of saving documents into an EDMS repository requires that all users – not just the records staff – know where to file and how classify information. It's no longer about individual filing systems that work for the individual until the completed files are delivered to the door of the records

management department. It's about having a standardized filing methodology that everyone follows from the point of creation and throughout a document's use. Saving information correctly so it can be retrieved by anyone who needs access to it is the primary goal." (p45) Says that not everyone "will welcome the discipline needed for them to participate in the successful implementation and use of an EDMS. That is why top management support is critical to ensure that those who don't are convinced to comply or seek employment somewhere where they can continue to work with traditional paper systems. This is just a reality to be faced. Not everyone will be able to make the cultural shift." But this rather suggests that resistance is to the e-system (vs paper system) but it may be the nature of the e-system not e-systems per se. CSFs for successful EDMS implementation are: (1) make the process transparent (ingrain the process of classifying records into daily work processes so it becomes invisible; minimise number of keystrokes needed to save or retrieve documents; suggests users classify documents but records staff declare as records – not sure why/how this would really save time); (2) manage user expectations (better to under-sell a system and over-deliver the product than vice versa; tell users what will be delivered & when; say that productivity may go down immediately after implementation but then increase; implement policies that help users understand changing expectations (e.g. e-records will be the official record, not paper ones); "it is not possible to over-communicate what is happening during an EDMS implementation", use different methods to "keep information flowing and set the right expectations"); (3) focus on people (show them the individual benefits first then the organisational ones e.g. easier, faster searching, improved document sharing, better security, better client service, improved vital records protection, better reporting, reduced file storage space, "overall - better decision-making based on better recordkeeping practices"; involve the right people in the change process – a combination of different "ranks" and both "those who have good attitudes and are willing to work at making processes better but also a few resisters who can be coached so their resistance will be reduced and buy-in obtained early in the process"; include them in the pilot & refine that on the basis of feedback); (4) focus on processes (consider changing the processes before customising software i.e. don't just customise software based on current processes; flowchart current processes based on discussion with people and then detail how they will be handled in the EDMS); (5) train on processes (ok to train on the software first but training must go beyond that to show how they will use it to support their work); (6) keep sight of the big picture ("be careful not to give departments or business units everything they ask for in isolation... it can lead to islands of information that create fragmented systems or multiple applications that don't talk to each other. There needs to be a coordinated effort to reduce redundancy yet maintain the necessary level of information sharing and process efficiency"); (7) understand changing communication dynamics ("communication systems change as work is created electronically. Electronic notification increases as work flows from one person to another... EDMS usually changes basic workflow patterns but not nearly as much as implementing a workflow engine would. Work group dynamics change as users are able to share electronic information... this causes traditional boundaries between groups and departments to disappear. EDMS can even change the relationship between managers and subordinates.. managers can view the progress on a job much earlier in the e-environment" but author cautions against micromanaging vs monitoring; EDMS creates more accountability because of audit trails. People won't just use an EDMS "because it is there. They have to have a vested interest in using it. Understanding the people and process issues will go a long way toward gaining that interest. Technology by itself does not fix poor processes, create motivating jobs, or necessarily solve department productivity issues. But combining the technology with skilled people who understand how a system is used to manage documents/records during the routine activities of everyday work can lead to improved processes, more motivated employees, and better productivity."

*Downing, L. (2006) 'Implementing EDMS: Putting People First', Information Management Journal, 40 (4), pp. 44-50.*

#163 2006 HHM

- *Need for user-friendly ERMS*

Use of EDMS to facilitate e-collaboration in project-based industry. Based on a number of case studies in Scandinavia. Realization of behavioural rather than technical nature of many problems facing introduction. These and other studies reveal: end-users not to be treated as homogenous group but differentiated by attitude and IT skills; high level of satisfaction with system but much lower with user support and training; equal emphasis needs to be placed on technology, processes and people; User satisfaction: varied somewhat by whether they were to a significant extent uploaders to (more satisfied) or downloaders from (less satisfied) the system. Conclusions. Constant reconfiguring of groups and personnel in project environment, and limited (re)training possibilities, demand either a move towards national standards or user-friendly systems. User satisfaction is widespread and digital environment taken for granted.

*Bjork, B.-C. (2006) 'Electronic document management in temporary project organisations: Construction industry experiences', Online Information Review, 30 (6), pp. 644-655.*

## 8 ERM IMPLEMENTATION

### 8.1 Cost of ERM and lack of desire to fund this

\$765 2004 HLL

- *Cost of ERM and lack of desire to fund this*

Interviews with three chief information officers: CIO1 = School + Storage Networking Industry Association; CIO2 = Law firm; CIO3 = National Archives and Records Administration (NARA). APPROACH TO MANAGING E-RECORDS. CIO1: waking up to the need for a strategy for ERM. CIO2: have an ERM policy. CIO3: Piloting software, but current policy is printing and filing. KEY TO ERM. CIO1: leadership buy-in. articulating cost-benefits and risks. Capture metadata in transparent way. Flexible for individual organisation's needs. CIO2: Deletion of spam/junk etc. CIO3: p.32 "simultaneously dealing with people, process, and technology." User buy-in. integration of RM into enterprise activities. Integrated software (RM and office etc.). BIGGEST CHALLENGE IN ERM. CIO1: cost and lack of desire to fund this. CIO2: Selective deletion of records. CIO3: integrated software. easy natural methods of filing. BIGGEST CHALLENGES OF COMPLIANCE. CIO1: Email can contain high-evidentiary material, but how identify, capture and archive? CIO2: confidentiality. CIO3: Federal Records ACT and NARA RM regs. WHO SETS ERM POLICIES/PROCEDURES. CIO1. Multi-departmental. CIO2. legal counsel, records dept, IT all together. CIO3. Multidepartmental. lead by RM. WHAT HELP REQUIRED FROM RM / IT. CIO1. p.34 "I want the philosophical and legal framework of a clearly articulated records management policy to drive our technology, not vice-versa." CIO2. RM staff to become more familiar with IT. RM to become responsible for e-records as well as paper. CIO3. RM set policies/strategies, IT helps to implement them. RELATIONSHIP BETWEEN RM / IT. CIO1. Good multidepartmental working. CIO2. Both IT and RM report to me, and library too. CIO3. Both IT and RM report to the CIO. SKILLS. CIO1. RM skills: understand best practice and policies for type of organisation working in and media using. IT: humility, listening, IT appropriate for the organisation. CIO2. RM: IT knowledge, assertion, proactive. IT: inform RM about IT, open up applications for RM input. CIO3. RM: Understand business process. Know IT speak. IT: Understand RM and technologies that can do RM. Communicate in non-technical language. STUDY: Recent study commissioned by ARMA from Forrester Consulting no other details given. Results: p.31 "Records and information (RIM) professionals are losing their influence in records management as ERM emerges. \* Business and IT perceive few challenges to ERM, other than organizational priorities and budget; unlike business and IT, RIM professionals see many challenges surrounding RIM. \* Business and IT do not fully understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

*Swartz, N. (2004) 'From the mouths of CIOs', Information Management Journal, 38 (5), pp. 30-36.*

### 8.2 ERM causes change / ERM requires change

Covers:

- ERM causes change in organizational status and power relations
- ERM alters relationships between managers and workers
- ERM causes changes in work practices
- ERM requires end-users to change to working together
- resistance to organizational and cultural changes caused by ERM
- ERM requires cultural change
- change management needed when implementing ERM

#717 1999 HMM

- *ERM requires end-users to change to working together*
- *Resistance to organizational and cultural changes caused by ERM*
- *Change management needed when implementing ERM*

Using BPR (business process re-engineering) as a means of implementing ERM; with case examples from U. S. federal organisations. The EPA case: workflow and ERM Organization of Dockets in the EPA the Docket is both an administrative unit and a file/ docket in the legal sense. Currently, Dockets are in different locations and with little intercommunication. Now to be relocated in single centre. EPA commissioned a BPR and modernization study to assess existing processes and make recommendations. Aim to increase docket workflow efficiency and improve customer service and public access through IT applications. As dockets are permanent records, need to comply with NARA requirements for storage and transfer. EPA staff involved in project spent much more time discussing business processes than new IT system; once consensus was reached, IT design flowed quickly from processes. Major effort lay in deliberation and reaching decisions on tasks and methods for agency staff, and on how the formerly separate staffs would work together. Once collective decisions had been made, specifying IT needs was straightforward. There will be resistance to organizational and cultural changes brought by new system. Change management and detailed implementation plans to be included so staff have ownership of solution.

*Van Wingen, R. S., Hathorn, F. & Sprehe, J. T. (1999) 'Principles for information technology investment in U. S. federal electronic records management', Journal of Government Information, 26 (1), pp. 33-42.*

\*444 2001 HH/H

- *ERM causes change in organizational status and power relations*
- *ERM causes changes in work practices*

ERM in hospitals and teleradiology - Based on PhD research. RM professionals have only recently started to grasp the full possibility of using electronic systems to capture records, including those that had not previously been amenable to capture. Electronic recordkeeping not only facilitates information access, it also brings information together in new ways. These factors impact both on the understanding of existing records and on user expectations. With increasing use of electronic methods, records managers need to reassess records in the context of new communication patterns and functions that these facilitate within organizations. Article examines trends in medical arena, particularly radiology. Records managers need to take into account the different functionality and new potential of electronic records and not treat them as merely replacing physical formats. They will need to re-analyze records series when they have changed to digital format, and understand the changing work practices. Changing technology and practice can also bring changes in organizational status and power relations.

*Yakel, E. (2001) 'An institutional view of electronic records management: hospitals and teleradiology', Information Management Journal, 35 (1), pp. 26, 28, 30, 32-23.*

#166 2002 HMM

- *Resistance to organizational and cultural changes caused by ERM*

US Dept of Education: Use of neural network software to categorize records according to retention period. With breakdown of traditional IM systems consequent on growth of PC and e-mail, it is now assumed that info can only be managed at folder, not document level; however, users resist the necessary filing practices, which have proved largely impossible to enforce. Previous attempts to deploy desktop RM applications had failed due to user resistance, and regular (re)training was required because of constant staff turnover. The project was devised to see if neural network technology (Hummingbird's Knowledge Manager Workstation) could do the work instead. In networking the software, previous user resistance taken into account by having it operate in the background. Under old paradigm,

records managers spent a lot of time educating and persuading staff to do their filing; now electronic fileplans unnecessary so less time spent on that. Also gives records managers more power and control – instead of devising systems which it is then up to others to apply, they design systems and oversee implementation with expert staff.

*Schewe, D. B. (2002) 'Classifying electronic documents: a new paradigm', Information Management Journal, 36 (2), pp. 54, 56-59.*

#### #786 2004 MM/M

- *Change management needed when implementing ERM*

DTI's EDRMS project using TRIM software. Implementation included management of change programme (business analysis briefings, training & communication).

*'EDRM with TRIM benefits the DTI', (2004) Information Management and Technology, 37 (1), p. 40.*

#### #748 2005 HMM

- *Resistance to organizational and cultural changes caused by ERM*

ERMS implementations. cases all come from the US government sector. While information is now appreciated as an asset, resourcing for RM has often been inadequate. "Records managers often face an uphill battle to incorporate ... ERM into their programs" p58. However, the ingenious records manager can build an effective programme, even with minimal resources. "Integrating ERM is not primarily a battle with management for resources; it is a culture war for the hearts and minds of the people who create and use records"p58. People usually sceptical about outsiders telling them to change ways of working, and co-operation of business staff necessary to successful implementation. Starting with small changes or implementation projects stands a better chance of success than major enterprise-wide efforts. Three case studies. Case 1: Digitizing bank examiner work papers. Enhancing existing technological resources to improve ERM; piloting with small section. Records manager in federal banking agency needed to convert manual records system into ERM system. Looked for a unit that was already doing its business electronically, and found that bank examination staff were using software package developed with other bank regulators to create and store papers related to examination work. Accuracy and integrity of such records essential as bank ratings depend on examination results. Records manager asked IT to develop small bit of code so that whenever a set of papers was saved by an examiner, a copy would automatically go to a folder controlled and accessible only by the records manager. While recognized that this was not full ERMS, several goals achieved: records manager got control of important set of ERs, and established relationship with IT and business unit. Seamless process for bank examiners to send ERs to records manager. Metadata developed for project was used as the foundation for agency-wide metadata standards. Cost was a fraction of what a full EDRMS would have been. "By undertaking a small, low budget project, the records manager was able to demonstrate that the ERM system was workable and to make a more informed recommendation for an enterprise-wide system." p59. Case 2: Implementing ERM in a small federal agency. Working collaboratively to build effective processes. Before carrying out an implementation, small records staff (two) set up series of hour long "show and tell" sessions for work groups to find out what people in business units did. Included session where fundamentals of RM were explained and related to context of audience, and another where business units described their processes and interactions and the documentation they created and used, and also included advice on retention. Sessions regular and limited to one hour; if discussion not complete, an additional session was scheduled. RM team took notes and circulated for comment by e-mail or at subsequent session. Goals were to (a) develop paper and ER retention schedules RM; (b) design / implement beginning of ERM programme; (c) give business units sense of ownership in RM policies / procedures. RM team did not impose, but reached solutions through collaboration. "Understanding how the business units operated and establishing rapport were vital factors in the success of the records management program!" p59. This collaborative process did not add to budget, but only required small allotments of time

commitment. No need for consultants or for busy staff to have to give up a lot of time. "All participants were better informed about agency business processes, making changes easier to implement effectively" p59. Case 3: Presenting the case to management. Using full functionality of existing technology to improve ERM processes and build capacity. Law librarian of federal agency legal division undertook project that, while not itself an ERM project, paved the way for later ERM implementation. Long-standing central filing system, managed by file clerks. Legal division sent all paper docs deemed to be records to central filing, keeping copies of some as part of a local library. Software package used to synopsise legal cases. Documents created using WP programme, but many docs received were paper. Attorneys spent a lot of time searching the library of records and complained at having to retype material that was not electronically available. Law librarian asked attorneys how processes could be improved. Attended demos of RM applications; gathered info on operating systems used within agency; researched products on-line; reviewed software product already used by division, which had several features not currently used incl scanning and electronic document storage. Reported advantages, disadvantages and costs of a variety of possible implementations, recommending expanding use of existing package because it was flexible, already familiar to staff, and had track record for service. Law librarian did not consider this system real ERMS, but was aware that agency-wide ERMS was in the offing; when it came to implementation, law staff were already informed and comfortable with good EDM /ERM practices. Records managers have assets other than staff and budgets: one is credibility, which can be assured if they keep up to date with developments, legislation, etc. Others include careful planning, and managing expectations (resisting temptation to promise too much). Another tactic is selling business benefits of ERM, as opposed to just risk: all staff benefit in carrying out their tasks more effectively if the records on which they rely are well managed. Accountability and accessibility of information are also enhanced. CP Several interim measures are open where resources are few: providing users with definitions and guidance; persuade business units to store records in a secure location (separate system or read-only in separate part of existing system); help business units to develop metadata standards; explain that limiting acceptable file formats helps storage and retrieval. "Effective communication is vital and inexpensive" p60. Users must always be consulted, and made comfortable and familiar with terms used. Can be done through soliciting user groups to engender co-operation. Records managers should use suggested ideas that have merit and explain why other suggestions cannot or will not be used. Staff with investment in system more likely to use it. Records managers have incentive to work with IT an business units to modify or extend existing systems to provide ERM capabilities. Need to co-operate to identify certification criteria. Time, money and stress will be save thereby when it comes to full implementation, because ground will have been laid "both culturally and technically" p60. No programme comes about in one go; records managers who take incremental, low-cost, high-value steps will contribute significantly to successful outcome.

*Young, J. (2005) 'Electronic records management on a shoestring: three case studies', Information Management Journal, 39 (1), pp. 58-60.*

#502 2005 HH/H

- *ERM requires cultural change*
- *Change management needed when implementing ERM*

Full-scale overhaul of recordkeeping procedures culminating in implementation of EDRMS, working to ISO 15489 as standard. PRONI started on one of three lead EDRM implementation projects in Northern Ireland Civil Service (NICS) in summer 2003, the first phase of a NICS-wide implementation. Project team had four staff plus project manager and project support officer; RM and IT input recognized as critical from the outset. RM input rapidly led to full-time assignment of one team member to RM issues, with IT called on as needed. Unlike other two lead projects, PRONI implementation was across entire agency (90 staff). Advantages of this for technological side, but disadvantages / challenges from cultural and RM perspectives: complete classification scheme had to be developed and adopted and

staff training on new system and ways of working with information carried out in very short time. Objectives: (1) improve internal RM procedures; (2) implement EDRMS; (3) provide lessons for full NICS implementation. Project methodology: PRINCE II. Importance of benefits realization stage integral to project; adoption of project management approach revealed organizational commitment to building on implementation and realizing benefits, unlike many projects where the impetus is lost once the project phase is over. Identified continuing responsibility as lying with PRONI's RM unit. Early on, RM procedures examined to fulfil one of the project objectives, i.e. regaining corporate control over RM processes, using methodology contained in ISO 15489 and DIRKS. Tenders for EDRM software had to meet TNA functional requirements. Three stages in PRONI project: preparation (14 months); implementation (3 months); operation (4 months). Central lesson is that preparation and laying of foundations key to project success: planning, training, allocating resources, re-introducing good RM procedures. Two activities arising from ISO 15489 carried out at this stage, information audit and ER questionnaire. Project launched to users via ER questionnaire; staff were asked about quantity of email they stored, whether they had structured their Outlook folders with sub-folders, and about volume of documents on their hard drives. This info could easily have been got by IT, but questionnaire was used instead to highlight to staff that 'their' ERs were a corporate resource and that scope of project included all electronic info held in PRONI. Questionnaire was sent out by the Chief Executive, and was very helpful in starting the cultural change as staff started discussing information and information duplication issues. Audit showed: "PRONI, like any other organisation, had adopted bad habits in record keeping due to a lack of internal training and the individualisation computers had brought to conducting business processes" p144. To help project team and put in place mechanism to aid cultural change, representatives sought from each work section: these were consulted, updated and trained throughout project. Communication was instituted – updates to senior managers, articles in internal magazines, competitions, awareness sessions, updates to intranet. Also liaising with other lead projects and giving presentations / workshops. Developing the functional classification scheme "the single most critical component of an EDRM project" p144. Pilot of scheme revealed gaps in new scheme and some aspects confusing to staff. Also highlighted lack of training in basic RM, now identified as project priority and which PRONI, unlike many other organizations, had in-house RM expertise to deliver over two weeks in form of intensive one day sessions for all staff mixing information and practical sessions. Course was popular (80–85% approval rating). Need to follow up with training for absent staff and to incorporate in induction programme. Best way to achieve necessary staff familiarity with BCS and acceptance of cultural change is to involve them in development process and allow time for change to take root. Focus groups held with staff from each area after basic course. Mapping info from these discussions along with business plans helped team to carry out ISO 15489 steps in analyzing organizational business activities and identify records requirements. In moving to new system, decision had already been made not to back-scan or mass-migrate existing data on network drives. Familiarization of staff with new classification / file structure effected in data transfer and clean-up exercise in summer 2004, starting with staff either moving documents from their hard drives to shared space or printing hard copies for registered files. Work teams then reviewed material now on shared drives to delete duplicates and out-of-date material or print off to registered file where appropriate. Transfer of remaining material to new ERM environment had to be justified in detail to the records manager. Meanwhile file classification carried out, to allow application of retention periods, as specified by ISO 15489. In September 2004, a "familiarisation drive" was opened and old shared drive made read-only. "The data transfer process was a big cultural change as staff found it hard to let go of 'their' information and it was a slow process for them to accept the corporate value of records" p146. Imposition of deadlines helped focus attention of staff, but this meant that deadlines had to be adhered to strictly to keep momentum, and time commitment from staff was a major issue, particularly at this stage of project, where getting input from time-pressed senior staff was especially difficult. Realized that time commitment from senior managers and from business sections should have been indicated in business

plans to clarify resource implications. Also realized that Chief Exec and PA would need ongoing one-to-one training on searching and overall use of corporate file-plan. Implementation started in October 2004, using Tower Software's TRIM Context. "The configuration workshop was a difficult process with a lot of software jargon and the records management implications being debated" p146. One-to-one meetings held with section reps ("power users") to explain procedure for exporting files from temporary familiarisation drive to EDRMS, which was welcomed as an improvement on the existing shared environment, with its enhanced search-and-retrieval functionality and the ability to store emails. EDRMS provider gave the 'power users' training in the software, with a model office and database, prior to going live in January 2005. Continuing management and roles discussed during implementation, with need for continued RM and administrative input recognized as essential, with IT staff happy to take background support role. EDRMS provider gave system administration training to project team members and section reps likely to stay with PRONI and thus provide continuity of knowledge. End-user training outsourced to SureSkills, briefed with significant input on training needs from project team. System went live mid-January, with software installed on PCs while staff were on training course, "an essential lesson we had learnt from other implementations" p147. Knowledge of other implementation experiences also determined timing and level of 'floorwalking' done by external provider, delaying it until users had assimilated enough of the new system to be able to avail of this support: initially, floorwalking done by project team – time-consuming, but enabled highlighting of issues and rapid response. Implementation also brought up significant issue of document naming conventions; each work area asked to develop local guidelines. Project team compiled 'handy hints' document delivered in follow-up training and put on intranet. User reaction to EDRMS generally favourable, 60% using it regularly (expected level, as roughly 40% of staff do not create filing on a day-to-day basis but need to access documents). Formal operating phase of project for four months after going live, allowing project team to provide continuing support and contribute to NICS-wide implementation phase. An essential aspect of the project's remit was to provide a "lessons-learned" report, which was written in the form of a post-implementation review as required by ISO 15489. RM skills essential in regaining corporate control of records, and change management aspects also critical. Further work identified includes specific training, development of RM schedules and guidance, dissemination of PRONI implementation experience to wider public sector. Benefits gained: analysis of RM procedures and recovery of control; RM policy; BCS; less duplication; better-trained staff; culture of sharing information. Real benefit of being a lead implementer was for PRONI – as the agency responsible for government records – to "get its own house in order" and allowing it to perform its function properly.

*Smyth, Z. A. (2005) 'Implementing EDRM: has it provided the benefits expected?', Records Management Journal, 15 (3), pp. 141-149.*

\$872 2006 MM/M

- *ERM alters relationships between managers and workers*
- *ERM causes changes in work practices*
- *Resistance to organizational and cultural changes caused by ERM*
- *ERM requires cultural change*

Choosing the right EDMS software is important but "the technology itself is less important than the people who will use it and the business processes it will support. Implementing EDMS software and expecting the technology to change organizational culture would be a mistake. The old 80-20 rule applies to implementation; for the most success, focus just 20 percent of the efforts on the technology and 80 percent on the cultural issue". An interesting application of the Pareto rule. "An implementation can be judged successful when the system captures the official records of the firm, the records are managed throughout their life cycle, and the EDMS has become so ingrained in the firm's culture that employees can't imagine working any other way. That is because document management is a part of every employee's job. Whereas filing was once the speciality of file clerks, the function of saving

documents into an EDMS repository requires that all users – not just the records staff – know where to file and how classify information. It's no longer about individual filing systems that work for the individual until the completed files are delivered to the door of the records management department. It's about having a standardized filing methodology that everyone follows from the point of creation and throughout a document's use. Saving information correctly so it can be retrieved by anyone who needs access to it is the primary goal." (p45) Says that not everyone "will welcome the discipline needed for them to participate in the successful implementation and use of an EDMS. That is why top management support is critical to ensure that those who don't are convinced to comply or seek employment somewhere where they can continue to work with traditional paper systems. This is just a reality to be faced. Not everyone will be able to make the cultural shift." But this rather suggests that resistance is to the e-system (vs paper system) but it may be the nature of the e-system not e-systems per se. CSFs for successful EDMS implementation are: (1) make the process transparent (ingrain the process of classifying records into daily work processes so it becomes invisible; minimise number of keystrokes needed to save or retrieve documents; suggests users classify documents but records staff declare as records – not sure why/how this would really save time); (2) manage user expectations (better to under-sell a system and over-deliver the product than vice versa; tell users what will be delivered & when; say that productivity may go down immediately after implementation but then increase; implement policies that help users understand changing expectations (e.g. e-records will be the official record, not paper ones); "it is not possible to over-communicate what is happening during an EDMS implementation", use different methods to "keep information flowing and set the right expectations"); (3) focus on people (show them the individual benefits first then the organisational ones e.g. easier, faster searching, improved document sharing, better security, better client service, improved vital records protection, better reporting, reduced file storage space, "overall - better decision-making based on better recordkeeping practices"; involve the right people in the change process – a combination of different "ranks" and both "those who have good attitudes and are willing to work at making processes better but also a few resisters who can be coached so their resistance will be reduced and buy-in obtained early in the process"; include them in the pilot & refine that on the basis of feedback); (4) focus on processes (consider changing the processes before customising software i.e. don't just customise software based on current processes; flowchart current processes based on discussion with people and then detail how they will be handled in the EDMS); (5) train on processes (ok to train on the software first but training must go beyond that to show how they will use it to support their work); (6) keep sight of the big picture ("be careful not to give departments or business units everything they ask for in isolation... it can lead to islands of information that create fragmented systems or multiple applications that don't talk to each other. There needs to be a coordinated effort to reduce redundancy yet maintain the necessary level of information sharing and process efficiency"); (7) understand changing communication dynamics ("communication systems change as work is created electronically. Electronic notification increases as work flows from one person to another...EDMS usually changes basic workflow patterns but not nearly as much as implementing a workflow engine would. Work group dynamics change as users are able to share electronic information... this causes traditional boundaries between groups and departments to disappear. EDMS can even change the relationship between managers and subordinates.. managers can view the progress on a job much earlier in the e-environment" but author cautions against micromanaging vs monitoring; EDMS creates more accountability because of audit trails. People won't just use an EDMS "because it is there. They have to have a vested interest in using it. Understanding the people and process issues will go a long way toward gaining that interest. Technology by itself does not fix poor processes, create motivating jobs, or necessarily solve department productivity issues. But combining the technology with skilled people who understand how a system is used to manage documents/records during the routine activities of everyday work can lead to improved processes, more motivated employees, and better productivity."

Downing, L. (2006) 'Implementing EDMS: Putting People First', *Information Management Journal*, 40 (4), pp. 44-50.

### 8.3 ERM Implementation – Critical success Factors

Covers:

#### Strategic level preparation

- produce a business case for the change to ERM
- place the change to ERM within the strategic development of information systems

#### Planning and managed implementation

- good planning when implementing ERM
- start with small changes or implementation projects
- change takes time when implementing ERM
- use BPR (business process reengineering) as a means of implementing ERM
- performance management the change to ERM

#### Leadership and organisational commitment

- chief executive vision for ERM in the organisation
- chief executive support for ERM
- organisational commitment to ERM

#### Staff involvement and cooperative working

- co-operation of staff necessary to successful implementation of ERM
- work collaboratively to build effective processes
- team working across different stakeholders when implementing ERM
- involve end users in developmental process
- give the end users 'ownership' of the change to ERM
- consultation with end users when implementing ERM
- good communication when implementing ERM

#### Awareness raising and training

- awareness raising when implementing ERM
- end users need to be persuaded to apply record keeping principles to e-records
- training of staff when implementing ERM

#### Clear benefits

- staff need to see the benefits when implementing ERM
- benefits of patient-accessible electronic medical records

#717 1999 HMM

- *Use BPR (business process reengineering) as a means of implementing ERM*
- *Give the end users 'ownership' of the change to ERM*

Using BPR (business process re-engineering) as a means of implementing ERM; with case examples from U. S. federal organisations. The EPA case: workflow and ERM Organization of Dockets in the EPA the Docket is both an administrative unit and a file/ docket in the legal sense. Currently, Dockets are in different locations and with little intercommunication. Now to be relocated in single centre. EPA commissioned a BPR and modernization study to assess existing processes and make recommendations. Aim to increase docket workflow efficiency and improve customer service and public access through IT applications. As dockets are permanent records, need to comply with NARA requirements for storage and transfer. EPA staff involved in project spent much more time discussing business processes than new IT system; once consensus was reached, IT design flowed quickly from processes. Major effort lay in deliberation and reaching decisions on tasks and methods for agency staff, and on how the formerly separate staffs would work together. Once collective decisions had been made, specifying IT needs was straightforward. There will be resistance to organizational and cultural changes brought by new system. Change management and detailed implementation plans to be included so staff have ownership of solution.

Van Wingen, R. S., Hathorn, F. & Sprehe, J. T. (1999) 'Principles for information technology investment in U. S. federal electronic records management', *Journal of Government Information*, 26 (1), pp. 33-42.

#### \$442 1999 HMM

- *End users need to be persuaded to apply record keeping principles to e-records*
- *Personal business records in an electronic environment. Ownership. An organization owns all records created or maintained within it. This remains the case with electronic records, but the situation is less clear-cut and policy much harder to enforce. This arises from the ease with which files can be copied, by the fact that many employees now work from home, and because of the perception of the PC as actually 'personal'. The organization is still responsible for all of these 'personal' copies held at home or on hard drives, perhaps inaccessible or past their retention period. Employee mind-set will need to be changed as well, so that they are persuaded to apply RK principles to electronic records as they did to paper records.*  
*Sanders, R. L. (1999) 'Personal business records in an electronic environment', Information Management Journal, 33 (4), pp. 60-63.*

#### \$172 2001 MML

- *Chief executive vision for ERM in the organisation*
- *Chief executive support for ERM*
- *Staff need to see the benefits when implementing ERM*

Use of XML to facilitate communication and integration of business processes. Senior management need to have not just vision but thorough understanding: introduction of XML needs to be driven from the top to change corporate culture, get 'buy-in', and ensure integrated approach. Successes following from implementation of XML will make employers more receptive to radical approaches to e-business.

*Beesley, K. (2001) 'XML: solution for the future', Business Information Review, 18 (2), pp. 35-40.*

#### \$681 2002 MM/M

- *Produce a business case for the change to ERM*
- *Place the change to ERM within the strategic development of information systems*
- *Performance management the change to ERM*

Practical outline of processes to go through to implement an ERMS. Managing the change to ERM. Justify the investment: business case; be clear where the impact will be felt - strategic, tactical, operational; demonstrate benefits by outlining what these are and measuring 'statistics' at starting point that can be re-measured after ERM implementation. Manage the strategic development information systems: position the ERM within the organisation's overall programme of system projects. Performance management: p.23 "Step 1: Link projects to organisational goals and objectives. Step 2: Develop performance measures. Step 3: Establish a baseline to compare future Performance. Step 4: Select projects with the greatest value. Step 5: Collect data. Step 6: Analyse the results. Step 7: Integrate into management processes. Step 8: Communicate the results." Finally, p.24 "understanding the human element".

*Wiggins, B. (2002) 'Making the case for electronic records management: a Churchillian viewpoint', Records Management Bulletin, (110), pp. 21-24.*

#### #166 2002 HMM

- *Training of staff when implementing ERM*

US Dept of Education: Use of neural network software to categorize records according to retention period. With breakdown of traditional IM systems consequent on growth of PC and e-mail, it is now assumed that info can only be managed at folder, not document level; however, users resist the necessary filing practices, which have proved largely impossible to

enforce. Previous attempts to deploy desktop RM applications had failed due to user resistance, and regular (re)training was required because of constant staff turnover. The project was devised to see if neural network technology (Hummingbird's Knowledge Manager Workstation) could do the work instead. In networking the software, previous user resistance taken into account by having it operate in the background. Under old paradigm, records managers spent a lot of time educating and persuading staff to do their filing; now electronic fileplans unnecessary so less time spent on that. Also gives records managers more power and control – instead of devising systems which it is then up to others to apply, they design systems and oversee implementation with expert staff.

*Schewe, D. B. (2002) 'Classifying electronic documents: a new paradigm', Information Management Journal, 36 (2), pp. 54, 56-59.*

\$765 2004 HLL

- *Chief executive support for ERM*
- *Co-operation of staff necessary to successful implementation of ERM*
- *Team working across different stakeholders when implementing ERM*

Interviews with three chief information officers: CIO1 = School + Storage Networking Industry Association; CIO2 = Law firm; CIO3 = National Archives and Records Administration (NARA). APPROACH TO MANAGING E-RECORDS. CIO1: waking up to the need for a strategy for ERM. CIO2: have an ERM policy. CIO3: Piloting software, but current policy is printing and filing. KEY TO ERM. CIO1: leadership buy-in. articulating cost-benefits and risks. Capture metadata in transparent way. Flexible for individual organisation's needs. CIO2: Deletion of spam/junk etc. CIO3: p.32 "simultaneously dealing with people, process, and technology." User buy-in. integration of RM into enterprise activities. Integrated software (RM and office etc.). BIGGEST CHALLENGE IN ERM. CIO1: cost and lack of desire to fund this. CIO2: Selective deletion of records. CIO3: integrated software. easy natural methods of filing. BIGGEST CHALLENGES OF COMPLIANCE. CIO1: Email can contain high-evidentiary material, but how identify, capture and archive? CIO2: confidentiality. CIO3: Federal Records ACT and NARA RM regs. WHO SETS ERM POLICIES/PROCEDURES. CIO1. Multi-departmental. CIO2. legal counsel, records dept, IT all together. CIO3. Multidepartmental. lead by RM. WHAT HELP REQUIRED FROM RM / IT. CIO1. p.34 "I want the philosophical and legal framework of a clearly articulated records management policy to drive our technology, not vice-versa." CIO2. RM staff to become more familiar with IT. RM to become responsible for e-records as well as paper. CIO3. RM set policies/strategies, IT helps to implement them. RELATIONSHIP BETWEEN RM / IT. CIO1. Good multidepartmental working. CIO2. Both IT and RM report to me, and library too. CIO3. Both IT and RM report to the CIO. SKILLS. CIO1. RM skills: understand best practice and policies for type of organisation working in and media using. IT: humility, listening, IT appropriate for the organisation. CIO2. RM: IT knowledge, assertion, proactive. IT: inform RM about IT, open up applications for RM input. CIO3. RM: Understand business process. Know IT speak. IT: Understand RM and technologies that can do RM. Communicate in non-technical language. STUDY: Recent study commissioned by ARMA from Forrester Consulting no other details given. Results: p.31 "Records and information (RIM) professionals are losing their influence in records management as ERM emerges. \* Business and IT perceive few challenges to ERM, other than organizational priorities and budget; unlike business and IT, RIM professionals see many challenges surrounding RIM. \* Business and IT do not fully understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

*Swartz, N. (2004) 'From the mouths of CIOs', Information Management Journal, 38 (5), pp. 30-36.*

#786 2004 MM/M

- *Good communication when implementing ERM*
- *Awareness raising when implementing ERM*
- *Training of staff when implementing ERM*

DTI's EDRMS project using TRIM software. Implementation included management of change programme (business analysis briefings, training & communication).

*'EDRM with TRIM benefits the DTI', (2004) Information Management and Technology, 37 (1), p. 40.*

\*426 2004 HH/H

- *Benefits of patient-accessible electronic medical records*

Randomised controlled trial (RCT) of effects of patient-accessible online medical records. Patients with heart failure at the University of Colorado Hospital. Used SPPARO (System Providing Patients Access to Records Online) which provided clinical notes, text results, and facility to send messages to clinical staff. Secure Web interface with ID/password access. Intervention group had access to SPPARO, control group had normal care. Clinicians blinded to which patients were which. Questionnaires at baseline, 6 moth, 12month, plus system usage data and health service usage data. Outcome measures: self efficacy, health status, adherence, patient satisfaction. 107 participants, 54 in intervention group, 53 in control. 144 decliners (people who did not join the study) completed a questionnaire. RESULTS FOR INTERVENTION GROUP COMPARED TO CONTROLS: Self efficacy improved but did not reach the threshold level set at the beginning of the study. Health status measures showed trends towards improvement but not statistically significant. Adherence to medical advice significant improvement. Adherence to medications showed trend to improvement but not statistically significant. Patient satisfaction showed non statistically significant trends to improvement in (i) how well patients felt their problems were understood, and (ii) how well doctors explained information. Significant increase in emergency dept visits. No adverse effects from use of SPPARO; one complaint about accuracy of data. There was a significant increase in the number of messages sent to staff, but staff did not perceive an increase in workload. RESULTS FOR DECLINERS. Compared to participants: lower incomes, lower membership of white ethnic group, fewer had medical insurance, fewer had college education, less likely to have had experience of Internet. CONCLUSIONS. P.10 "Overall, this trial suggests that a patient-accessible electronic medical record can be implemented with the potential for a modest benefit in adherence and minimal impact on clinic operations. Although the majority of patients were not interested in online medical records, the fact that fully one-quarter of the patients in the practice were interested demonstrates that this intervention can appeal to a substantial number of patients. "The overall impression from studies of patient-accessible medical records is that they can improve certain aspects of care, but they are unlikely to substantially improve health status. This probably reflects the inherent limitations of interventions that focus on information alone".

*Earnest, M. A., Lin, C.-T., Moore, L. A., Ross, S. E. & Wittevrongel, L. (2004) 'Providing a Web-based online medical record with electronic communication capabilities to patients with congestive heart failure: randomized trial', Journal of Medical Internet Research, 6 (2), p. No page numbers.*

#502 2005 HH/H

- *Good planning when implementing ERM*
- *Change takes time when implementing ERM*
- *Organisational commitment to ERM*
- *Team working across different stakeholders when implementing ERM*
- *Involve end users in developmental process*
- *Consultation with end users when implementing ERM*
- *Good communication when implementing ERM*
- *Awareness raising when implementing ERM*
- *Training of staff when implementing ERM*
- *Staff need to see the benefits when implementing ERM*

Full-scale overhaul of recordkeeping procedures culminating in implementation of EDRMS, working to ISO 15489 as standard. PRONI started on one of three lead EDRM implementation projects in Northern Ireland Civil Service (NICS) in summer 2003, the first phase of a NICS-wide implementation. Project team had four staff plus project manager and project support officer; RM and IT input recognized as critical from the outset. RM input rapidly led to full-time assignment of one team member to RM issues, with IT called on as needed. Unlike other two lead projects, PRONI implementation was across entire agency (90 staff). Advantages of this for technological side, but disadvantages / challenges from cultural and RM perspectives: complete classification scheme had to be developed and adopted and staff training on new system and ways of working with information carried out in very short time. Objectives: (1) improve internal RM procedures; (2) implement EDRMS; (3) provide lessons for full NICS implementation. Project methodology: PRINCE II. Importance of benefits realization stage integral to project; adoption of project management approach revealed organizational commitment to building on implementation and realizing benefits, unlike many projects where the impetus is lost once the project phase is over. Identified continuing responsibility as lying with PRONI's RM unit. Early on, RM procedures examined to fulfil one of the project objectives, i.e. regaining corporate control over RM processes, using methodology contained in ISO 15489 and DIRKS. Tenders for EDRM software had to meet TNA functional requirements. Three stages in PRONI project: preparation (14 months); implementation (3 months); operation (4 months). Central lesson is that preparation and laying of foundations key to project success: planning, training, allocating resources, re-introducing good RM procedures. Two activities arising from ISO 15489 carried out at this stage, information audit and ER questionnaire. Project launched to users via ER questionnaire; staff were asked about quantity of email they stored, whether they had structured their Outlook folders with sub-folders, and about volume of documents on their hard drives. This info could easily have been got by IT, but questionnaire was used instead to highlight to staff that 'their' ERs were a corporate resource and that scope of project included all electronic info held in PRONI. Questionnaire was sent out by the Chief Executive, and was very helpful in starting the cultural change as staff started discussing information and information duplication issues. Audit showed: "PRONI, like any other organisation, had adopted bad habits in record keeping due to a lack of internal training and the individualisation computers had brought to conducting business processes" p144. To help project team and put in place mechanism to aid cultural change, representatives sought from each work section: these were consulted, updated and trained throughout project. Communication was instituted – updates to senior managers, articles in internal magazines, competitions, awareness sessions, updates to intranet. Also liaising with other lead projects and giving presentations / workshops. Developing the functional classification scheme "the single most critical component of an EDRM project" p144. Pilot of scheme revealed gaps in new scheme and some aspects confusing to staff. Also highlighted lack of training in basic RM, now identified as project priority and which PRONI, unlike many other organizations, had in-house RM expertise to deliver over two weeks in form of intensive one day sessions for all staff mixing information and practical sessions. Course was popular (80–85% approval rating). Need to follow up with training for absent staff and to incorporate in induction

programme. Best way to achieve necessary staff familiarity with BCS and acceptance of cultural change is to involve them in development process and allow time for change to take root. Focus groups held with staff from each area after basic course. Mapping info from these discussions along with business plans helped team to carry out ISO 15489 steps in analyzing organizational business activities and identify records requirements.

In moving to new system, decision had already been made not to back-scan or mass-migrate existing data on network drives. Familiarization of staff with new classification / file structure effected in data transfer and clean-up exercise in summer 2004, starting with staff either moving documents from their hard drives to shared space or printing hard copies for registered files. Work teams then reviewed material now on shared drives to delete duplicates and out-of-date material or print off to registered file where appropriate. Transfer of remaining material to new ERM environment had to be justified in detail to the records manager. Meanwhile file classification carried out, to allow application of retention periods, as specified by ISO 15489. In September 2004, a "familiarisation drive" was opened and old shared drive made read-only. "The data transfer process was a big cultural change as staff found it hard to let go of 'their' information and it was a slow process for them to accept the corporate value of records" p146. Imposition of deadlines helped focus attention of staff, but this meant that deadlines had to be adhered to strictly to keep momentum, and time commitment from staff was a major issue, particularly at this stage of project, where getting input from time-pressed senior staff was especially difficult. Realized that time commitment from senior managers and from business sections should have been indicated in business plans to clarify resource implications. Also realized that Chief Exec and PA would need ongoing one-to-one training on searching and overall use of corporate file-plan. Implementation started in October 2004, using Tower Software's TRIM Context. "The configuration workshop was a difficult process with a lot of software jargon and the records management implications being debated" p146. One-to-one meetings held with section reps ("power users") to explain procedure for exporting files from temporary familiarisation drive to EDRMS, which was welcomed as an improvement on the existing shared environment, with its enhanced search-and-retrieval functionality and the ability to store emails. EDRMS provider gave the 'power users' training in the software, with a model office and database, prior to going live in January 2005. Continuing management and roles discussed during implementation, with need for continued RM and administrative input recognized as essential, with IT staff happy to take background support role. EDRMS provider gave system administration training to project team members and section reps likely to stay with PRONI and thus provide continuity of knowledge. End-user training outsourced to SureSkills, briefed with significant input on training needs from project team. System went live mid-January, with software installed on PCs while staff were on training course, "an essential lesson we had learnt from other implementations" p147. Knowledge of other implementation experiences also determined timing and level of 'floorwalking' done by external provider, delaying it until users had assimilated enough of the new system to be able to avail of this support: initially, floorwalking done by project team – time-consuming, but enabled highlighting of issues and rapid response. Implementation also brought up significant issue of document naming conventions; each work area asked to develop local guidelines. Project team compiled 'handy hints' document delivered in follow-up training and put on intranet. User reaction to EDRMS generally favourable, 60% using it regularly (expected level, as roughly 40% of staff do not create filing on a day-to-day basis but need to access documents). Formal operating phase of project for four months after going live, allowing project team to provide continuing support and contribute to NICS-wide implementation phase. An essential aspect of the project's remit was to provide a "lessons-learned" report, which was written in the form of a post-implementation review as required by ISO 15489. RM skills essential in regaining corporate control of records, and change management aspects also critical. Further work identified includes specific training, development of RM schedules and guidance, dissemination of PRONI implementation experience to wider public sector. Benefits gained: analysis of RM procedures and recovery of control; RM policy; BCS; less duplication; better-trained staff; culture of sharing information. Real benefit of being a lead implementer was for

PRONI – as the agency responsible for government records – to “get its own house in order” and allowing it to perform its function properly.

*Smyth, Z. A. (2005) 'Implementing EDRM: has it provided the benefits expected?', Records Management Journal, 15 (3), pp. 141-149.*

#### #748 2005 HMM

- *Start with small changes or implementation projects*
- *Co-operation of staff necessary to successful implementation of ERM*
- *Work collaboratively to build effective processes*
- *Team working across different stakeholders when implementing ERM*
- *Involve end users in developmental process*
- *Give the end users 'ownership' of the change to ERM*
- *Consultation with end users when implementing ERM*
- *Good communication when implementing ERM*
- *Awareness raising when implementing ERM*
- *Training of staff when implementing ERM*

ERMS implementations. cases all come from the US government sector. While information is now appreciated as an asset, resourcing for RM has often been inadequate. “Records managers often face an uphill battle to incorporate ... ERM into their programs” p58. However, the ingenious records manager can build an effective programme, even with minimal resources. “Integrating ERM is not primarily a battle with management for resources; it is a culture war for the hearts and minds of the people who create and use records”p58. People usually sceptical about outsiders telling them to change ways of working, and co-operation of business staff necessary to successful implementation. Starting with small changes or implementation projects stands a better chance of success than major enterprise-wide efforts. Three case studies. Case 1: Digitizing bank examiner work papers. Enhancing existing technological resources to improve ERM; piloting with small section. Records manager in federal banking agency needed to convert manual records system into ERM system. Looked for a unit that was already doing its business electronically, and found that bank examination staff were using software package developed with other bank regulators to create and store papers related to examination work. Accuracy and integrity of such records essential as bank ratings depend on examination results. Records manager asked IT to develop small bit of code so that whenever a set of papers was saved by an examiner, a copy would automatically go to a folder controlled and accessible only by the records manager. While recognized that this was not full ERMS, several goals achieved: records manager got control of important set of ERs, and established relationship with IT and business unit. Seamless process for bank examiners to send ERs to records manager. Metadata developed for project was used as the foundation for agency-wide metadata standards. Cost was a fraction of what a full EDRMS would have been. “By undertaking a small, low budget project, the records manager was able to demonstrate that the ERM system was workable and to make a more informed recommendation for an enterprise-wide system.” p59. Case 2: Implementing ERM in a small federal agency. Working collaboratively to build effective processes. Before carrying out an implementation, small records staff (two) set up series of hour long “show and tell” sessions for work groups to find out what people in business units did. Included session where fundamentals of RM were explained and related to context of audience, and another where business units described their processes and interactions and the documentation they created and used, and also included advice on retention. Sessions regular and limited to one hour; if discussion not complete, an additional session was scheduled. RM team took notes and circulated for comment by e-mail or at subsequent session. Goals were to (a) develop paper and ER retention schedules RM; (b) design / implement beginning of ERM programme; (c) give business units sense of ownership in RM policies / procedures. RM team did not impose, but reached solutions through collaboration. “Understanding how the business units operated and establishing rapport were vital factors in the success of the records management program!” p59. This

collaborative process did not add to budget, but only required small allotments of time commitment. No need for consultants or for busy staff to have to give up a lot of time. "All participants were better informed about agency business processes, making changes easier to implement effectively" p59. Case 3: Presenting the case to management. Using full functionality of existing technology to improve ERM processes and build capacity. Law librarian of federal agency legal division undertook project that, while not itself an ERM project, paved the way for later ERM implementation. Long-standing central filing system, managed by file clerks. Legal division sent all paper docs deemed to be records to central filing, keeping copies of some as part of a local library. Software package used to synopsise legal cases. Documents created using WP programme, but many docs received were paper. Attorneys spent a lot of time searching the library of records and complained at having to retype material that was not electronically available. Law librarian asked attorneys how processes could be improved. Attended demos of RM applications; gathered info on operating systems used within agency; researched products on-line; reviewed software product already used by division, which had several features not currently used incl scanning and electronic document storage. Reported advantages, disadvantages and costs of a variety of possible implementations, recommending expanding use of existing package because it was flexible, already familiar to staff, and had track record for service. Law librarian did not consider this system real ERMS, but was aware that agency-wide ERMS was in the offing; when it came to implementation, law staff were already informed and comfortable with good EDM /ERM practices. Records managers have assets other than staff and budgets: one is credibility, which can be assured if they keep up to date with developments, legislation, etc. Others include careful planning, and managing expectations (resisting temptation to promise too much). Another tactic is selling business benefits of ERM, as opposed to just risk: all staff benefit in carrying out their tasks more effectively if the records on which they rely are well managed. Accountability and accessibility of information are also enhanced. CP Several interim measures are open where resources are few: providing users with definitions and guidance; persuade business units to store records in a secure location (separate system or read-only in separate part of existing system); help business units to develop metadata standards; explain that limiting acceptable file formats helps storage and retrieval. "Effective communication is vital and inexpensive" p60. Users must always be consulted, and made comfortable and familiar with terms used. Can be done through soliciting user groups to engender co-operation. Records managers should use suggested ideas that have merit and explain why other suggestions cannot or will not be used. Staff with investment in system more likely to use it. Records managers have incentive to work with IT an business units to modify or extend existing systems to provide ERM capabilities. Need to co-operate to identify certification criteria. Time, money and stress will be save thereby when it comes to full implementation, because ground will have been laid "both culturally and technically" p60. No programme comes about in one go; records managers who take incremental, low-cost, high-value steps will contribute significantly to successful outcome.

*Young, J. (2005) 'Electronic records management on a shoestring: three case studies', Information Management Journal, 39 (1), pp. 58-60.*

#### #333 2006 HML

- *Chief executive vision for ERM in the organisation*
- *Chief executive support for ERM*
- *Team working across different stakeholders when implementing ERM*
- *Consultation with end users when implementing ERM*
- *Training of staff when implementing ERM*
- *Staff need to see the benefits when implementing ERM*

The development of RM at the French National Library. Driven by new president and a new CEO taking up post in 2002: president = preserving the history of the French National Library and other French libraries; CEO = reform of public institutions. Set up a new service devoted

to RM and archives attached to the CEO. CSF: p.98 "This position in the organisational hierarchy means the author is free to intervene at any level necessary, without a long and hard process of seeking support or authority." Used DIRKS. Interviews with staff to understand functions and activities and e-tools used. Then meetings with secretaries p. 98 "understand how they manage their jobs, their ideas for improvement and to explain best practices. The difficulty at the National Library is that the background and expertise of the secretaries varies greatly from one office to another. Some of them are experienced, but others had previously been technical personnel ... They wanted information and to learn how to do better, but a large number of them were unable to suggest new ideas or to imagine new processes in their job." Then separate training with managers. Needed to train in basic RM principles and procedures. Built with staff meetings a classification scheme. Used Lotus Notes. External training for all staff covering best practices and processes as well as Lotus Notes use. Two levels of training: first level mandatory for all users on managing emails and e-diaries and searching databases; second level for document creators. P. 101 "Training has been essential and is a significant investment which must continue and become a permanent feature." Informal team of people with different competencies from across the organisation. Strong support from president and CEO. Managers see the benefits.

*Dherent, C. (2006) 'Document management at the French National Library', Records Management Journal, 16 (2), pp. 97-101.*

\$872 2006 MM/M

- *Chief executive support for ERM*
- *Training of staff when implementing ERM*
- *Staff need to see the benefits when implementing ERM*

Choosing the right EDMS software is important but "the technology itself is less important than the people who will use it and the business processes it will support. Implementing EDMS software and expecting the technology to change organizational culture would be a mistake. The old 80-20 rule applies to implementation; for the most success, focus just 20 percent of the efforts on the technology and 80 percent on the cultural issue". An interesting application of the Pareto rule. "An implementation can be judged successful when the system captures the official records of the firm, the records are managed throughout their life cycle, and the EDMS has become so ingrained in the firm's culture that employees can't imagine working any other way. That is because document management is a part of every employee's job. Whereas filing was once the speciality of file clerks, the function of saving documents into an EDMS repository requires that all users – not just the records staff – know where to file and how classify information. It's no longer about individual filing systems that work for the individual until the completed files are delivered to the door of the records management department. It's about having a standardized filing methodology that everyone follows from the point of creation and throughout a document's use. Saving information correctly so it can be retrieved by anyone who needs access to it is the primary goal." (p45) Says that not everyone "will welcome the discipline needed for them to participate in the successful implementation and use of an EDMS. That is why top management support is critical to ensure that those who don't are convinced to comply or seek employment somewhere where they can continue to work with traditional paper systems. This is just a reality to be faced. Not everyone will be able to make the cultural shift." But this rather suggests that resistance is to the e-system (vs paper system) but it may be the nature of the e-system not e-systems per se. CSFs for successful EDMS implementation are: (1) make the process transparent (ingrain the process of classifying records into daily work processes so it becomes invisible; minimise number of keystrokes needed to save or retrieve documents; suggests users classify documents but records staff declare as records – not sure why/how this would really save time); (2) manage user expectations (better to under-sell a system and over-deliver the product than vice versa; tell users what will be delivered & when; say that productivity may go down immediately after implementation but then increase; implement policies that help users understand changing expectations (e.g. e-records will be the official record, not paper ones); "it is not possible to over-communicate what is happening during an

EDMS implementation”, use different methods to “keep information flowing and set the right expectations”); (3) focus on people (show them the individual benefits first then the organisational ones e.g. easier, faster searching, improved document sharing, better security, better client service, improved vital records protection, better reporting, reduced file storage space, “overall - better decision-making based on better recordkeeping practices”; involve the right people in the change process – a combination of different “ranks” and both “those who have good attitudes and are willing to work at making processes better but also a few resisters who can be coached so their resistance will be reduced and buy-in obtained early in the process”; include them in the pilot & refine that on the basis of feedback); (4) focus on processes (consider changing the processes before customising software i.e. don’t just customise software based on current processes; flowchart current processes based on discussion with people and then detail how they will be handled in the EDMS); (5) train on processes (ok to train on the software first but training must go beyond that to show how they will use it to support their work); (6) keep sight of the big picture (“be careful not to give departments or business units everything they ask for in isolation... it can lead to islands of information that create fragmented systems or multiple applications that don’t talk to each other. There needs to be a coordinated effort to reduce redundancy yet maintain the necessary level of information sharing and process efficiency”); (7) understand changing communication dynamics (“communication systems change as work is created electronically. Electronic notification increases as work flows from one person to another... EDMS usually changes basic workflow patterns but not nearly as much as implementing a workflow engine would. Work group dynamics change as users are able to share electronic information... this causes traditional boundaries between groups and departments to disappear. EDMS can even change the relationship between managers and subordinates.. managers can view the progress on a job much earlier in the e-environment” but author cautions against micromanaging vs monitoring; EDMS creates more accountability because of audit trails. People won’t just use an EDMS “because it is there. They have to have a vested interest in using it. Understanding the people and process issues will go a long way toward gaining that interest. Technology by itself does not fix poor processes, create motivating jobs, or necessarily solve department productivity issues. But combining the technology with skilled people who understand how a system is used to manage documents/records during the routine activities of everyday work can lead to improved processes, more motivated employees, and better productivity.”

*Downing, L. (2006) 'Implementing EDMS: Putting People First', Information Management Journal, 40 (4), pp. 44-50.*

## 9 ERMS IMPLEMENTATION

### 9.1 Many of the problems facing ERMS implementation are behavioural rather than technical

#163 2006 HMM

- *Many of the problems facing ERMS implementation are behavioural rather than technical*

Use of EDMS to facilitate e-collaboration in project-based industry. Based on a number of case studies in Scandinavia. Realization of behavioural rather than technical nature of many problems facing introduction. These and other studies reveal: end-users not to be treated as homogenous group but differentiated by attitude and IT skills; high level of satisfaction with system but much lower with user support and training; equal emphasis needs to be placed on technology, processes and people; User satisfaction: varied somewhat by whether they were to a significant extent uploaders to (more satisfied) or downloaders from (less satisfied) the system. Conclusions. Constant reconfiguring of groups and personnel in project environment, and limited (re)training possibilities, demand either a move towards national standards or user-friendly systems. User satisfaction is widespread and digital environment taken for granted.

*Bjork, B.-C. (2006) 'Electronic document management in temporary project organisations: Construction industry experiences', Online Information Review, 30 (6), pp. 644-655.*

### 9.2 Implementing ERMS is about cultural change

#748 2005 HMM

- *Implementing ERMS is about cultural change*

ERMS implementations. cases all come from the US government sector. While information is now appreciated as an asset, resourcing for RM has often been inadequate. "Records managers often face an uphill battle to incorporate ... ERM into their programs" p58. However, the ingenious records manager can build an effective programme, even with minimal resources. "Integrating ERM is not primarily a battle with management for resources; it is a culture war for the hearts and minds of the people who create and use records" p58. People usually sceptical about outsiders telling them to change ways of working, and co-operation of business staff necessary to successful implementation. Starting with small changes or implementation projects stands a better chance of success than major enterprise-wide efforts. Three case studies. Case 1: Digitizing bank examiner work papers. Enhancing existing technological resources to improve ERM; piloting with small section. Records manager in federal banking agency needed to convert manual records system into ERM system. Looked for a unit that was already doing its business electronically, and found that bank examination staff were using software package developed with other bank regulators to create and store papers related to examination work. Accuracy and integrity of such records essential as bank ratings depend on examination results. Records manager asked IT to develop small bit of code so that whenever a set of papers was saved by an examiner, a copy would automatically go to a folder controlled and accessible only by the records manager. While recognized that this was not full ERMS, several goals achieved: records manager got control of important set of ERs, and established relationship with IT and business unit. Seamless process for bank examiners to send ERs to records manager. Metadata developed for project was used as the foundation for agency-wide metadata standards. Cost was a fraction of what a full EDRMS would have been. "By undertaking a small, low budget project, the records manager was able to demonstrate that the ERM system was workable and to make a more informed recommendation for an enterprise-wide system." p59. Case 2: Implementing ERM in a small federal agency. Working collaboratively

to build effective processes. Before carrying out an implementation, small records staff (two) set up series of hour long “show and tell” sessions for work groups to find out what people in business units did. Included session where fundamentals of RM were explained and related to context of audience, and another where business units described their processes and interactions and the documentation they created and used, and also included advice on retention. Sessions regular and limited to one hour; if discussion not complete, an additional session was scheduled. RM team took notes and circulated for comment by e-mail or at subsequent session. Goals were to (a) develop paper and ER retention schedules RM; (b) design / implement beginning of ERM programme; (c) give business units sense of ownership in RM policies / procedures. RM team did not impose, but reached solutions through collaboration. “Understanding how the business units operated and establishing rapport were vital factors in the success of the records management program!” p59. This collaborative process did not add to budget, but only required small allotments of time commitment. No need for consultants or for busy staff to have to give up a lot of time. “All participants were better informed about agency business processes, making changes easier to implement effectively” p59. Case 3: Presenting the case to management. Using full functionality of existing technology to improve ERM processes and build capacity. Law librarian of federal agency legal division undertook project that, while not itself an ERM project, paved the way for later ERM implementation. Long-standing central filing system, managed by file clerks. Legal division sent all paper docs deemed to be records to central filing, keeping copies of some as part of a local library. Software package used to synopsise legal cases. Documents created using WP programme, but many docs received were paper. Attorneys spent a lot of time searching the library of records and complained at having to retype material that was not electronically available. Law librarian asked attorneys how processes could be improved. Attended demos of RM applications; gathered info on operating systems used within agency; researched products on-line; reviewed software product already used by division, which had several features not currently used incl scanning and electronic document storage. Reported advantages, disadvantages and costs of a variety of possible implementations, recommending expanding use of existing package because it was flexible, already familiar to staff, and had track record for service. Law librarian did not consider this system real ERMS, but was aware that agency-wide ERMS was in the offing; when it came to implementation, law staff were already informed and comfortable with good EDM /ERM practices. Records managers have assets other than staff and budgets: one is credibility, which can be assured if they keep up to date with developments, legislation, etc. Others include careful planning, and managing expectations (resisting temptation to promise too much). Another tactic is selling business benefits of ERM, as opposed to just risk: all staff benefit in carrying out their tasks more effectively if the records on which they rely are well managed. Accountability and accessibility of information are also enhanced. CP Several interim measures are open where resources are few: providing users with definitions and guidance; persuade business units to store records in a secure location (separate system or read-only in separate part of existing system); help business units to develop metadata standards; explain that limiting acceptable file formats helps storage and retrieval. “Effective communication is vital and inexpensive” p60. Users must always be consulted, and made comfortable and familiar with terms used. Can be done through soliciting user groups to engender co-operation. Records managers should use suggested ideas that have merit and explain why other suggestions cannot or will not be used. Staff with investment in system more likely to use it. Records managers have incentive to work with IT an business units to modify or extend existing systems to provide ERM capabilities. Need to co-operate to identify certification criteria. Time, money and stress will be save thereby when it comes to full implementation, because ground will have been laid “both culturally and technically” p60. No programme comes about in one go; records managers who take incremental, low-cost, high-value steps will contribute significantly to successful outcome.

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\$872 2006 MM/M

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### 9.3 Implementing ERMS – Critical success factors

Covers:

#### **Leadership**

- leadership when implementing ERMS

#### **Involvement of users/staff**

- partnership working across different stakeholders when implementing ERMS
- stakeholder consensus when implementing ERM / ERMS
- communication/consultation with end users when implementing ERMS
- end-users not to be treated as homogenous group but differentiated by attitude and IT skills when implementing ERMS
- ease of use of tool related to knowledge of participants
- need for user-friendly ERMS
- problem of time commitment for staff when implementing ERMS

#### **Training of end users**

- comprehensive training programme when implementing ERMS
- ongoing need for staff training in use of ERMS
- lack of time for staff training in use of ERMS
- end-users dissatisfied with user support and training when implementing ERMS

#### **After implementation**

- people-related success criteria for ERMS implementation projects
- disseminating good practice of ERMS implementation

\*467 1997 MHM

- *Ease of use of tool related to knowledge of participants*

The ‘Models for Action’ (MfA) project, a partnership between the Center for Technology in Government (CTG) at SUNY (State University of New York) and NYSARA (New York State Archives and Records Administration), assisted by NHPRC (National Historical Publications and Records Commission) funding, focuses on practical tools for enabling integration of RK requirements. A practical tool, the Records Requirements Elicitation Component (RREC), was developed to express the functional requirements as application-specific questions. MfA products being tested at the NY State Adirondack Park Agency. So far, only business process (BP) aspect of RREC tested. Series of staff interviews led to preliminary model of process and followed up with two-day workshop. Overall results very positive; tool easy to use and information gathered using it very relevant to both RM and BP issues. Important to note that ease of use of tool related to knowledge of participants, who need to include those aware of regulatory etc background as well as business processes.

Kowlowitz, A. & Kelly, K. (1997) 'Models for action: developing practical approaches to electronic records management and preservation', *Bulletin of the American Society for Information Science*, 23 (5), pp. 20-24.

#### #717 1999 HMM

- *Stakeholder consensus when implementing ERM / ERMS*

Using BPR (business process re-engineering) as a means of implementing ERM; with case examples from U. S. federal organisations. The EPA case: workflow and ERM Organization of Dockets in the EPA the Docket is both an administrative unit and a file/ docket in the legal sense. Currently, Dockets are in different locations and with little intercommunication. Now to be relocated in single centre. EPA commissioned a BPR and modernization study to assess existing processes and make recommendations. Aim to increase docket workflow efficiency and improve customer service and public access through IT applications. As dockets are permanent records, need to comply with NARA requirements for storage and transfer. EPA staff involved in project spent much more time discussing business processes than new IT system; once consensus was reached, IT design flowed quickly from processes. Major effort lay in deliberation and reaching decisions on tasks and methods for agency staff, and on how the formerly separate staffs would work together. Once collective decisions had been made, specifying IT needs was straightforward. There will be resistance to organizational and cultural changes brought by new system. Change management and detailed implementation plans to be included so staff have ownership of solution.

*Van Wingen, R. S., Hathorn, F. & Sprehe, J. T. (1999) 'Principles for information technology investment in U. S. federal electronic records management', Journal of Government Information, 26 (1), pp. 33-42.*

#### \$700 2000 HMH

- *Stakeholder consensus when implementing ERM / ERMS*

Electronic records retention: fourteen basic principles. Three basic functional requirements for ERMS: (1) Automatic migration of docs and data from on-line to off-line media as dictated by stage in life-cycle; (2) Automatic deletion at end of retention period; (3) Permanent retention of archival records. Need for closer relationship between records managers and IT/IS specialists, best accomplished by working in partnership to develop and implement systems. (6) Determine retention periods based on conceptually sound methodology. This involves: Three principles and Four further rules: (iv) develop consensus among responsible parties. (13) Retain e-mail under stringent records management controls. Users assume that their e-mails are private, and the nature of e-mail encourages informal modes of expression. (14) Retain PC-based electronic records based on official records status. PC-based data a problem as users tend to regard them as personal.

*Stephens, D. O. (2000) 'Electronic records retention: fourteen basic principles', Information Management Journal, 34 (4), p. 38+ (11 pages).*

#### \$701 2001 HMM

- *Partnership working across different stakeholders when implementing ERMS*

Electronic record challenges for clinical systems. Article deals with US legal requirement, particularly FDA's Electronic Records/Electronic Signatures Rule 21 CFR 11 (Part 11). Clinical practice "heavily data-oriented" and interactions and effects within systems are complex and not always obvious. p721. Variety of staff involved: While lab systems tend to have very few users, large clinical d/b systems are interacted with by multiple staff, both users and systems / facilities support, sometimes at multiple locations. Lab/manufacturing systems used primarily by permanent employees, clinical systems by far wider user base, including temporary staff, contractors, and patients. Has implications for training, support, access, and security. (7) Identifying systems owners for cross-functional systems. "It cannot be stated enough that representation and involvement from the business end users are critical in a successful implementation of a validated system" p728. Part 11 compliance not the sole responsibility of IT/IM. Not always easy to determine system owner; high-level

management sponsor and cross-functional project team key. (8) Delegation to external parties. It is necessary to ensure that the activities of external contractors / parties are validated in line with the sponsor's obligations and requirements. Outsourced functions can include research (the use of Contract Research Organizations – CROs), system development, support, and validation activities (though the sponsor's obligations under the Rule mean that the latter cannot be wholly outsourced)

*Olson, L. (2001) 'Electronic record challenges for clinical systems', Drug Information Journal, 35 (3), pp. 721-730.*

#### #166 2002 HMM

- *Need for user-friendly ERMS*

US Dept of Education: Use of neural network software to categorize records according to retention period. With breakdown of traditional IM systems consequent on growth of PC and e-mail, it is now assumed that info can only be managed at folder, not document level; however, users resist the necessary filing practices, which have proved largely impossible to enforce. Previous attempts to deploy desktop RM applications had failed due to user resistance, and regular (re)training was required because of constant staff turnover. The project was devised to see if neural network technology (Hummingbird's Knowledge Manager Workstation) could do the work instead. In networking the software, previous user resistance taken into account by having it operate in the background. Under old paradigm, records managers spent a lot of time educating and persuading staff to do their filing; now electronic fileplans unnecessary so less time spent on that. Also gives records managers more power and control – instead of devising systems which it is then up to others to apply, they design systems and oversee implementation with expert staff.

*Schewe, D. B. (2002) 'Classifying electronic documents: a new paradigm', Information Management Journal, 36 (2), pp. 54, 56-59.*

#### \$765 2004 HLL

- *Need for user-friendly ERMS*

Interviews with three chief information officers: CIO1 = School + Storage Networking Industry Association; CIO2 = Law firm; CIO3 = National Archives and Records Administration (NARA). APPROACH TO MANAGING E-RECORDS. CIO1: waking up to the need for a strategy for ERM. CIO2: have an ERM policy. CIO3: Piloting software, but current policy is printing and filing. KEY TO ERM. CIO1: leadership buy-in. articulating cost-benefits and risks. Capture metadata in transparent way. Flexible for individual organisation's needs. CIO2: Deletion of spam/junk etc. CIO3: p.32 "simultaneously dealing with people, process, and technology." User buy-in. integration of RM into enterprise activities. Integrated software (RM and office etc.). BIGGEST CHALLENGE IN ERM. CIO1: cost and lack of desire to fund this. CIO2: Selective deletion of records. CIO3: integrated software. easy natural methods of filing. BIGGEST CHALLENGES OF COMPLIANCE. CIO1: Email can contain high-evidentiary material, but how identify, capture and archive? CIO2: confidentiality. CIO3: Federal Records ACT and NARA RM regs. WHO SETS ERM POLICIES/PROCEDURES. CIO1. Multi-departmental. CIO2. legal counsel, records dept, IT all together. CIO3. Multidepartmental. lead by RM. WHAT HELP REQUIRED FROM RM / IT. CIO1. p.34 "I want the philosophical and legal framework of a clearly articulated records management policy to drive our technology, not vice-versa." CIO2. RM staff to become more familiar with IT. RM to become responsible for e-records as well as paper. CIO3. RM set policies/strategies, IT helps to implement them. RELATIONSHIP BETWEEN RM / IT. CIO1. Good multidepartmental working. CIO2. Both IT and RM report to me, and library too. CIO3. Both IT and RM report to the CIO. SKILLS. CIO1. RM skills: understand best practice and policies for type of organisation working in and media using. IT: humility, listening, IT appropriate for the organisation. CIO2. RM: IT knowledge, assertion, proactive. IT: inform RM about IT, open up applications for RM input. CIO3. RM: Understand business process. Know IT speak. IT: Understand RM and technologies that can do RM. Communicate in non-technical language. STUDY: Recent study commissioned by ARMA from Forrester Consulting no other details

given. Results: p.31 "\*\* Records and information (RIM) professionals are losing their influence in records management as ERM emerges. \* Business and IT perceive few challenges to ERM, other than organizational priorities and budget; unlike business and IT, RIM professionals see many challenges surrounding RIM. \* Business and IT do not fully understand what ERM is; nor do they understand ERM's role in compliance regulations and legislation."

*Swartz, N. (2004) 'From the mouths of CIOs', Information Management Journal, 38 (5), pp. 30-36.*

\$238 2005 HMM

- *Leadership when implementing ERMS*
- *Partnership working across different stakeholders when implementing ERMS*

Describing the 'Sedona Guidelines: Best Practice Guidelines and Commentary for Managing information and Records in the Electronic Age'. Focuses on the legal imperatives for compliance. Guideline One: Adopt a Practical and Reasonable Approach. p.55 "committees formed with representatives of information technology, business units, records management, and legal, along with tax, audit, finance, human resources, and other functional groups ... The legal department should provide leadership and guidance in this effort with strong management support."

*Allman, T. Y. (2005) 'Fostering a compliance culture: the role of the Sedona Guidelines', Information Management Journal, 39 (2), pp. 54-56, 58, 61.*

#283 2005 HMM

- *Partnership working across different stakeholders when implementing ERMS*

Role of end-users in implementing enterprise-wide ERMS. Two approaches: (i) user guided to decide that item is a record and to place it in the file plan; (ii) make the RM decisions automatically in the background and transparent to users. US research p.48 "indicates that the highest quality and accuracy occurs when records management is as non-intrusive as possible to the desktop end user and does not interfere with the normal work routines of professional staff in the enterprise." Four case examples of US governmental agencies: US Government Accountability Office (GAO), US Office of the Comptroller of the Currency (OCC) Department of Treasury, US Nuclear Regulatory Commission (NRC), unnamed intergovernmental agency (Anon). How these examples have made their RM non-intrusive to the desktop end user.

*Sprehe, J. T. & McClure, C. R. (2005) 'Lifting the burden', Information Management Journal, 39 (4), pp. 47-48, 50-52.*

#502 2005 HH/H

- *Partnership working across different stakeholders when implementing ERMS*
- *Problem of time commitment for staff when implementing ERMS*
- *Comprehensive training programme when implementing ERMS*
- *Disseminating good practice of ERMS implementation*

Full-scale overhaul of recordkeeping procedures culminating in implementation of EDRMS, working to ISO 15489 as standard. PRONI started on one of three lead EDRM implementation projects in Northern Ireland Civil Service (NICS) in summer 2003, the first phase of a NICS-wide implementation. Project team had four staff plus project manager and project support officer; RM and IT input recognized as critical from the outset. RM input rapidly led to full-time assignment of one team member to RM issues, with IT called on as needed. Unlike other two lead projects, PRONI implementation was across entire agency (90 staff). Advantages of this for technological side, but disadvantages / challenges from cultural and RM perspectives: complete classification scheme had to be developed and adopted and staff training on new system and ways of working with information carried out in very short time. Objectives: (1) improve internal RM procedures; (2) implement EDRMS; (3) provide lessons for full NICS implementation. Project methodology: PRINCE II. Importance of

benefits realization stage integral to project; adoption of project management approach revealed organizational commitment to building on implementation and realizing benefits, unlike many projects where the impetus is lost once the project phase is over. Identified continuing responsibility as lying with PRONI's RM unit. Early on, RM procedures examined to fulfil one of the project objectives, i.e. regaining corporate control over RM processes, using methodology contained in ISO 15489 and DIRKS. Tenders for EDRM software had to meet TNA functional requirements. Three stages in PRONI project: preparation (14 months); implementation (3 months); operation (4 months). Central lesson is that preparation and laying of foundations key to project success: planning, training, allocating resources, re-introducing good RM procedures. Two activities arising from ISO 15489 carried out at this stage, information audit and ER questionnaire. Project launched to users via ER questionnaire; staff were asked about quantity of email they stored, whether they had structured their Outlook folders with sub-folders, and about volume of documents on their hard drives. This info could easily have been got by IT, but questionnaire was used instead to highlight to staff that 'their' ERs were a corporate resource and that scope of project included all electronic info held in PRONI. Questionnaire was sent out by the Chief Executive, and was very helpful in starting the cultural change as staff started discussing information and information duplication issues. Audit showed: "PRONI, like any other organisation, had adopted bad habits in record keeping due to a lack of internal training and the individualisation computers had brought to conducting business processes" p144. To help project team and put in place mechanism to aid cultural change, representatives sought from each work section: these were consulted, updated and trained throughout project. Communication was instituted – updates to senior managers, articles in internal magazines, competitions, awareness sessions, updates to intranet. Also liaising with other lead projects and giving presentations / workshops. Developing the functional classification scheme "the single most critical component of an EDRM project" p144. Pilot of scheme revealed gaps in new scheme and some aspects confusing to staff. Also highlighted lack of training in basic RM, now identified as project priority and which PRONI, unlike many other organizations, had in-house RM expertise to deliver over two weeks in form of intensive one day sessions for all staff mixing information and practical sessions. Course was popular (80–85% approval rating). Need to follow up with training for absent staff and to incorporate in induction programme. Best way to achieve necessary staff familiarity with BCS and acceptance of cultural change is to involve them in development process and allow time for change to take root. Focus groups held with staff from each area after basic course. Mapping info from these discussions along with business plans helped team to carry out ISO 15489 steps in analyzing organizational business activities and identify records requirements. In moving to new system, decision had already been made not to back-scan or mass-migrate existing data on network drives. Familiarization of staff with new classification / file structure effected in data transfer and clean-up exercise in summer 2004, starting with staff either moving documents from their hard drives to shared space or printing hard copies for registered files. Work teams then reviewed material now on shared drives to delete duplicates and out-of-date material or print off to registered file where appropriate. Transfer of remaining material to new ERM environment had to be justified in detail to the records manager. Meanwhile file classification carried out, to allow application of retention periods, as specified by ISO 15489. In September 2004, a "familiarisation drive" was opened and old shared drive made read-only. "The data transfer process was a big cultural change as staff found it hard to let go of 'their' information and it was a slow process for them to accept the corporate value of records" p146. Imposition of deadlines helped focus attention of staff, but this meant that deadlines had to be adhered to strictly to keep momentum, and time commitment from staff was a major issue, particularly at this stage of project, where getting input from time-pressed senior staff was especially difficult. Realized that time commitment from senior managers and from business sections should have been indicated in business plans to clarify resource implications. Also realized that Chief Exec and PA would need ongoing one-to-one training on searching and overall use of corporate file-plan. Implementation started in October 2004, using Tower Software's TRIM Context. "The

configuration workshop was a difficult process with a lot of software jargon and the records management implications being debated” p146. One-to-one meetings held with section reps (“power users”) to explain procedure for exporting files from temporary familiarisation drive to EDRMS, which was welcomed as an improvement on the existing shared environment, with its enhanced search-and-retrieval functionality and the ability to store emails. EDRMS provider gave the ‘power users’ training in the software, with a model office and database, prior to going live in January 2005. Continuing management and roles discussed during implementation, with need for continued RM and administrative input recognized as essential, with IT staff happy to take background support role. EDRMS provider gave system administration training to project team members and section reps likely to stay with PRONI and thus provide continuity of knowledge. End-user training outsourced to SureSkills, briefed with significant input on training needs from project team. System went live mid-January, with software installed on PCs while staff were on training course, “an essential lesson we had learnt from other implementations” p147. Knowledge of other implementation experiences also determined timing and level of ‘floorwalking’ done by external provider, delaying it until users had assimilated enough of the new system to be able to avail of this support: initially, floorwalking done by project team – time-consuming, but enabled highlighting of issues and rapid response. Implementation also brought up significant issue of document naming conventions; each work area asked to develop local guidelines. Project team compiled ‘handy hints’ document delivered in follow-up training and put on intranet. User reaction to EDRMS generally favourable, 60% using it regularly (expected level, as roughly 40% of staff do not create filing on a day-to-day basis but need to access documents). Formal operating phase of project for four months after going live, allowing project team to provide continuing support and contribute to NICS-wide implementation phase. An essential aspect of the project’s remit was to provide a “lessons-learned” report, which was written in the form of a post-implementation review as required by ISO 15489. RM skills essential in regaining corporate control of records, and change management aspects also critical. Further work identified includes specific training, development of RM schedules and guidance, dissemination of PRONI implementation experience to wider public sector. Benefits gained: analysis of RM procedures and recovery of control; RM policy; BCS; less duplication; better-trained staff; culture of sharing information. Real benefit of being a lead implementer was for PRONI – as the agency responsible for government records – to “get its own house in order” and allowing it to perform its function properly.

*Smyth, Z. A. (2005) 'Implementing EDRM: has it provided the benefits expected?', Records Management Journal, 15 (3), pp. 141-149.*

#### #748 2005 HMM

- *Partnership working across different stakeholders when implementing ERMS*
- *Communication/consultation with end users when implementing ERMS*
- *Comprehensive training programme when implementing ERMS*

ERMS implementations. cases all come from the US government sector. While information is now appreciated as an asset, resourcing for RM has often been inadequate. “Records managers often face an uphill battle to incorporate ... ERM into their programs” p58. However, the ingenious records manager can build an effective programme, even with minimal resources. “Integrating ERM is not primarily a battle with management for resources; it is a culture war for the hearts and minds of the people who create and use records”p58. People usually sceptical about outsiders telling them to change ways of working, and co-operation of business staff necessary to successful implementation. Starting with small changes or implementation projects stands a better chance of success than major enterprise-wide efforts. Three case studies. Case 1: Digitizing bank examiner work papers. Enhancing existing technological resources to improve ERM; piloting with small section. Records manager in federal banking agency needed to convert manual records system into ERM system. Looked for a unit that was already doing its business electronically, and found that bank examination staff were using software package developed with other bank

regulators to create and store papers related to examination work. Accuracy and integrity of such records essential as bank ratings depend on examination results. Records manager asked IT to develop small bit of code so that whenever a set of papers was saved by an examiner, a copy would automatically go to a folder controlled and accessible only by the records manager. While recognized that this was not full ERMS, several goals achieved: records manager got control of important set of ERs, and established relationship with IT and business unit. Seamless process for bank examiners to send ERs to records manager. Metadata developed for project was used as the foundation for agency-wide metadata standards. Cost was a fraction of what a full EDRMS would have been. "By undertaking a small, low budget project, the records manager was able to demonstrate that the ERM system was workable and to make a more informed recommendation for an enterprise-wide system." p59. Case 2: Implementing ERM in a small federal agency. Working collaboratively to build effective processes. Before carrying out an implementation, small records staff (two) set up series of hour long "show and tell" sessions for work groups to find out what people in business units did. Included session where fundamentals of RM were explained and related to context of audience, and another where business units described their processes and interactions and the documentation they created and used, and also included advice on retention. Sessions regular and limited to one hour; if discussion not complete, an additional session was scheduled. RM team took notes and circulated for comment by e-mail or at subsequent session. Goals were to (a) develop paper and ER retention schedules RM; (b) design / implement beginning of ERM programme; (c) give business units sense of ownership in RM policies / procedures. RM team did not impose, but reached solutions through collaboration. "Understanding how the business units operated and establishing rapport were vital factors in the success of the records management program!" p59. This collaborative process did not add to budget, but only required small allotments of time commitment. No need for consultants or for busy staff to have to give up a lot of time. "All participants were better informed about agency business processes, making changes easier to implement effectively" p59. Case 3: Presenting the case to management. Using full functionality of existing technology to improve ERM processes and build capacity. Law librarian of federal agency legal division undertook project that, while not itself an ERM project, paved the way for later ERM implementation. Long-standing central filing system, managed by file clerks. Legal division sent all paper docs deemed to be records to central filing, keeping copies of some as part of a local library. Software package used to synopsise legal cases. Documents created using WP programme, but many docs received were paper. Attorneys spent a lot of time searching the library of records and complained at having to retype material that was not electronically available. Law librarian asked attorneys how processes could be improved. Attended demos of RM applications; gathered info on operating systems used within agency; researched products on-line; reviewed software product already used by division, which had several features not currently used incl scanning and electronic document storage. Reported advantages, disadvantages and costs of a variety of possible implementations, recommending expanding use of existing package because it was flexible, already familiar to staff, and had track record for service. Law librarian did not consider this system real ERMS, but was aware that agency-wide ERMS was in the offing; when it came to implementation, law staff were already informed and comfortable with good EDM /ERM practices. Records managers have assets other than staff and budgets: one is credibility, which can be assured if they keep up to date with developments, legislation, etc. Others include careful planning, and managing expectations (resisting temptation to promise too much). Another tactic is selling business benefits of ERM, as opposed to just risk: all staff benefit in carrying out their tasks more effectively if the records on which they rely are well managed. Accountability and accessibility of information are also enhanced. CP Several interim measures are open where resources are few: providing users with definitions and guidance; persuade business units to store records in a secure location (separate system or read-only in separate part of existing system); help business units to develop metadata standards; explain that limiting acceptable file formats helps storage and retrieval. "Effective communication is vital and inexpensive" p60. Users

must always be consulted, and made comfortable and familiar with terms used. Can be done through soliciting user groups to engender co-operation. Records managers should use suggested ideas that have merit and explain why other suggestions cannot or will not be used. Staff with investment in system more likely to use it. Records managers have incentive to work with IT an business units to modify or extend existing systems to provide ERM capabilities. Need to co-operate to identify certification criteria. Time, money and stress will be save thereby when it comes to full implementation, because ground will have been laid "both culturally and technically" p60. No programme comes about in one go; records managers who take incremental, low-cost, high-value steps will contribute significantly to successful outcome.

*Young, J. (2005) 'Electronic records management on a shoestring: three case studies', Information Management Journal, 39 (1), pp. 58-60.*

### #3 2005 HMM

- *People-related success criteria for ERMS implementation projects*

FESD project to look at implementation of an EDMS for Danish central and local government. Organisations established success criteria for their implementation projects to achieve. p.373 "employees - that the project provides a more attractive workplace where knowledge sharing is supported by technology; and \* change - that the project is a driver for change and rethinking within the organisation."

*Steinmark, C. (2005) 'EDM in the Danish public sector: the FESD project', Aslib Proceedings, 57 (4), pp. 369-377.*

### #163 2006 HMM

- *End-users not to be treated as homogenous group but differentiated by attitude and IT skills when implementing ERMS*
- *Need for user-friendly ERMS*
- *End-users dissatisfied with user support and training when implementing ERMS*

Use of EDMS to facilitate e-collaboration in project-based industry. Based on a number of case studies in Scandinavia. Realization of behavioural rather than technical nature of many problems facing introduction. These and other studies reveal: end-users not to be treated as homogenous group but differentiated by attitude and IT skills; high level of satisfaction with system but much lower with user support and training; equal emphasis needs to be placed on technology, processes and people; User satisfaction: varied somewhat by whether they were to a significant extent uploaders to (more satisfied) or downloaders from (less satisfied) the system. Conclusions. Constant reconfiguring of groups and personnel in project environment, and limited (re)training possibilities, demand either a move towards national standards or user-friendly systems. User satisfaction is widespread and digital environment taken for granted.

*Bjork, B.-C. (2006) 'Electronic document management in temporary project organisations: Construction industry experiences', Online Information Review, 30 (6), pp. 644-655.*

### \$872 2006 MM/M

- *Need for user-friendly ERMS*

Choosing the right EDMS software is important but "the technology itself is less important than the people who will use it and the business processes it will support. Implementing EDMS software and expecting the technology to change organizational culture would be a mistake. The old 80-20 rule applies to implementation; for the most success, focus just 20 percent of the efforts on the technology and 80 percent on the cultural issue". An interesting application of the Pareto rule. "An implementation can be judged successful when the system captures the official records of the firm, the records are managed throughout their life cycle, and the EDMS has become so ingrained in the firm's culture that employees can't imagine working any other way. That is because document management is a part of every

employee's job. Whereas filing was once the speciality of file clerks, the function of saving documents into an EDMS repository requires that all users – not just the records staff – know where to file and how classify information. It's no longer about individual filing systems that work for the individual until the completed files are delivered to the door of the records management department. It's about having a standardized filing methodology that everyone follows from the point of creation and throughout a document's use. Saving information correctly so it can be retrieved by anyone who needs access to it is the primary goal." (p45) Says that not everyone "will welcome the discipline needed for them to participate in the successful implementation and use of an EDMS. That is why top management support is critical to ensure that those who don't are convinced to comply or seek employment somewhere where they can continue to work with traditional paper systems. This is just a reality to be faced. Not everyone will be able to make the cultural shift." But this rather suggests that resistance is to the e-system (vs paper system) but it may be the nature of the e-system not e-systems per se. CSFs for successful EDMS implementation are: (1) make the process transparent (ingrain the process of classifying records into daily work processes so it becomes invisible; minimise number of keystrokes needed to save or retrieve documents; suggests users classify documents but records staff declare as records – not sure why/how this would really save time); (2) manage user expectations (better to under-sell a system and over-deliver the product than vice versa; tell users what will be delivered & when; say that productivity may go down immediately after implementation but then increase; implement policies that help users understand changing expectations (e.g. e-records will be the official record, not paper ones); "it is not possible to over-communicate what is happening during an EDMS implementation", use different methods to "keep information flowing and set the right expectations"); (3) focus on people (show them the individual benefits first then the organisational ones e.g. easier, faster searching, improved document sharing, better security, better client service, improved vital records protection, better reporting, reduced file storage space, "overall - better decision-making based on better recordkeeping practices"; involve the right people in the change process – a combination of different "ranks" and both "those who have good attitudes and are willing to work at making processes better but also a few resisters who can be coached so their resistance will be reduced and buy-in obtained early in the process"; include them in the pilot & refine that on the basis of feedback); (4) focus on processes (consider changing the processes before customising software i.e. don't just customise software based on current processes; flowchart current processes based on discussion with people and then detail how they will be handled in the EDMS); (5) train on processes (ok to train on the software first but training must go beyond that to show how they will use it to support their work); (6) keep sight of the big picture ("be careful not to give departments or business units everything they ask for in isolation... it can lead to islands of information that create fragmented systems or multiple applications that don't talk to each other. There needs to be a coordinated effort to reduce redundancy yet maintain the necessary level of information sharing and process efficiency"); (7) understand changing communication dynamics ("communication systems change as work is created electronically. Electronic notification increases as work flows from one person to another...EDMS usually changes basic workflow patterns but not nearly as much as implementing a workflow engine would. Work group dynamics change as users are able to share electronic information... this causes traditional boundaries between groups and departments to disappear. EDMS can even change the relationship between managers and subordinates.. managers can view the progress on a job much earlier in the e-environment" but author cautions against micromanaging vs monitoring; EDMS creates more accountability because of audit trails. People won't just use an EDMS "because it is there. They have to have a vested interest in using it. Understanding the people and process issues will go a long way toward gaining that interest. Technology by itself does not fix poor processes, create motivating jobs, or necessarily solve department productivity issues. But combining the technology with skilled people who understand how a system is used to manage documents/records during the routine activities of everyday work can lead to improved processes, more motivated employees, and better productivity."

Downing, L. (2006) 'Implementing EDMS: Putting People First', *Information Management Journal*, 40 (4), pp. 44-50.

#333 2006 HML

- *Comprehensive training programme when implementing ERMS*
- *Ongoing need for staff training in use of ERMS*

The development of RM at the French National Library. Driven by new president and a new CEO taking up post in 2002: president = preserving the history of the French National Library and other French libraries; CEO = reform of public institutions. Set up a new service devoted to RM and archives attached to the CEO. CSF: p.98 "This position in the organisational hierarchy means the author is free to intervene at any level necessary, without a long and hard process of seeking support or authority." Used DIRKS. Interviews with staff to understand functions and activities and e-tools used. Then meetings with secretaries p. 98 "understand how they manage their jobs, their ideas for improvement and to explain best practices. The difficulty at the National Library is that the background and expertise of the secretaries varies greatly from one office to another. Some of them are experienced, but others had previously been technical personnel ... They wanted information and to learn how to do better, but a large number of them were unable to suggest new ideas or to imagine new processes in their job." Then separate training with managers. Needed to train in basic RM principles and procedures. Built with staff meetings a classification scheme. Used Lotus Notes. External training for all staff covering best practices and processes as well as Lotus Notes use. Two levels of training: first level mandatory for all users on managing emails and e-diaries and searching databases; second level for document creators. P. 101 "Training has been essential and is a significant investment which must continue and become a permanent feature." Informal team of people with different competencies from across the organisation. Strong support from president and CEO. Managers see the benefits.

*Dherent, C. (2006) 'Document management at the French National Library', Records Management Journal, 16 (2), pp. 97-101.*

#332 2006 HML

- *Ongoing need for staff training in use of ERMS*
- *Lack of time for staff training in use of ERMS*

The International Committee of the Red Cross (ICRC) official e-mail system. ICRC bases its RMS on its email system. High staff turnover so continuous training needs for system use, but often individuals receive very little time for this training. IM assistants pay regular visits to ICRC sites to give training and to monitor compliance with the system.

*Willemin, G. (2006) 'The International Committee of the Red Cross (ICRC) official e-mail system: An example of records management', Records Management Journal, 16 (2), pp. 82-90.*

#795 2007 MML

- *Comprehensive training programme when implementing ERMS*

e-learning training programme used in association with ERMS implementation at Cheshire Police. (written by the e-learning consultants hired to do this particular job in preparation for ERMS implementation). Critical success factors of e-learning are: (1) focused project; (2) measurable business benefits; (3) right resources. Cheshire Police had bought in authoring tools, but hadn't allocated sufficient staff resources to enable the training to actually be carried out. However, things became critical when they needed to prepare staff for implementing Atlas ERMS. Decided to outsource e-learning to authors of article. 1. Focused project Based on generic CSFs. Atlas being introduced to help compliance with Management of Police Information (MOPI) requirements, as a replacement for existing mission-critical database. Most police officers and many civilian staff will need to use system as part of their daily routine. One-day General User (GU) course had been running for months, as Atlas was already used for non-crime incidents. Building on GU course, Cheshire developed one-day

Basic course a several specialist three-, four-, and five-day courses. In future, GU course would be delivered only by e-learning: 600 further staff needed to do course. Lack of time and resources meant that classroom training would only be provided to priority users. Also, software and processes still changing so training for those on earlier courses needed to be updated. 2. Measurable business benefits. (a) Numbers doubled – over 1,400 assigned to course, impossible via classroom. (b) Time reduction – one-day course = 3 hours' e-learning. (c) Savings – £320k, based on Home Office calculation methods for overheads and staff time. (d) Manageable chunks – course consisted of 20 learning objects taking 5–15 minutes each. Course did not need to be completed in one sitting. (e) At learner's own pace – those with experience of Atlas could finish course in one hour. (f) Standard: assessment throughout course, 70% pass mark. (g) Continued availability of materials so that users could undertake 'refresher training' for themselves. (h) Flexibility to learn out of office hours meant more computers available for those who did not normally have access. 3. Right resources in place. After investigation in early 2005, Cheshire bought Knowledge Solution's software-simulation authoring package. Also brought in two external e-learning consultants, both of whom were then trained in this package and attended the GU course in Atlas. The first worked with the Atlas project team, talking to as many subject-matter experts as possible, then creating tools and simulations using the authoring software. A small pilot was arranged. The second consultant worked with the Learning and Development (L&D) department to assess existing processes and to see how to fit the new training in with current system. Marketing campaign. Available internal communication mechanisms identified. Initial 'top-down' approach – Area Training Managers decided who needed to do course; articles for Atlas users in internal newsletters. "However, break-through was achieved when a bottom up 'desire' for e-learning was created" 21. This was done through (1) poster campaign; (2) e-mail; (3) intranet. Once the hype had generated active interest, so many applied that it put a strain on administration process. Outcomes achieved. 1. Atlas GU course – started work on course Aug 2006, piloted late September, first 50 e-learners assigned early October. Up to 1,400 over eight-week period. Progress and completion monitored. 2. Just-in-time learning – creation of ad hoc materials for extra training requirements for Custody Sergeants in Atlas upgrade. Launched Friday afternoon, by Monday 30% of relevant staff had completed e-learning successfully. 3. Learner choice – discussions with L&D showed that on-day Basic course in Atlas could be re-created as e-learning as half of it was common to GU course. Therefore able to offer learning as well as classroom training in Basic course, alleviating pressures of space and time. Success was quickly evident, and there was much positive feedback, though not all staff found the passive mode of learning to their liking (no ability to learn actively through trial and error). E-learning does not suit everyone. Very important aspect of roll-out was help-desk accessible by phone or e-mail.

*Moseley, N. & Leteney, F. (2006) 'A learning force', e.learning age, (Dec 2006/Jan 2007), pp. 20-22.*

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