

# Best Practice in Corporate Record Keeping and Archiving

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*"The 1980s and 1990s witnessed dramatic and frequent changes in technology, featuring most prominently the emergence of the personal computer and of the Internet, and the development of database management systems, client-server architectures, distributed computing and enterprise-wide applications. All of these developments and more have had the effect of dramatically changing the way data, information and records were created and managed. Perhaps the most dramatic transformations were in document or record creation and in the resultant changing form of documents".*

*"At the centre of all archiving thinking is the 'record'. Whether a parchment court roll, a frontier-land patent, a business report on a paper file, or an electronic message, all records have three properties: content, structure and context"<sup>ii</sup>.*

*"The biggest single worry federal agencies have in the records management field today is how to capture e-mail records. The agencies recognize that e-mail constitutes their greatest source of liability in the event of litigation, FOIA requests, congressional investigation, or media exposure"<sup>iii</sup>.*

## 1. Introduction

The quotations above illustrate the changing environment for the management of records and archives. Because of the way records are created and managed in the electronic environment archives can no longer be managed in isolation from records. However, although the technology has changed, the basic requirements for managing records remain the same. It is a matter of ensuring that record keeping systems are designed and implemented to provide the controls to guarantee integrity of the content, structure and context of records over time.

In the paper "IT'S 10 O'CLOCK: Do you know where your data are?" Terry Cook dramatically highlights the problems of managing records in the rapidly changing technological environment. Eight years ago, the example of Ontario Hydro's inability to locate crucial information required for the replacement of a nuclear reactor sealing ring pinpointed the seriousness of the state of record keeping in large corporations. And, as Cook indicated then, Ontario Hydro's situation was not unusual and many other examples of this type of failure could likely be found in the corporate world.

Records in the past were viewed as having a life cycle with distinct stages. At the end of their active life, records were appraised and their disposition status determined. They could be destroyed or preserved for the longer term. However, an important and influential new model for records management has emerged that places records in an extended life cycle or continuum, which includes the additional stages of record creation and disposition<sup>iv</sup>. The continuum brings records managers and archivists into partnership together



with IT personnel, corporate information managers, web masters and end users, who all have a role to play in managing records and archives.

It is becoming clear that in many organizations accurate, reliable and trustworthy records that fulfil evidential requirements are not being created and properly managed. In the past year or two there have been some high profile failures in accountability due to poor record keeping practices. To address these problems there are well-defined strategies, processes and procedures which, if implemented, enable best practice records management.

This paper will describe some of the current document and records management challenges and will review the steps for the design and implementation of a best practice corporate record keeping system. An essential element of design and implementation is the choice of a software application that can fully support an organization's record keeping requirements. The TRIM Context solution is such an application. TRIM has been developed and systematically modified to meet the needs of the modern approach to records and archives and can be implemented within a holistic approach to information management, enabling the maintenance of complete and accurate records throughout the records continuum.

## 2. Background

### 2.1 Archiving 'as it was' in the world of paper records management

In the paper world of the past, records created in the course of business were stored and kept in hard copy form as evidence of an action, decision or process. Secretaries and filing clerks maintained registry systems with filing cabinets containing the paper evidence of an organization's business. At the end of the period of usefulness or active life of these records, typically, an archivist's services would be employed to appraise the records and determine which of them was worthy of long-term preservation and which should be destroyed. This approach is still in practice in many organizations and paper continues to be viewed as the official record. Few electronic records are stored in an electronic records management system or on file in hard copy format.

### 2.3 Growth of digital output

Technological change has resulted in the exponential growth of digital output in a wide range of formats. According to the School of Information Management and Systems at UC Berkeley, the world produces between 1 and 2 exabytes of unique information per year, which is roughly 250 megabytes for every man, woman and child on earth. An exabyte is a billion gigabytes. Ninety-three percent of the information produced each year is stored in digital form. Magnetic storage is by far the largest medium for storing information and is the most rapidly growing, with hard drive capacity doubling every year.<sup>v</sup> From the perspective of records management the key factors are that:

- Printed documents of all kinds comprise only .003% of the total.
- Compared to 100 years ago much data can now be produced and published by individuals. Individuals create and store a large amount

of the unique information. 55% of hard drives are installed in single user desktop computers.

- Digital content dominates and is the largest form and the fastest growing. Most textual documents are now 'born digital'.
- E-mail is growing very rapidly and this includes corporate e-mail. 610 billion e-mail messages are sent each year worldwide. And 2.2 billion messages are sent each day.<sup>vi</sup>

This growth is contributing to large-scale problems in records management. The autonomy provided by the personal computer leads to uncontrolled production of unclassified records on individual drives. Constant changes in hardware and software add to difficulties in terms of obsolescence. Web content, compound and dynamic documents present additional records management challenges. There is confusion about the functionality in different types of systems; information systems are not record keeping systems. Although information systems may have some record keeping functionality, they lack vital elements that ensure that all the requirements for evidence are met.

### **2.3 The origins of modern records and archives management**

The problems developing from increasing output of electronic information are not new. They were described in 1989 by David Bearman in a UN Report, which discussed the need for revised policy and guidelines to manage computer generated records, including electronic mail. This report noted that electronic records policies needed to change and that records should be evaluated "according to the function they perform and support and not on the media they are created and reside on."<sup>vii</sup> This assertion defined an important perspective and firmly linked the management of records and archives.

In the early 1990s Cox, Bearman and their colleagues at the University of Pittsburgh carried out an extensive research project the prime objective of which was to identify the functional requirements for the preservation of electronic evidence. Bearman noted that "one must identify the requirements for record keeping in each community and then establish metadata that meet those requirements".<sup>viii</sup> It is metadata that carries the information about the context and structure of the record and it is metadata that can carry the record forward in space and time and facilitate the integration of archives and records management.

### **2.4 Examples of records management failures**

There are an increasing number of law cases involving electronic evidence. Potentially damaging information for a company is often to be found on old backup tapes, in e-mails, and on disks. When lawyers decide they need electronic evidence as part of the 'discovery' process it is usually the IT department (rather than the records manager) of a company that is approached and asked to investigate. Trying to discover the evidence is frequently "an economic and operational nightmare"<sup>ix</sup>. It is also very costly. This situation alone provides a compelling reason for having an electronic document and records management system that can store records in such a way that they can be retrieved easily. The fact that an organization does not know what records it is retaining points to a lack of developed records

practices and procedures. If they are being inadvertently preserved then the organization is incurring unnecessary costs for storage and possibly litigation risk if there is incriminating evidence contained in them.

E-mail is a major source of corporate memory and evidence of business processes and leaves a "pervasive trail of evidence that demonstrates corporate decisions and behavior – digital testimony to an organization's functions, activities and transactions"<sup>x</sup>. As such it has been found to be an invaluable weapon in providing evidence of who decided what, when and why.

The following examples of records management or rather mismanagement illustrate why best practice archiving and records management is essential to an organization. What they clearly demonstrate is that there is a need, above all, for written document retention policies for e-mail.

#### *Microsoft and evidence of anti competitive practices found in e-mail*

Microsoft Corporation has been in the legal spotlight more than once related to finding stored e-mails which are used as evidence for a prosecution. In a court case in 2002, a January 1999 e-mail from Bill Gates was used as incriminating evidence of Gates' plan to promote Microsoft's audio and video delivery software over that of rival RealNetworks. Had best practice archiving with effective retention policies been in place, this message may have been destroyed before the case was brought. Or, well-defined policies and procedures may have prevented the comments ever being committed to paper or exchanged by e-mail. For some information, e-mail is an inappropriate medium, but an organization needs a policy and procedures that states this.

#### *Merrill Lynch and the "piece of junk" evidence*

This case occurred in October 2000. A well thought of analyst at Merrill Lynch Analysts, Henry Blodget, who was recommending the stock of a company called Infospace, at the same time wrote an e-mail to a colleague describing the stock as "a piece of junk". Following the issue of a subpoena by New York Attorney General Eliot Spitzer, the message became public knowledge. Spitzer used the e-mail as evidence contending that Merrill Lynch was deceiving investors in order to gain investment banking business. Merrill Lynch did not acknowledge wrong doing but paid out \$100 million to settle the case. Merrill Lynch has since initiated a mandatory firm-wide e-mail training program.<sup>xi</sup> However, this will not likely address the problem as the remedy is more complex than how to use e-mail. Evidence of business activities must be appraised and managed according to record keeping requirements within a total information management structure. Policies must be applied not only to e-mail but to all business functions. "E-mail is not an undifferentiated mass or a single documentary form but is created in the course of carrying out diverse business activities."<sup>xii</sup>

### *Enron, Arthur Andersen and incriminating e-mail*

Accounting firm Arthur Andersen was convicted recently of deliberately destroying documents to thwart an investigation being carried out by the Securities and Exchange Commission. Evidence emerged that the instruction to shred documents had been given to and carried out by Duncan, an Andersen employee and lead partner on the Enron account. Andersen claimed that Duncan had acted independently in this regard. However, this was shown to be untrue based upon the evidence of an altered memo that was unearthed and provided to the court. As a result, Andersen, and not Duncan, was found guilty of obstruction of justice. Even if retention policies had existed at Arthur Andersen, they would likely not have been followed as many documents were destroyed knowing that an investigation was pending. The conviction of Arthur Andersen on a charge of obstruction of justice showed that the act of destroying evidence in anticipation of a lawsuit can lead a jury to the conclusion that the information would have been damning".<sup>xiii</sup> However, in this situation, having a well defined, understood and implemented records management system in existence may have resulted in a more serious approach to the importance of the organization's documents and records and may have prevented the employee from undertaking the shredding in the first place (even though ordered). Subsequent to this case more stringent punishments have been imposed upon companies that undertake document shredding in this type of situation. The liabilities are part of the new Sarbanes-Oxley Act in the US which makes destroying or attempting to destroy documents related to a federal investigation a crime punishable by up to 20 years in jail.

### *Prudential Insurance and the "lost order".*

In 1995, in a case brought against Prudential Insurance pending the review of a claim against the company, a judge issued an order requiring Prudential to preserve all documents potentially relevant to the litigation. However, the order was apparently not passed on to the employees and relevant documents to the claim case were destroyed. This resulted in a fine of \$1 million for Prudential. Although there was no evidence that the document destruction was deliberate, the loss of the documents did remove potentially valuable evidence for the claimants. If a retention policy had been in place the documents would not have been destroyed. The judge held senior management responsible for the loss and fined Prudential Insurance. In addition he ordered the company to inform employees of the original court order (to retain documents) and to submit to the court within 30 days a written manual describing its document retention policy.

### **Summary**

The end user must know what constitutes a record, what constitutes evidence. In the case of e-mail messages this may be even more difficult than for administrative documents. Rick Barry recently related his experiences consulting with organizations on their e-mail use and their policies to oversee that use. Based on surveys and follow-up focus groups with organizational staff members, Barry found that:

- up to 80% of e-mail creators stated that they did not "have a clue" as to when their e-mail qualified as an official record;
- that there was "great inconsistency" as to what was actually classified as a record;
- that staff were "largely unaware" of the existence of organizational e-mail policies;
- that they had an unwarranted fear that saved e-mail would come back to haunt them and,
- that despite claims that e-mail was being routinely copied to the records center, very few actually were<sup>xiv</sup>.

In addition to e-mail, the cases above illustrate a variety of problems which would not occur or, would be a lot less likely to occur, if a system of best practice corporate record keeping and archiving were in place. Such a system involves establishing the necessary processes and procedures to meet the records requirements of an organization. And implementing the requirements requires an electronic document and records management system that provides the tools to manage records in accordance with the standards of best practice. This minimizes risk, reduces costs (for example for storage and retrieval in the event of legal 'discovery' cases), maintains proper evidence of business activity and increases business efficiency by ensuring access to the corporate memory.

### 3. The Elements of Best Practice: Methodology and System

#### **3.1: Best Practice Methodology**

The foundation of best practice is ISO 15489, The International Standard for Records Management published in 2001. The standard reflects the perspective of an integrated regime, a continuum, for the management of records and archives. A key strength of the standard is its recognition that records are evidence of an organization's activity and that their management is critical to business interests. Part 1 of the standard identifies the essential elements of records management. Part 2 provides guidelines for the design and implementation of a records system in accordance with a 'Design and Implementation of Records System' (DIRS) process. The process is an eight step methodology that applies to records in any format. Below is an abbreviated description of the steps involved.

*Preliminary investigation.* This step is essential groundwork as it is the process during which the organization identifies the major factors in the environment in which the business operates. Factors to consider are the administrative, legal, business and social contexts. The analysis can be used, for example, in preparing a business case for records management. It can also define more clearly the role that records management plays in the corporate culture.

*Analysis of business activity* examines in detail what the organization does and what its main functions and activities are. The analysis starts with the big picture view of the organization, its functions, and drills down to the smaller parts, the activities within functions and resultant transactions. This functional model for records provides a conceptual view of the organization and the

framework for the development of control tools essential to the electronic records system. These control tools include the business classification scheme, thesaurus, disposition authorities and security and access schemes.

*Identification of requirements for records* is the step that provides the basis for design of the system. The impact of regulatory, business and community requirements are identified and evaluated in relation to the creation of business records. A risk analysis is a necessary part of this step. These requirements can change over time and so this process is one which is revisited periodically in accordance with changes that may have an impact. For example there may be new legislation that affects record keeping practices e.g. the Sarbanes Oxley Act, the corporate structure may change, or additional committees may be established for which there are new record keeping requirements.

*The assessment of existing systems* measures the extent to which business activities are documented within the present information and record keeping systems. A records inventory assists in this process. Also needed are the details of existing record keeping practices and the extent to which they fulfil the requirements for creating evidence. The results of this assessment are useful in defining the specification for a new electronic records system, for example what integrations may be required.

*Identification of strategies for satisfying records requirements.* To identify the strategies required a thorough knowledge of the organization is needed. This follows from the analyses done in the previous steps. There are four main strategies or tactics to consider. These are policy, design, implementation, and standards tactics. Policies spell out what an organization intends to do and may include a programme and procedures to show how they may be implemented. Design applies to the technical components of the record keeping system. For example one important objective may be to make the records creation as seamlessly integrated with business processes as possible. Another requirement may be that IT specialists, records managers and archivists work together in designing a system to meet requirements. Implementation includes managing the configuration of hardware and software and the establishment of procedures and practices for record keeping, e.g. how e-mail is captured and managed. It can also include training which is a powerful implementation tactic. Standards are key elements of best practice. As a result of the rapid increase in digital information, the last few years has witnessed a significant growth in the number that are applicable to the records management environment. Depending on the kinds of records that are kept, different standards are taken into consideration. Some examples of relevant standards are:

- The Dublin Core standard.<sup>xv</sup>
- The Recordkeeping Metadata Standard<sup>xvi</sup>
- The Victorian Electronic Records Strategy (VERS) for long-term preservation of electronic records<sup>xvii</sup>.
- MoReq: Model Requirements For The Management Of Electronic Records<sup>xviii</sup>
- DoD 5015.2 Design Criteria Standard for Electronic Records Management Software Applications.<sup>xix</sup>

*The design of a records system*, new technologies are taken into account and plans are made as to how the necessary changes are incorporated into the existing records management structure. It is important at this stage to consult with all those involved in Records Management including RM professionals, IT personnel, the Chief Information Officer, Webmaster etc. Paper and electronic records require different processes and controls.

*Implementation of a records system* includes a project plan showing in detail how implementation takes place and the steps involved. These will likely include the conversion and migration process, integration plans, training, documented policies, procedures and standards, performance reports and reports to management. At the end of this stage the system is in use and improved records management practices should be in situ.

*Post-Implementation review* is the final stage and a system of evaluation and ongoing monitoring regime are put in place including surveys, interviews with management and other stakeholders and checking operations. This enables an organization to establish more clearly the return on its investment and also to keep track of how the system is meeting changes to records and organizational needs.

### **3.2 Electronic document and records management system requirements exemplified by the use of TRIM**

#### *The facility to apply document retention policies*

The cases described previously reinforce the necessity for document retention policies which are well thought out, and complied with, throughout an organization. Whilst such policies will not necessarily prevent all the problems they will certainly reduce confusion and provide more trustworthy evidence that a company has been acting professionally and in accordance with a well-established practices. The Archiving component of TRIM Context allows an organization to control the aging of its records so that it can conduct an orderly disposal of unwanted records, or archive its important records for future reference. This is carried out through the application to records of disposal and retention schedules.

#### *Easy access from the Desktop.*

Records can be cataloged seamlessly into the record keeping system with the appropriate metadata from the user's desktop. This requires a platform that can provide out-of-the-box integration with an organization's standard applications such as e-mail, word processing etc. TRIM Context integrates at the desktop and with the Operating System. Desktop integration is achieved using ODMA for ODMA compliant applications (such as MS Word, PowerPoint) and Macro's for non-ODMA compliant applications (such as MS Excel). TRIM Context integrates with the operating system as a Windows Component itself.

#### *An open and scalable architecture for enterprise wide access.*

An open architecture provides the capacity for the organization to grow and cater for increasing number of documents and records and to be able to integrate with all types of line of business applications. For integration with line-of-business applications, TRIM provides an SDK. The TRIM SDK is a

suite of tools that allow programmers to create custom solutions, services and integrated applications by leveraging the functionality of TRIM. These tools give TRIM clients and third-party integrators the opportunity to EDRM-enable line-of-business applications, to create custom document-centric applications, and to increase the return-on-investment of an organization's information assets, such as classification systems, controlled vocabularies, and knowledge repositories. TRIM Context includes some other great features for the integration developer. These include ActiveX controls for bringing the rich experience of the TRIM User Interface into custom applications, and an event processor interface for responding to key events as they occur in TRIM. TRIM Context Web provides enterprise wide Web access to the EDRMS.

### *The ability to manage all types of business processes.*

TRIM Context Workflow supports the definition and management of all types of business processes. Workflow design enables transaction arrangements that include branching/parallel workflow, looping and decision points. The functionality provides for resource management, including delegation, supervision, automatic allocation and monitoring. TRIM Context's resource management tools make it easy for managers and supervisors to manage workflow for themselves and for staff. TRIM Context's workflow will integrate with other business applications and initiate actions within those other programs as required. TRIM Context has a fully graphical workflow manager and viewer, enabling visualization of a complete process.

### *Deletion and Destruction Capabilities.*

In the conventional paper-based world, once a document is shredded, incinerated, or buried in a landfill, it is no longer subject to discovery as a practical matter. However, the routine "deletion" of a computer-based document does not destroy the data. Hitting the "delete" key merely renames the file in the computer, making it available for overwriting if that particular space on the computer's hard disk is needed in the future. The data may remain on the hard disk or on removable storage media for months or years, or may be overwritten only partially. It is for this reason that TRIM includes a shredder delete function which enables an administrator, should it be required as part of policy to overwrite and make a record completely irretrievable.

### *Comprehensive metadata.*

Metadata in electronic systems is vital to the control of records. TRIM provides extensive metadata in line with International standards and enables the kind of control of records that is essential to preserve their integrity over time. The role of metadata in describing records and their content, context and structure is very significant. For electronic records metadata must be created either automatically or by data input. Metadata is used to record the processes of capture, registration, classification, access and security classifications, identification of disposition status, storage, use and tracking and implementation of disposition. These processes all have detailed specifications and the electronic records system must be capable of meeting them.

### *Classification Tools.*

TRIM provides the tools to build a business classification scheme that can represent the business functions of an organization. E-mail, in the same way as other records, must be part of the business classification plan. The classification or file plan enables records to be better organized, described and linked. This in turn provides easier access, better retrieval and enhanced use and distribution capacities. TRIM's thesaurus provides the opportunity to use terms which have specified and hierarchical relationships with one another in accordance with the standards defined in ISO 2788, "Guidelines for the establishment and development of monolingual thesauri." Vocabulary controls involve the use of a list of authorised subject heading which may be used in the classification scheme. The list allows control of the terminology used to name records.

## 4. Conclusion

Best practice corporate archiving depends upon an understanding and a philosophy throughout the organization that defines records and archives within an integrated process of information management. This new regime for records and archives requires the recognition that the management of records relies upon the combined efforts, expertise and actions of many people within an organization, including records managers, archivists, information technology specialists, CEOs and end users.

The evidence abounds that many organizations lack the necessary processes and procedures for managing electronic records. This leads to business inefficiency, increased costs and exposure to unnecessary risk. Many organizations are using outdated records management practices which no longer apply in the digital environment. To ensure the reliability and authenticity of records requires the application of a system which can record and preserve, in the metadata of records, the content, context and structure of records over time.

The DIRS process described in ISO 15489 provides a methodology that describes how to implement a best practice records system. Whilst it almost certainly involves choosing a suitable software tool such as TRIM, it also requires a careful and thorough analysis of an organization's culture, information management structure and business processes. Only after this analysis is complete, is it possible to plan, design and implement the changes that are necessary for a modern regime of records and archives management.

## About TOWER Software

TOWER Software delivers Electronic Document and Records Management (EDRM) Solutions, empowering organizations to take control of their corporate information assets. TOWER Software's award-winning TRIM Context® solution is a single, integrated platform that manages business information throughout its complete lifecycle. By relying on its proven domain expertise, strong strategic partnerships, and powerful solutions, TOWER Software enables organizations to maintain accuracy, maximize efficiency, and achieve and maintain standards compliance across industries, resulting in sustained competitive advantage. TOWER Software is a privately held company with operations in North America, Europe and Asia-Pacific. For more information, visit [www.towersoft.com](http://www.towersoft.com).



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