WHITE PAPER

INFORMATION AND RECORDS MANAGEMENT TOWARDS 2000 –
ELECTRONIC RECORDS MANAGEMENT PRINCIPLES

Information and Records Management Towards 2000 - Electronic Records Management Principles

Introduction

Records management is an often misunderstood term. Most business people are likely to think of records management as the act of storing and moving file folders, tasks usually performed by the denizens of the basement. It conjures up quaint and crusty, musty images of filing rooms, basements, ink wells, steel pens, splintering wooden desks, suffocating paper dust, worn, torn, crinkling, aged file covers and decay. A subterranean domain peopled by ancient, shambling clerical relics.

In 1996, nothing could be further from the truth. Records management is about managing important, often vital business information. It is about managing all information within an enterprise irrespective of its form, (paper, electronic, image, corporate data), or location. It is about expeditious information delivery. It is about being able to provide <u>everything</u> asked for <u>when</u> it is asked for.

For example, the question, *"give me everything we have on Martin & Co. and the Glebe Island Bridge project"*, should immediately return, on screen, a list of every document, (paper, electronic, image, etc) held by the organization. You should then be able to select and look at any one of these documents on screen without having to request assistance or hard copy. **This is an example of what a good computerized records management system can do!**

What are "Information" and "Records"?

In the IT industry, it is normal to differentiate between data and information even though the Collins Concise English Dictionary defines them as synonyms. For our purposes however, we think of data as elements of information and information as either:

"the results derived from the processing of data according to programmed instructions", or

"an organized collection of data".

Records are defined as, (quoting from AS4390.1, the new Australian standard for records management):

"recorded information, in any form, including data in computer systems, created or received and maintained by an organization or person in the transaction of business or the conduct of affairs and kept as evidence of such activity".

A record is therefore evidence of a business activity and it can be in any form, file folder, paper, electronic document, image, E-mail, fax or whatever.

Records are information important to your business. <u>Vital</u> records are information "critical" to the success of your business, records without which your business could not survive!

What is Electronic Records Management?

We already know that a record is evidence of a business activity. The process of managing these is called records management. Records management can be defined as (again quoting from AS 4390.1):

"the discipline and organizational function of managing records to meet operational needs, accountability requirements and community expectations", and further, "systematic control over the creation, handling, processing, filing, storage, retrieval and disposal of records".

Electronic records management is simply the use of electronic equipment, such as computers, to manage records.

Why is it important?

Some examples:

- One assumes that you would like to know who owes you money,
- who you owe money to (less important?),
- who is doing work for you,
- what that work is supposed to be,
- when it is supposed to be complete, ...

Remember that records are evidence of business activities, of business transactions.

You cannot conduct any business for very long without records. Records are essential to business activity. Records are your business!

In addition, there are a great many laws, regulations, citations etc that mandate the keeping of records, for example, tax records must be kept for seven years, (or is it 8 years, or 9 years?, - I rang three tax offices and got five opinions).

The bad news is that you have no choice, you are forced to maintain records.

The good news is that if you make a good job it, your business will benefit, your costs will go down, service levels will go up, productivity will increase and (hopefully) profits will increase.

How is it done today?

File Folders, Labels, Barcoding, Color Coding

The traditional ways of managing paper records, paper you produce and paper sent to you from outside your organization. If done properly, with appropriate numbering and classification systems, (as a "system"), it can provide an acceptable service with average response times of around one to three hours.

A good computerized records management system will allow you to capture all file folder based information including file number, title and barcode number and track same using fixed and portable barcode readers. The end result being that by using the system you should be able to find any file folder within minutes, not hours, days or weeks.

File Cabinets and Shelving

Probably where most of your paper records are now. Often the largest and most inaccessible "database" of information in your company. Some methods, like four drawer filing cabinets, are inefficient and extremely costly. Others, like modern open color coded filing, are efficient and reduce costs by releasing floor space and providing better and more timely access to information.

A good computerized records management system will allow you to record the details of all filing cabinets and their contents such that any search via the system will tell you the precise physical location of the required information.

Movable Cabinets, e.g., Lektriever, Compactus

Relatively expensive but very cost efficient if used for the right application. Efficient use of floor and ceiling space are two of the major advantages of this type of filing equipment. An added advantage is that this type of equipment can be electronically linked to a computerized records management system in a totally integrated and extremely efficient solution.

A good computerized records management system will be "open" enough so that an on-line link can be built between it and the movable cabinet. Network users should then be able to search for information and then submit a request on-line to the operator of the movable cabinet.

Manual Procedures, "Request", "Resubmit" etc

This is probably how most of you work now. If you need some information, you probably have to ask someone else to get it for you. How long it takes depends upon the state of the manual filing processes, the quality of the person doing the searching, his or her current workload and whether or not he or she is falling in or out of love at the time of the request. In short, it probably takes from a few hours to a few weeks to get the information you need.

A good computerized records management system will include a Resubmit or Request module so that network users can request access to paper based records.

Archive/Retention Schedules

There are three very important rules when determining what information to keep and what to discard.

Hire an expert to look at your business, your business practices and the laws (local, state and federal) that govern your business and build a retention schedule that is right for you.

Keep everything you are required to keep for as long as you are required to keep it, (tax records, employee records etc). Don't listen to dubious consultants preaching "risk management" because it is your risk, (and your money), not theirs if they are wrong!

Get rid of anything whose time is up immediately its time is up. Do not hang on to anything longer than you have to.

A good computerized records management system will include an Archive/Retention schedule module able to "absorb" and apply your schedules to both paper based and electronic records.

Classification Systems, "Keyword Thesaurus"

Every organization needs a uniform way of classifying information. The same system should be used for both paper based and electronic records. Within the records management profession such a classification system is usually called a "Keyword Thesaurus". That is, a list of terms (organized as Keywords, Descriptors, Broader Terms, Narrower Terms etc), used to describe records.

There are generally two types, Administrative and Subject. If you don't have a uniform way of classifying information you should take the steps to rectify this situation as soon as possible. You cannot enjoy the benefits of an enterprise wide information management system without an enterprise wide classification system.

If you don't understand this area call the local records management association and ask for a list of approved consultants.

A good computerized records management system will include a Keyword Thesaurus function able to "absorb" and apply your Thesauri to both paper based and electronic records.

What can we expect by the year 2000?

World peace, prosperity for all, zero inflation, no unemployment and all politicians telling only the truth. Probably a little ambitious!

What can we "reasonably" expect, especially in the business of information management?

Paper

Will we have a "Paperless World"?

I don't think so. In fact I predict that we will be using more paper per head than we do now. Unless we make photocopiers and laser printers illegal and until someone invents a better medium than paper, it is highly unlikely that the much heralded Paperless office will be upon us by the year 2,000.

This last point is worth exploring. Paper "ain't all bad". For many applications it remains by far the most appropriate and cost efficient medium. Books, magazines, agendas for meetings, note pads, etc. It is low cost, recyclable, easy to use, easy to carry and convenient. Despite all the enthusiasm for optical disk as a long term storage medium, paper is still far more reliable. I can still read a paper report produced ten years ago. I have great difficulty finding the right hardware and software to read a Maxtor WORM optical disk cartridge produced eight years ago! Paper is without doubt one of the greatest inventions of all time.

Will we have a "Paperless World"? Certainly not in the sense that we no longer use paper. However, will we have a Paperless world in the sense that for 99.9% of all enquiries for information we will not need to look at the original source document? Most certainly, because that is one of the major objectives of any computerized records management system.

File Folders

Will we still use cardboard file folders?

Most certainly yes. However, we will probably be using a greater percentage of synthetic materials and the file folders of advanced users will be electronically encoded (as well as barcoded) with a passive electronic device (PED) with a unique code, similar to those now used to "tag" runners in marathons. Various locations in your building will have sensors imbedded in walls and doorways. These sensors will be connected to your local area network and will activate the PED and read the number when the file folder is within say two to three meters. The location information will be instantly transmitted to your computerized records management system which will then "know" the most recent location of the file folder thus solving the age old problem of "lost" files.

Electronic Documents

Will our use of electronic documents have expanded?

Most certainly yes, both within organizations and between organizations. Existing applications and new applications will make far greater use of electronic documents and EDI. The ongoing "Information Explosion" will drive this growth as will new applications and the Internet (or whatever it is called in 2,000). The use of EDI for commerce will be at least five times what it is now. Electronic commerce, via the Internet and other commercial networks, will be the norm rather than the exception. Ordinary householders will be perfectly comfortable using the Internet to search for, select and purchase products.

Companies will go direct to the Internet for a majority of purchases rather than via Value Added Resellers (VARS) as they do now. Companies will communicate via E-Mail, both internally and externally, far more than they do now. E-Mail will have replaced faxes for many types of communication.

Managing this ever growing explosion of electronic documents will be the biggest challenge facing any organization. It will be an impossible task without a good computerized records management system.

Workflow

Will there be a growth in the use of workflow?

Most certainly yes. Workflow applications will control the "flow" of information within and between applications. Every organization, government and private, will use workflow to some extent within their business. Most applications will include elements of workflow.

Workflow will be essential for the effective management of all types of documents, both paper and electronic.

A good computerized records management system will include a Workflow function to help manage all documents and the work associated with them.

Images

Will the oft predicted imaging explosion have finally happened?

Yes, but not in the way predicted by most of the large imaging companies. No one will be interested in imaging applications per se, (especially hulking, prohibitively expensive imaging applications), but they will insist that any application in use be "image enabled". Imaging as a tool (rather than as a discrete application) will be commonplace.

It will be rare indeed to find an application that isn't image enabled. A computerized records management system has to be image enabled!

A good computerized records management system will be image enabled allowing you to easily scan, index, store, retrieve, view and print images.

Microfilm

Will micrographics still have a place?

Most certainly. The market may have diminished in size but new and low cost techniques will enable micrographics to survive well into the 21st century as an ideal, highly appropriate and extremely low cost way to "store" or "archive" non current information. The current problems of high cost and awkward access will be solved.

The microfilm database will be online to the computerized records management system and users will be able to search for, retrieve and view microfilm records on their desktop PC.

A good computerized records management system will have the ability to "link" to your micrographics system.

E-Mail

No need to ask the question. E-Mail will be ubiquitous. Everyone from children to CEOs will be E-Mail proficient. It will be an integral part of our daily lives as well as that of business and government.

The number of E-Mail records in existence will be mind boggling. E-Mail will be one of many kinds of electronic documents managed by our computerized records management system.

A good computerized records management system will include the ability to "link" to E-Mail systems and capture and manage all incoming and outgoing E-Mail of importance, (important because a great deal of E-Mail is irrelevant).

Voice Mail

Will voice mail be ubiquitous?

Yes, both good and bad voice mail systems will permeate the workplace and general society. Bad voice mail systems, such as those used by some companies to avoid taking support calls, will continue to frustrate millions whose only need is to speak to a human being. Good voice mail systems, those used to communicate information, will rival E-Mail in popularity. Low cost mass storage and new technologies will make the voice mail "size" problem irrelevant in the year 2,000.

A good computerized records management system will include the ability to capture, index and replay voice mail.

Faxes

Will we still rely on faxes as much as we do now?

I don't think so. I predict that E-Mail and EDI will do much of what is being done by faxes now. Certainly, computer faxes (software and a board in the computer) and network fax servers will replace most of the paper faxes now in existence. The actual number of fax documents will probably be higher than today but fax usage will have grown at a much slower rate than E-Mail and EDI. However, it will still be a requirement of our computerized records management system that it integrates with fax software and manages faxes.

A good computerized records management system will include the ability to "link" to Fax systems and capture and manage all incoming and outgoing faxes.

Corporate Databases/Data Warehouses

Will most organizations be committed to huge corporate databases?

I don't think so. The current push for data warehouses is OK for a few but unworkable for most. Huge databases holding all of an organization's data are simply too complex to program and too hard to manage. Writing hundreds of applications that all access a common, gigantic database is simply too difficult and unbelievably complex. Current RDMS start to creak, groan and break in an exponential fashion once the size of the database gets past a certain size. Programming and development teams behave in a similar fashion, littering your office with stale pizza, empty Coke cans, used styrofoam coffee cups and quivering, wild eyed, disheveled, empty husks of former programmers.

What makes sense in theory simply doesn't work in practice. The trend will be towards organizing a corporation's data into smaller, easier to manage and significantly less costly application databases. However, new technologies will facilitate a much greater ease of access and transfer of information between databases. New technology in information access will allow you to search for information irrespective of where or how it is stored. You simply won't know or care as a user that the information you have just found resided in multiple databases. The physical location of the data will not be an issue. Search engines will work equally well whether the data is in one huge database or many smaller databases.

Our computerized records management system will allow you to search for and view records from your corporate databases.

A good computerized records management system will include the ability to "link" to your corporate databases and locate and view corporate records.

Video

Will Video records be ubiquitous?

Not to the degree that imaging will be but certainly video records will leave the realm of "playthings" and become accepted and widely used in business. Desktop operating systems, databases and applications will be "video enabled". Videos will be accepted as records just as file folders, paper, word processing documents and spreadsheets are accepted as records. The power of desktop workstations will be such that movie quality replay of videos will be the norm. Integrated video and still picture cameras will be low cost and high quality, far surpassing what is available today.

A good computerized records management system will include the functionality to capture, store, index and view video.

Internet/Intranet Databases

Will all business data processing be via the Internet or private Intranets?

I don't think so. Certainly the Internet needs major changes and some form of centralized, coordinated management before it can be accepted as serious business application tool, as opposed to a marketing and sales tool. I don't see the Internet making the massively expensive changes necessary to enable it to support corporate data processing, mission critical applications. Especially as the Internet is actually a community of hundreds of thousands of different companies and organizations all with their own problems and agendas.

I do see many large corporations and government departments investing huge amounts (billions) in Intranet development, that is, in establishing private networks using Internet technology. However, this is hardly the earth shattering paradigm shift as espoused by the IT media. Rather, it represents the ongoing development of client server technology.

A good computerized records management system will have a version suitable for Internet/Intranet processing. This probably means that it has a "thin client" version specifically designed for Internet processing.

Equipment?

Will we all be using network PCs?

I don't expect so. Most of us will probably be using derivations of today's technology. Intel processors will probably still be dominant and will power far more file servers than they do now albeit in multiprocessor configurations. It is absolutely certain that for the same dollars we pay today for a desktop will get one in the year 2,000 which is at least five times more powerful. Of course, you will need that power because "Microsoft Office 2000" will require five times more disk, five times more memory (RAM) and five times more CPU power to operate at the same speed as today's Microsoft Office suite!

A good computerized records management system will work on the most popular PC configurations.

Server Operating Systems

Will NT dominate?

I don't think so, but it will have a significantly larger share of the server market than it does today. My guess is that this will be at the expense of Novell, not the various Unix implementations. In my humble opinion, unless Novell gets its act together quickly, it won't be around in the year 2,000. I see NT and the various Unix systems (e.g., SUN, IBM, Unisys, HP, etc) sharing the server market in the year 2,000.

Will a new operating system arise and dominate the market?

Unlikely, though a few companies will try to reinvent the wheel and lose millions, (maybe billions), in the process.

A good computerized records management system will work on the most popular server operating systems.

Desktop Operating Systems

Will Microsoft still dominate?

My guess is yes. By the year 2,000 most of us will be using a true multi-tasking, "Windows" operating system, probably based on the next generation NT workstation operating system with a WIN95 type interface. WIN95, the current Windows operating system, will be long gone having been discarded as quickly as possible by most users as soon as NT 4.0 was released, (late 1996?). Microsoft will have introduced a brand new interface by 1999, (requiring a major hardware upgrade and staff retraining), but organizations will be slow to move to early versions having been burnt too many times by Microsoft in the preceding years.

A good computerized records management system will work on the most popular desktop operating systems.

One Application or Many?

Will the current practice of using many different applications give way to a new breed of "I Do Everything" (IDEA) applications?

I don't think so. I think that in the year 2,000 we will still be using an accounting package, a word processing package, a records management package, etc. I do predict that Microsoft will begin developing IDEA type applications. It will also significantly expand the number of applications it produces and will continue inexorably on its path towards "owning" every piece of desktop software. However, Microsoft will stretch even its considerable resources, will get "burnt" just as Novell got burnt playing with applications and will find itself up against increasingly tougher competition in the application marketplace.

Will it be easier to "integrate" applications, to exchange data between different applications?

Thanks to Microsoft, Yes. They will establish the defacto standards and developers will follow them out of self interest. Exchanging information between applications, (even applications from different vendors), will be easy and commonplace.

A good computerized records management system will integrate with all of the most popular desktop applications such as word-processing, spreadsheets, graphics, E-Mail, etc.

Standards

Will the standards industry finally implode and stop driving us crazy?

Unlikely, unfortunately. The standards industry is intent on having a mandatory, highly costly standard for every aspect of business life. How long before the size of coffee cups is mandated?

Will there be standards for Records Management?

The good news is that there is one now, AS 4390. The even better news is that (rare for the standards industry) it is a very good and appropriate standard. An excellent set of guidelines for any organization building or reviewing a records management program. The even better, better news is that it is a voluntary standard.

A good computerized records management system will support the application of these standards.

What Should You Do To Prepare?

The million dollar question.

The answer however is boringly simple and familiar.

1. Hire a consultant to critically examine your management of physical records, (file folders and documents). If it is a mess, fix it before installing a system.

2. Rationalize procedures and work practices. Identify your major requirements, (e.g., improve customer service, free up floor space, increase productivity, provide immediate access to information), your "hot buttons". Focus on these. Make sure that the system can help you achieve these. Set goals, targets for each of your hot buttons. Measure these areas prior to the system being installed so that you have a basis for comparison, "before" and "after".

3. Hire a consultant (or use your in-house consultant if you have one) to specify your requirements for a classification system and Archive/Retention schedules. Ensure that the system you choose can meet your needs.

4. Use this same consultant to specify your records management needs, including the management of electronic records. Ensure that the system you choose can meet these needs.

5. Build a project plan, appoint a project manager. List all of the things that need to be done, such as:
   - system selection
   - consultancy
   - training
   - testing
   - data conversion
   - hardware, system software, network software acquisition
   - acceptance test

6. Hold regular reviews.

7. Get wet slowly, that is, take it one step at a time.

8. After installation, regularly review the results. Compare them against your original goals. Make changes if necessary, your business objectives must be met. Change the system, not your goals!

Most Important:

9. Make sure that you clearly identify your business goals prior to beginning this process. The role of a computerized records management system is to assist you in meeting those business goals. You can't select an appropriate system if you don't know what it has to do!

10. Ensure that your records management consultant works closely with your MIS manager. The current and future architecture of the computerized records management system must be consistent with your company's IT direction. Don't select a Unix based system if your future is NT!

Conclusions

Also boringly predictable.

You need a records management program, a records management strategy. Once you have a strategy in place you then need a computerized records management system to meet your objectives.

A good computerized records management system will improve your business, lower your costs, raise the customer service level and protect you in disputations with other organizations and the government.

Computerized records management is good!

Recommendations

Start the process. Look at other organizations that have installed computerized records management systems. Ask around, ask for references. Get vendors to give you and your team a presentation and demonstration. See enough vendors until you know what you want. Select a system and enjoy the benefits.

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