Information Management Advice 42 Structuring Shared Network Drives for Recordkeeping

Introduction

Increasingly agencies are opting to move to EDRMS for document management. If your agency is implementing an EDRMS, structuring shared drives is the first step in any migration. If not, structuring file shares allows for their better long term management and greatly assists in the ongoing management of an agency's records.

What are Shared Drives?

Shared drives, also known as network drives, are used by many organisations to store electronic information, including Word documents, Excel spreadsheets, PowerPoint slides, digital photos, PDF documents and database reports.

What are Files, Folders and Documents? (Language warning)

Be wary of confusion over language. When we talk of "files" this can mean different things depending on which discipline you are approaching them from. A file in the physical world is a paper folder filled with paper documents. In the electronic world a file refers to a compiled set of instructions that direct a computer how to behave. So a Word file is a set of instructions that tell the computer to display a document on screen. As a result the terms "document" and "file" refer to the same thing. In the electronic world a folder is a container for documents (or files).

What are Unstructured Shared Drives?

Shared drives often evolve informally with minimal structure or planning. Folders with titles such as 'John's Folder' or 'Jenny's Letters' are not uncommon, and document titles like 'Letter 3' are very unhelpful but often used.

Users rarely perform any housekeeping of shared drives, which means information accumulates and is rarely deleted.

Unstructured content on shared drives is the cause of many problems for an organisation, including but not limited to:

- Difficulty finding and retrieving information that is known to exist
- Difficulty authenticating State records
- Documents not providing reliable evidence of actions
- Lack of recordkeeping functionality, for instance:

- o   Auditing controls;
- o   Security controls able to match whole of Government guidelines; and
- o   Retention and disposal rules.

Benefits of structuring shared drives

If migrating to an EDRMS structuring content is essential as a first step.

Other benefits include:

- Ongoing drive maintenance is far easier in a structured system.
- Adherence to Information Management Policies is greatly simplified.

Prerequisites for structuring drives

- Ownership of content has already been established – See *Advice 39 Developing an Information Asset Register* pg 8 'Information Custodianship' for more information.
- An up to date Business Classification Scheme has been negotiated with stakeholders – See *Advice 6 Information Classification tools* and *Advice 66 Classification Scheme Considerations*.

The Process for Structuring Share Drives

Step 1: Identify Stakeholders

It is essential that all stakeholders are engaged in a File Share structuring project. Most stakeholders will have a lot to gain so with proper communication they should be easy to engage. Stakeholders include but are not limited to:

Who	Reasons	Gain/opportunity
Information Technology (IT)	- Support of existing policies - Need to implement any new policies - Sorting of existing drive content and identifying problem areas	- Freeing up of drive space - Strengthening of existing file share policy - Tidy up of existing structure✖
Human Resources (HR)	Connecting content to function	Improved separation & induction processes
Legal	Identifying what needs to be preserved	Ease of meeting RTI responsibilities and any other legal proceedings in a timely manner
Records Management	- Management long term - Ensure agreed BCS is in place - Identifying what needs to be preserved and what can be	- Ongoing adherence to policy - Timely identification of records

	destroyed	
All staff (Information Owners)	• These are the users that the success or failure of the project depends on, so their buy-in is critical • Owners/users/creators of documents	• Ongoing ease of finding information. • Opportunity to learn and understand functional classification before moving to a formal EDRMS • Learn classification

Step 2: Identify size and shape of the problem with shared drives

You need to know what you are dealing with. The first step is to establish what information your IT support is able to provide you with. You need to know the following:

- How many files and what type – Word, Excel, PDF, Multimedia etc.?
- How many folders – especially how deep is the existing folder structure?
- What is the current structure - do you have separate drives for each unit or section?
- Do you have separate drives for databases, applications or multimedia? Do you have any secured drives?
- Do you have secured folders and how are these managed?
- Do you have duplicate folders and documents, how many and where?

A complete report listed by file extension will give this information. If you have any file extensions you can't identify, one of these lists will help or you can simply 'Google' the file extension you don't recognise.[1]

Many enterprise data management software packages allow IT to identify duplicate documents on their servers. If your system is not able to provide this information, there are tools such as Abrevity or Kazeon which simplify these tasks. With a very limited budget it is possible for IT to create batch files using 'file compare' to check for duplicates. Your final solution will depend on what your IT support can do.

Step 3: Decide on the new structure

You will need to implement a file naming convention. Folders should be named using BCS (Business Classification Scheme) terms.

The key considerations when assessing the new structure are:

- What do you need to manage? Do you only have documents (.doc, .docx, .xls, .pdf etc) or do you have databases (.mdb, ACCDB, .odb etc) and multimedia (.jpg, .mp4 etc) files?
- Do you allow users personal space and do you intend to continue to do so? Note, with cheap USB storage available there is no longer any real need to provide storage for personal use. However, IT sections may prefer to carry the load rather than risk use of external devices.

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[1] http://pc.net/extensions/ http://filext.com/alphalist.php? http://en.wikipedia.org/wiki/List_of_file_formats

A recommended structure for shared drives would be as follows. (This generic example may include options you don't need, conversely you may identify other folders you do need). A screen shot is attached in the Appendix to this Advice.

Folder/Drive name	Content
Archived - read only folder managed by nominated officers within Business Unit	- Any standard doc type that would normally go to EDRMS but has not been classified or ownership claimed - All folders with content that are currently on the O drive and are being held for sorting/archiving/disposal later
Databases	Contains any/all databases
Documents - This will include any documents identified for migration to an EDRMS, or if using the network drive as the primary tool for managing records a folder structure based on functional classification would be recommended here	All current office documents
Multi-Media Note: these may or may not be able to be stored in your EDRMS depending upon its functionality. This folder may reside on the network drive or under the documents folder (see previous point), and be migrated to your EDRMS	- All Business Photos (e.g. openings, promotional events, etc) - Any movie files - Sound recordings etc
Reporting	- Report templates - Result sets
Social - This is a temporary solution. In this day and age it may be more appropriate for social clubs to work within a social network such as Facebook to distribute event information and photos etc.	- Pictures from social events (Christmas bbq etc) - Social club related docs etc.
Web Development	- Any html, css, xml or similar docs that can't/don't live in your Content Management System. - Any docs or files used to prepare content for the web - Possibly any images or multi-media specifically for the web (but this is a business unit choice as to whether those things go under Multi-Media).

Step 4. File and Folder naming convention

Document and file naming is an essential part of any structuring process and a policy must be developed to support this across your agency.

Files and Folders need easy to follow rules. Some elements to consider are:

- Common spellings - spell out departmental or organisational unit names rather than use acronyms

- Use consistent date formats – YYYY-MM-DD is more useful when sorting a list of otherwise same titled documents (i.e. meeting minutes or agendas) as it gives a date order but in many cases year and month may be all that is needed. Remember that dates tracked by the system cannot be relied upon as system events can change them (i.e. moving a document or file can alter dates)
- Formalise version control language – draft, version #, superseded , final
- Consider adding postfix tags into folder names to assist in identifying function and life-cycle state (e.g. ADM for administration, RM for records management, IT for information technology, etc and "drafts", "final" etc. for state records) Giving file names such as "Correspondence [ADM, Final]".
- Consider the use of upper or lower case and formalise – e.g. upper case for version control, sentence case for all other.
- Identify 'Illegal' characters – punctuation in document titles can be confusing and when migrating to EDRMS systems can cause processes to fail (', /, ?, ! etc).
- Employee or author names – do not use, rename to reflect function of the document.
- Avoid abbreviations – if you use 'acceptable' abbreviations, create a wiki or at least a managed document that lists them.
- Avoid organisational unit and department names – because these change often so you will need to keep up to date.
- Avoid naming document according to formats – Word, email, picture, spreadsheet, these can easily be identified by the system.

Step 5. Decide on management process

Whatever structure you decide on, ongoing management is essential. You need to know who is going to manage what, is IT or records or are local unit staff going to be responsible (or a combination of all of these)? Things to consider are:

- Records - If your live documents and records are going directly into an EDRMS this is fine, but if not, how are you going to identify records, and when will they be captured and moved into a records system?
- Structure integrity - How is the drive content going to be managed long term? Are users going to be relied on to self manage, or do you have IT management software capable of maintaining integrity? Some drive management tools used by IT can be set to move particular document types (i.e. move all Word documents created under 'Databases' to a particular folder, or all databases to the databases folder at the end of each day/week). If no tools exist, this can be done by a batch file by your IT area.
- Document Folder Management - If you have a Documents folder structure, who will create and edit the functional classification levels?
- Reporting - Are you going to report and review the structure regularly?
- Policing of policy – define this responsibility, who will do this - is it a Records or an IT role, or shared? Possible tasks include IT running reports on new documents created, to allow spot checking on file and document names on a weekly basis.
- Access - how will you restrict access to secure branches of the file structure?

Step 6. Sorting the Documents

Document sorting needs to be done by users. It is strongly recommended that users are enlisted to do a first tidy up prior to an official sort. This allows users to reacquaint themselves with their folders and remove any unnecessary documents. These are some of the issues that need to be considered:

- Identify document owners - these are not the information owners in the 'records sense' but the creators and ongoing users of the documents, those who will effect or be affected by the changes.
- Educate users – why are we doing this, what are the problems we are solving, what are the gains we are providing? Most important of all - how will this affect our daily work?
- Managing deep folder structures - If you have deep folder structures these can be 'flattened'. This involves combining folder names to create a single level folder structure, to prevent missing folders. You would need to ask IT support to create a script to create the folder structure, move the documents contained in the old structure, and then delete the old structure. See Appendix to this Advice for example of a flattened folder structure.
- File renaming tools - these can be used to add folder names to document titles. This can be done by users instead of flattening the file structure, giving them more control over 'their' documents.
- Links - watch for linked documents, these may be spreadsheets or even word documents with hyperlinks to other documents. Once you start moving documents around, these links are easily broken.
- Support – records staff need to support this process. They should be available to help with clarifying needs and interpreting information, as well as assisting with mapping documents into the new structure.
- Finding existing documents– transition is always an issue. Consider maintaining the old structure as 'read only', with links to the new structure for key areas.

Tools

These are cheap or free and can be used to assist a cleanup project.

Before downloading and installing anything, talk to your IT support. They may be able to offer you other tools, have preferred tools, or need to be educated about their existence.

File naming tools such as 'Magic File Renamer'[2] can batch process and modify the document name to help adhere to naming conventions. This can also be used to transfer information from parent folders to document names and or remove phrases, dates and even particular characters.

File management tools such as 'Free Commander'[3] greatly assist in moving documents as you can open multiple folders next to each other, drag and drop between them and report on the contents of folder structures.

Link management tools such as 'Link Fixer Plus'[4] can be used to preserve links between documents, such as spread sheet references, when moving files around.

Recommended sorting process

1. Build the new drive and folder structure

2. Create a hidden copy of the existing folder structure for recovery purposes

3. Rename folders in existing locations (adding useful information, removing illegal characters etc.)

4. Move all non-document file types to their appropriate locations (databases, multi media etc.)

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[2] http://www.finebytes.com/mfr/
[3] http://freecommander.com/en/summary/
[4] http://www.linkfixerplus.com/

5. Move all documents to the new structure

6. Delete (or 'disappear' by restricting access) existing file structure to remove later if you have copied the documents

7. Delete backups after reasonable time span (e.g. 6 months, 1 year)

Further Advice

For more detailed advice, please contact:

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Queensland State Archives publications
- Guideline for the planning of an Electronic Document and Records Management System (EDRMS)
- Public Records Brief Responsibilities required for planning, implementing and operating an EDRMS
- Public Records Brief Transitioning between recordkeeping systems
- Public Records Brief Managing Shared Drives

NSW State Records
- Recordkeeping-in-Brief 52 Considering digital recordkeeping as part of systems development or procurement
- Recordkeeping-in-Brief 61 FAQs about EDRMS

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This document has been security classified using the Tasmanian Government Information Security classification standard as PUBLIC and will be managed according to the requirements of the Tasmanian Government Information Security Policy.

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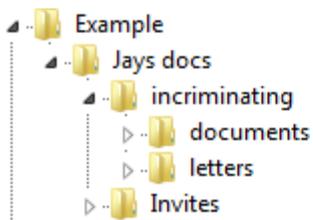
Ross Latham
State Archivist

Appendix 1

Suggested folder structure could look like this (note sample does not include a 'Documents' folder as it comes from an organisation that already uses an EDRMS):

```
⊞ 📁 Archived
⊞ 📁 Databases
⊞ 📁 Multi-Media
⊟ 📁 Reporting
    ⊞ 📁 Crystal
    ⊞ 📁 NVivo
⊞ 📁 Social
⊞ 📁 Web Development
```

A 'Flattened' folder structure could look like this:

Before

```
▲ 📁 Example
    ▲ 📁 Jays docs
        ▲ 📁 incriminating
            ▷ 📁 documents
            ▷ 📁 letters
        ▷ 📁 Invites
```

After

```
▷ 📁 Example_Jays docs_incriminating_documents
▷ 📁 Example_Jays docs_incriminating_letters
▷ 📁 Example_Jays docs_Invites
```