Managing Records

In

Microsoft® SharePoint® 2010

Version 2.0

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RIMtech

Where Software Meets Recordkeeping

www.rimtech.ca

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Contents

ARMA International has published this report as a book entitled **Managing Records in Microsoft SharePoint 2010**. Available from ARMA International's online bookstore, in either paper or downloadable formats. Click here to order, or visit www.arma.org.

Introduction

SharePoint™ 2010 offers powerful recordkeeping capabilities that have been much improved and expanded from the 2007 version. SharePoint 2010 can therefore be used for formal corporate recordkeeping. However, it also has some significant recordkeeping limitations that first must be overcome. The purpose of this report is to examine these capabilities and limitations and recommend how to overcome them, such that formal recordkeeping capability can be fully and confidently applied within SharePoint 2010. This report is intended for IT Managers who know very little about recordkeeping principles, practices, and methods, but wish to know how to properly and effectively leverage SharePoint's new recordkeeping capabilities.

In order to identify the gaps in SharePoint's recordkeeping capabilities, we compare SharePoint's out of the box capabilities with a set of proposed requirements we refer to as the F1000 Requirements, a subset of the US DoD 5015.2-STD software requirements[1], and detailed later in this report. These gaps can be bridged by developing modules within SharePoint that augment its existing recordkeeping capabilities.

SharePoint 2010 is not compliant with 5015.2. The level of software development required to bridge the gaps between the out of the box capabilities and the 5015.2 requirement is extreme, and would rise to the level of commercial product development. If you require 5015.2 compliance, you will have to purchase a commercially-available plug-in product that delivers 5015.2 compliance within SharePoint, such as GimmalSoft Compliance Suite[2]. This report therefore is concerned only with how to use SharePoint on its own, to meet F1000 requirements, without compliance to 5015.2.

To maximize your understanding of this report, please note the following:

1) This report outlines the capability gaps between the out of the box capabilities and the F1000 requirements, and what SharePoint configuration and modules need to be developed to close this gap. It does not show *how* to build these modules. However we believe the required development effort is well within reach of any competent IT group properly equipped and trained in SharePoint solution development and delivery.

2) Your requirements may be greater than those that we use in this report, and therefore you may require additional capabilities we do not account for. Conversely, your requirements may be less sophisticated, and you can eliminate some capabilities and the requisite effort required to develop them in SharePoint.

3) There are many ways to implement the capabilities outlined in this report. We suggest a simple, basic approach to each capability, in order to have it as generally-applicable as possible. These approaches may not be best for your particular organization or circumstance. Try to envision how each capability might be uniquely applied to your organization.

4) Because this report is concerned only with SharePoint, we are assuming that the organization is using exclusively SharePoint for ECM purposes, as well as Microsoft Office 2010, integrated with SharePoint.

5) SharePoint has a very basic set of features to manage hardcopy records, however this is not dealt with in this report.

6) RIMtech proposes several "Best Practices" throughout this report. Most of these practices are derived from the past project experience of RIMtech, and by observation of other projects.

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[1] 5015.2 is a de facto industry standard for electronic recordkeeping software capabilities
[2] See RIMtech's report on GimmalSoft at http://www.rimtech.ca/GimmalSoft.html.

The Use Case

In order to assess how to apply recordkeeping principles to SharePoint, we need to have a hypothetical well-defined organizational "model" of recordkeeping requirements. For the purposes of this report, the organization will be characterized by:

1) 1,000 employees
2) 10 departments, each with 100 employees;
   - Manufacturing
   - Administration
   - Legal
   - Finance
   - Human Resources
   - Sales
   - Marketing
   - Information Technology
   - Safety and Security
   - Shipping & Receiving
3) All 1,000 employees are active email account holders and are creating and receiving business records in electronic form[3].
4) Each user receives approximately 100 emails per day.
5) Does not require all the functionalities of the US D0D 5015.2 standard
6) The organization does business with a total of 100 contractors
7) Requirements are typical of the Fortune 1000 companies, i.e. F1000 requirements (see below)
8) Microsoft Exchange® Outlook® is used as corporate email.
9) The organization has adopted and implemented Office 2010, including Microsoft Word®, Exchange/Outlook, and Excel®

We further need to know the details of the organization`s records management program. What does the file plan look like? What is the rate of records flow? We will proceed to define this hypothetical model. If SharePoint can meet the requirements of this model, it should be able to meet the requirements of all Fortune 1000 companies, and by implication, most organizations.

Records Infrastructure

Below are the characteristics of the retention schedule we will use for our example organization:

1) The corporate retention schedule is a relatively modern activity-based structure consisting of a total of 340 unique categories, consisting of:
   - 10 Primary-level categories
   - 30 Secondary-level categories (avg. 2 per Primary)
   - 300 Tertiary-level categories (avg. 10 per Secondary)
2) The company retains the following categories:
   - There are 1000 tertiary-level *Employee* categories (1 for each employee)
   - There are 100 tertiary-level *Contractor* categories (1 for each contractor)
3) There is a roughly 50/50 mix of Subject and Case *categories*. However, due to the fact that there are 1,000 employee categories and 100 contractor categories, there are perhaps around 4 to 5 times as many case files[4] as subject files. Put another way, the number of incoming records that have an event-driven retention (case files) will be 5 times greater than records that have a simple time-driven retention rule (subject files).

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[3] Obviously, not every member of a 1,000-employee organization will be handling corporate records.
[4] "File" refers to a category, not to a document

4) A Classification accuracy rate of **85%**[5] is the minimum requirement to carry out disposition. If the rate were any lower, an unacceptably high number of records would be destroyed at the wrong time (too early or too late), as they would have the wrong retention rule applied to them.

F1000 Requirements

To arrive at the F1000 requirements, we start with the US DoD 5015.2-STD requirements, then distil them down to a set we believe is applicable to most organizations. At the option of the vendor, software products can be formally tested compliant against the US DoD 5015.2-STD standard by JITC, a branch of the US Department of Defense. These tests are very rigorous, and compliance is technically very difficult and costly to achieve. Once the product passes the tests, JITC officially certifies the product compliant, and lists it on the registry of certified products. This certification remains in place as long as the vendor maintains it by submitting new product revisions to JITC for regular certification re-testing. It is important to understand that there are three "levels" of certification granted by JITC:

Baseline   Tested to meet all requirements of Chapter 2 (minimum mandatory) and Chapter 5 (Transfers, or Import/Export).

Classified   Tested to meet Baseline requirements plus all requirements of Chapter 3 (Classified Records).

FOIA and PA   Tested to meet Baseline requirements, Classified requirements (chapter 3), plus all requirements of Chapter 4 (Freedom of Information Act and Privacy Act).

All vendors must meet baseline certification to be certified compliant. Some are additionally certified to Classified Records, and a few have achieved all three levels of certification. Note that a baseline-certified product may well have some Classified and/or FOIA features, but they may not necessarily have enough to meet JITC compliance to that particular level. Many vendors achieve baseline compliance first, then work towards additional compliance levels in future releases.

Assessing Recordkeeping Requirements

To manage electronic records with SharePoint, you have the following three options:

OOB (Out-Of-Box)   Use the built-in recordkeeping features of the product and live with any recordkeeping limitations the product may have.

Customize SharePoint   Extend the product's OOB recordkeeping features by customizing it to compensate for the gap between what it delivers OOB, and your recordkeeping requirements.

5015.2 Compliant   Buy a 5015.2-compliant SharePoint Plug-in product. You will then have a comprehensive recordkeeping capability fully compliant with 5015.2.

For some organizations you do not have these choices – you **must** comply with US DoD 5015.2. This is the case with US Department of Defense organizations, as well as many larger US Government organizations, and even some state governments. Some corporations have also adopted compliance as a matter of policy.

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[5]   This rate will vary among different organizations. Each Organization must establish their own acceptable error rate, then track it to ensure it is consistently maintained.

Assuming you are not obliged to comply with 5015.2, which option is right for your organization? To make the right choice, you need to compare your requirements with the capabilities of all three options above. Because 5015.2 is well documented, it can serve as a benchmark against which we can assess the other two options. RIMtech has summarized the 5015.2 requirements in Appendix 3. We have listed all the mandatory 5015.2 requirements for a baseline certification, which consists of all requirements in 5015.2 chapter 2 and chapter 5.

There are 168 baseline requirements in 5015.2. We arrived at this number by consolidating the individual numbered requirements in certain tables into a single requirement (we assume compliance with all the table requirements or none). Obviously, all 5015.2 compliant products deliver all 168, as they are fully baseline compliant.

Now we need to understand the OOB capabilities of the product. The table also shows the OOB (Out Of Box) capabilities of Microsoft SharePoint 2010, with 72 out of the 168 5015.2 requirements.

The relationship between the three sets of requirements is shown below. To meet F1000 requirements, we need to deliver 33 more capabilities than Microsoft delivers out of the box. 5015.2-compliant products deliver 63 more capabilities than the F1000 set (more if they are compliant with non-mandatory 5015.2 requirements).

Baseline 5015.2
Compliance
(168)

Fortune 1000
(105)

SharePoint Out Of Box
(72)
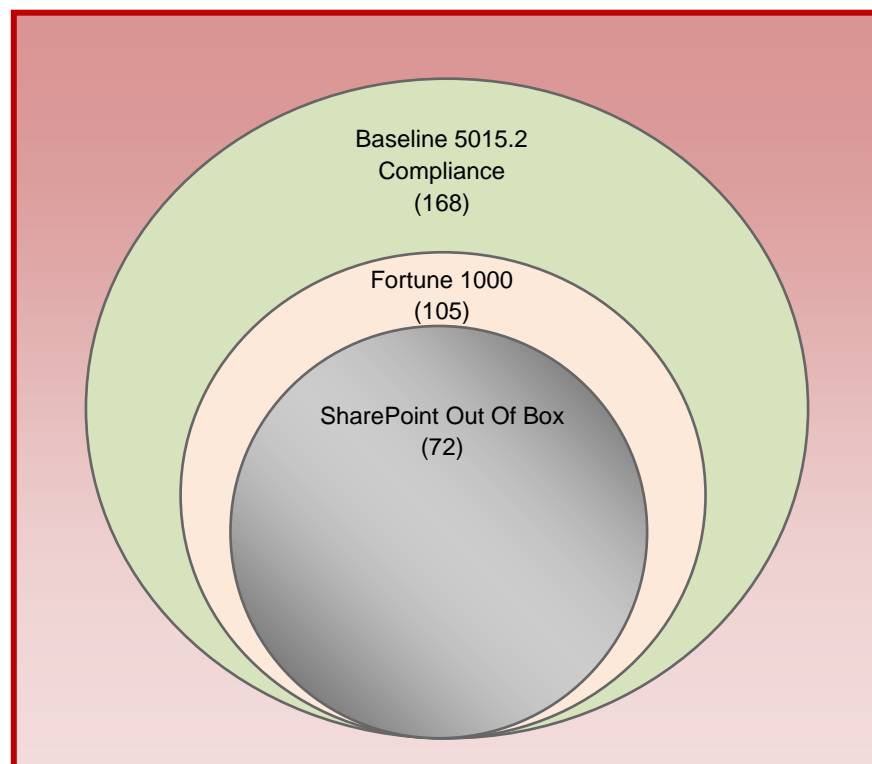
Requirements Analysis

Given the product's OOB capabilities, any of the following requirements would mean you have to close the gap between OOB capabilities and your requirements by customizing the product. All of these capabilities define the F1000 requirements:

1) **Case file handling**. You need proper handling of case file types. Each category in the file plan is a *Case* (person, place, event, or thing), or a *Subject* (ongoing activity). SharePoint does not appropriately apply disposition to records classified against a category of type *Case*.

2) **File Plan Structure**. You need a hierarchical, enumerated and ordered file plan/retention schedule that can be managed independently of the records.

3) **Expunge**. You need to destroy eligible records such that they cannot possibly be reconstructed within the system.

4) **Container (Folder) structure**. You require the concept of a "container" to contain physical records or groups of electronic records, such as a set of records within a case file.

5) **Formal Disposition**. You require a formal 3-stage process to destroy records (qualify, review, dispose), and cannot tolerate SharePoint destroying records on its own without a formal review.

6) **Transfer**. For some records, you need to move them to another location or state, before the end of their life. Or, move them to another organization at the end of their retention period.

7) **Basic Cutoff**. You need to determine destruction eligibility dates based on dates other than the triggering event date, such as end of calendar year.

8) **Email Integration**. You need a means whereby users can easily declare email from within Microsoft Outlook (or similar email client).

9) **Classification Accuracy Measurement**. You need a way to measure and track the classification accuracy of all declared records. RIMtech deems this to be essential.

10) **Records Security Model**. You need access control of declared records to act independently of the document security within SharePoint.

The following capabilities take you from the F1000 requirements to full 5015.2 compliance:

1) **Supplemental Markings**. Field-level metadata control or advanced security.

2) **Classified Records**. You require management of security-classified records to the level of Chapter 3 in 5015.2.

3) **NARA Transfer**. You need to transfer electronic records to NARA (National Archives and Records Administration).

4) **Container Open/Close**. You need to manage the open/close state of containers to prohibit contributing additional records.

5) **Advanced Disposition**. Multiple triggering event dates on retention rules. Parallel lifecycle phases.

6) **Multi-Record Linking**. You need to record and track bi-directional links between related or unrelated records.

7) **Import/Export**. You need to transfer all or some of your records from one system to/from another.

8) **Advanced Cutoff**. You need to manage cutoff of both transfer and destructions in accordance with any arbitrary cutoff date.

9) **Audit Analysis**. You need to analyse audit trails to investigate possible unauthorized attempts at records access.

10) **Vital Records**. You need to track and record which records are vital, and manage the vital status by reviewing and cycling the status regularly.

11) **Backup/Rebuild**. You need to perform backups and rebuilds of specified records data, independently from overall system backup.

There is always an option to use just the OOB capabilities. This would be suitable for what RIMtech will refer to as "informal records management", also known more generally as "Retention Management". This option would only be suitable if all of the following were true:

1) Machine-Driven Destruction is acceptable. You do not require human-driven disposition.

2) No formal File Plan Structure. You do not have a need for a hierarchical, enumerated, structured file plan/retention schedule.
3) No need for Case Files. You are not concerned with applying retention rules to case files, i.e. collections of documents with the same retention rules.
4) You do not intend to track the accuracy of classification of declared records.
5) Existing SharePoint security control is adequate
6) You do not need a way to declare from inside an email client.

Retention Management means that you can use SharePoint to destroy records at the end of their assigned retention period, however the degree of recordkeeping accountability does not rise to that of "formal" recordkeeping:

1) You cannot be assured that the retention rules have been applied correctly. You may not have a basis to proceed with disposition
2) The product will destroy many records without any oversight or intervention

In short, it is difficult to be truly accountable to the retention schedule without at least the F1000 capabilities.

The obvious safest route would be to simply purchase a 5015.2-compliant SharePoint plug-in, which ensures you have all 168 capabilities. If you have formal recordkeeping requirements but are not a candidate for 5015.2, then you have to either purchase a compliant plug-in product or bridge the gap with the OOB capabilities by customizing it. How big an effort is this customization? The greater the number of requirements, and the greater the sophistication of these requirements, the greater will be the build effort. This is highly variable depending on such factors as the requirements, skill level, records knowledge, etc.

Consider the customization route if:

1) Your IT department has the capacity to develop and maintain product customizations
2) You have a well-defined set of requirements that do not approach the 168 5015.2 requirements
3) You wish to have a highly customized solution tailored to your particular organization.
4) You are practicing recordkeeping in a manner unique from most standard practices

You should consider deploying a compliant SharePoint plug-in if:

1) You do not have an appetite to customize
2) You have advanced recordkeeping requirements that go beyond the F1000

Here are some factors to consider on any decision as to the (3) options above:

1) A compliant product likely delivers all the recordkeeping capabilities you need, and more
2) A compliant product means that you have to pay for a product and its annual maintenance
3) With customization, you have to maintain it over time

Key Underlying Principles

There are several underlying recordkeeping principles that must be first understood, and then applied appropriately to the SharePoint environment. This will set the stage for later proper configuration of SharePoint. They are:

Document Status

Document State

Case vs Subject

Deletion vs Disposition

Policy vs. Retention Rule

Document Status

At its core, SharePoint is a tool used to create, store, and share documents. Which documents are records, and which are not? The answer to that is well beyond the scope of this report, but in simple terms a document is a record if it records or substantiates a decision, records the conduct of the business of the organization, or perhaps if it is needed to conduct business. Different users and organizations have different definitions of what constitutes a record, but every organization has the same goal – to manage business records in a prescribed, formal manner. Most importantly, documents that are business records are kept for as long as they are needed by policy, business practices, or applicable law, then either deleted or kept for historical purposes.

If we randomly ask 10 people the same question "What is a record?" we will generally get 10 different answers, ranging from "none of them" to "all of them" and everything in between. Even if an organization has defined a proper formal definition of a record, there is essentially zero chance that all of our 1,000 users will understand it, interpret it properly, and then act on it consistently in real-life situations. We have to simplify it to something we refer to as a "street definition" that will more or less consistently cause people to declare appropriate documents as records. There is no right way and wrong way to do this, as each organization is culturally and operationally quite different. We will propose a simplified general-purpose approach that seems to form a solid basis for many organizations. You can build on this to find what works well in your particular organization.

Instead of simply asking "*What is a record?*", we will instead ask users to choose one of the following three options that best applies to the document they are placing into SharePoint:

Record	The user wants this document preserved as a record. Put another way, they user does not want it to be auto-deleted! It is "finished" and in play (it has been circulated among one or more user). It will be placed into SharePoint as a declared record.
Work In Progress	Placed into SharePoint, but not yet complete. Safe to assume that because it is something being worked on, it is a business record that eventually will be declared as a record.
Reference	Not a record, but a document that is needed to conduct work. Probably a document received from outside (e.g. downloaded from the web).

Below are some of the practical, real-world guidance we can consider giving users to help them make the appropriate choice. Again, you will have to adjust these to your particular organization:

Document Status	Choose This When
Record	• You do not want this document to be automatically deleted • You (or others) will need this in the future • This appears to be a record • Not transitory/temporary in nature
Work In Progress	• The document is not yet finished • You are not ready for others to see it • It is "work" -- everyday business
Reference	• You (or others) need this to do your work • OK for this to be deleted in 2 years (or whatever the corporate auto-delete period may be)

Note that these choices deal with the *need* for the document, from the user's perspective. We do not ask them to deal with the esoteric meaning of records versus non-records. Our goal is to make all users feel comfortable selecting RECORD status as close to 100% of the time as possible.

What to do with the document, based on the Status selection? Again that will vary widely among different organizations, but below is a typical general-purpose answer that can act as a basis for your particular circumstances:

Document Status	Store in SharePoint As	Retention
Record	Declared Record, classified appropriately	Determined by CATEGORY
In-Progress	Classified, declared as non-record Will be declared in the future	1. Notify user after 6 months (if not declared) 2. Auto-convert after 1 year
Reference	Non-record, not classified	Auto-delete after 2 years

Document State

Every SharePoint installation will have documents that are records, and documents that are not. Think of recordkeeping as a formal process used to manage documents as records. Documents of formal business value (records) are carefully managed via these processes, and theoretically, those that are not formal records can be destroyed when no longer needed.

To make a document a record, we **declare** it to be a record, whereupon the formal recordkeeping process will be applied to it. The problem is many documents that are in fact records, and therefore should be formally managed as records, may not have been declared as records. There is no software process that can magically determine if a document is a record or not[6], so we rely entirely upon users to tell us if a document is a record, or we can use business process context to deduce it is a record (e.g. if an insurance claim file is being worked on, all documents related to it are records).

From this we can infer that all documents in SharePoint are in one of the following three possible states:

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[6]   Despite some marketing claims to the contrary, as of the date of this report no software is known to RIMtech that can reliably automatically determine if a document is a record, as the subject matter of the document must be understood, and verified as a valid business activity subject to records control.

Declared Record	A document that has been declared a record, and is therefore being managed as a record. For this report, documents in this state will be referred to as "Records".
Non-Record	A document that does meet the criteria of a record, and does not need to be managed as a record.
Undeclared Record	A document that meets the criteria of a record, and should be managed as a record, but has not been declared as a record. It most likely is not known to the Records Process or people who administer the records process. Can result from:

- Users failing to declare as records when submitting (uploading, importing, etc.) into SharePoint
- Users creating documents from inside SharePoint and never getting around to later declaring them as records

All SharePoint installations will have a mix of documents of all three states at any point in time. Undeclared records are a potentially explosive problem. They often represent potential legal liability. Undeclared records are not under control, and will never be deleted at the proper time. The goal is to have no undeclared records, or at least as close to zero as possible. A good SharePoint implementation with strong recordkeeping in place will have very few.

> **BEST PRACTICE**
>
> Institute strong auto-delete policies for all documents not declared as records.

Rarely is there a way to tell non-records from undeclared records. To illustrate, suppose users store (from whatever sources) 1,000 documents a day into SharePoint – a small number for an organization of 1,000 users. Suppose that only 50%, or 500, are declared as records. After a single month, we could have 500 documents/day X 22 days = 11,000 documents of either a non-record or undeclared record state – we will not know! We simply cannot read 11,000 documents. A quick sample of 10 or so might tell us that 80% of the 11,000, or 8,800 documents, are probably records, but what can we do? In order to manage them properly as records, they each have to be properly classified against the retention schedule, a monumental undertaking few will ever attempt. If this is allowed to continue, we will soon have "poisoned the well" and cannot apply recordkeeping to the vast majority of our records[7]. For this reason, it is absolutely vital that undeclared records be kept to an absolute minimum.

Only those documents declared as records will be subject to the formal recordkeeping process. For the remainder, will have to either ignore them, or apply informal processes. According to recordkeeping best practices, we should delete non-records and undeclared records. This motivates users to declare their documents as records (so they are not deleted), and reduces the number of problematic undeclared records.

Case vs Subject

The principle of a case versus subject record type is the single most important principle in recordkeeping that the reader needs to understand. It drives the mechanics of recordkeeping in SharePoint. It leads to strict rules about how users will declare documents, and how and where they are stored. It requires us to define and manage folders a certain way. It is also the root source of the largest single gap in SharePoint's native recordkeeping capabilities. SharePoint does not natively understand or support the

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[7]   Disposition cannot be carried out if classification accuracy does not reach our minimum threshold of 85% or so, as too many records will be destroyed at the incorrect time..

principle of case records and their proper treatment. This has a profound effect on our ability to use SharePoint`s native capabilities to manage records, and accounts for most of the gap of the 33 requirements between SharePoint`s 72 native capabilities and the 105 needed for F1000 operation. As a consequence we have to:

1. Construct a means of defining and dealing with case type records
2. Ignore SharePoint`s records deletion tool and construct our own
3. Construct our own means of implementing a file plan
4. Build declaration processes that reflect case vs subject record types
5. Define and implement operational rules regarding folders and their usage

This is not as monumental as it might seem. But make no mistake about it – if we do not correctly implement this principle correctly, we will fail to achieve proper recordkeeping in SharePoint. Let`s first examine the theory behind case vs. subject.

Also known as a **File Plan**, a sample Retention Schedule fragment for our hypothetical organization is show in Appendix 2. It is a three-level hierarchical classification scheme based on business activities. Records are "classified" against this scheme by assigning a rule from this schedule to the document. For example a document entitled "*Insurance Policy 2009*", bearing filename Insurance Policy 2009 Final Approved.docx should be classified against Administration/Insurance,

> The retention rule for Safe-Tee Security is "*2 years after contract end, then Destroy*", the same rule for all 100 contractors. Because each contract bears a different contract end date, the rule must be applied to each contractor separately. All records related to Safe-Tee Security must be treated as one group of records, separate from all other contracts.

whereupon it will be destroyed after 7 years. Each category in the file plan has an identifying number, composed of numbers and/or letters representing that category, and each level separated by a dash. For instance, the category **Insurance** has file number 10-20, 10 representing the Primary ADMINISTRATION, and 20 representing the secondary level category INSURANCE.

It is important to note that all categories fall into one of the following two "file types[8]":

Subject	Ongoing subject or business activity that never ends, i.e. "Budgeting", "Travel", etc.
Case	Person, Place, Event, Thing, Project. e.g. "Peggy's Cove Plane Crash", "Taxpayer Smith, Fred", Employee "Jenkins, Ruth". A Case has a defined beginning and end. Disposition is triggered by an event date.

Typically 50-75% or more of all records are members of *case* files. "File" in this case is the old-fashioned term used for a collection of records, however to avoid confusion with the modern computer term "file", where possible we will refer to a *category* instead of a *file*. We will refer to a computer file (i.e. something stored on a disk) as a *document*, instead of a file. Disposition is triggered very differently on each category type:

Subject	*Document age*. Documents are treated on an individual basis, per-document basis. Only documents where age > retention period are qualified. This means that older records can be destroyed and younger ones remain behind.
Case	*Event date*. All documents in this category are qualified for disposition or none at all. They are always treated as a group – never separated.

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[8] "File" is the traditional language used to define a category within the file plan

In our file plan fragment, Subject categories are shown in blue – there are 5 (*Travel, Insurance*, *Accounts Receivable*, *Accounts Payable*, *Accounts Receivable*, and *Budgeting*). These categories bear a simple time period expiration as their retention rule. Note that all remaining categories are case categories, wherein the retention rules are triggered by an event date (which is usually unknown at creation time).

It is important to understand that more often than not, a declared record will be classified against a case category, which will have many downstream implications on the mechanics of declaration, folder creation and management, and disposition.

Deletion vs Disposition

In order to apply sound recordkeeping practices to SharePoint, we must understand the difference between Deletion and Disposition.

Deletion refers to a simple, arbitrary deletion of a document. It can be completely user-initiated, and manually executed. For example, you simply select a document in SharePoint and delete it[9]. Or it can be machine-initiated and machine executed, perhaps by a pre-determined workflow process.

Disposition however is very different from deletion. Disposition refers to a formal, structured process whereby documents are evaluated against formal rules (retention rules) within an approved list of rules (retention schedule) to determine which documents are qualified to be *destroyed* or *transferred* to a permanent archive, in accordance with the applicable retention rule. Disposition is a human-initiated process that consists of the following three typical steps or phases:

1 Qualify	Documents are measured against applicable retention rules to determine if they are qualified for destruction or transfer.
2 Review	A qualified Records Administrator reviews the qualified documents to validate their status, changing the status if required.
3 Processing	Qualified documents are destroyed or transferred, at the request of the Records Administrator.

The distinction between deletion and disposition is extremely important to understand, because both need to be happening in SharePoint *at the same time*. Think of deletion as **informal destruction**, in the sense that the decision as to *what* to delete and *when* can be made arbitrarily, by anyone at any time, for any reason. Think of disposition as **formal destruction**, in that the decision as to what to delete, when, and why, is not arbitrary – it is dictated by an authoritative centralized rule list known as a retention schedule. This retention schedule is formally pre-approved and is based upon laws and policy that govern the organization.

SharePoint uses the same process for both deletion and disposition, which can quickly get confusing. SharePoint uses the following two capabilities together in combination for deletion and for disposition:

Policies	These are retention rules that state when a condition is met, take some action. This action can be document deletion, i.e. "Delete when document is 5 years old".
Timer Jobs	These are hidden SharePoint elements that run continuously in the background – you will never see them run. They act upon the policies, deleting documents when the rules specified by the policies are met. Think of them as "bots" that automatically act on the policies continually, without human input.

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[9] Assuming you have deletion privileges

The first and probably most important thing to understand about applying recordkeeping to SharePoint is that you have to **use these exact same capabilities for both deletion and disposition**.

For all declared records, we will use SharePoint Policies, but we will not use Timer Jobs, as the timer jobs do not give us the opportunity to carry out our three-phase disposition process. We will instead manually initiate a formal disposition process. We will customize SharePoint's built-in capabilities to construct the disposition process we need, as shown later in this report.

For the remainder of the documents in SharePoint (undeclared records and non-records), we will use the SharePoint policies and the Timer Jobs, as delivered out of the box. This represents *deletion*, not *disposition*. We will be inevitably deleting some undeclared records that really should have the formal disposition applied to them, however as stated earlier, hopefully we have very few undeclared records. Because we are using SharePoint retention Policies, it may seem as if we are doing recordkeeping, but we are not – we are doing **Deletion**.

Policy vs Retention Rule

In traditional recordkeeping, we use the term "Retention Schedule" or File Plan to describe the set of individual retention rules. An individual rule could be as shown:

> *Tax Returns. Keep for 7 years following receipt of assessment, then destroy.*

An individual item in the retention schedule is called a **Rule** (sometimes called a category), and the complete list of rules is called the **Retention Schedule** (sometimes called a File Plan). SharePoint uses different names for each of these fundamental constructs:

Retention Rule	**Information Management Policy**. Commonly abbreviated to simply **Policy**. Specifies the retention period, the disposition triggering event date, and the disposition action taken at the end of the retention period.
Retention Schedule	**Policy Gallery**. The total combined collection of Policies. Depending on where you are in SharePoint, the Gallery may show only those policies associated with the particular Library

In a classic records management setting, all the retention rules (policies) are fixed in a central location, and you **assign** these policies to various folders, libraries, and documents that you create throughout the system. Only the designated central records authority can maintain the policies – nobody else can create or assign retention rules.

In SharePoint however, policies can be arbitrarily defined, then independently associated with *Libraries*, *Folders*, and document *Content Types* at any time by any users (as long as you have the required privileges to do so). You create these policies any time you wish, and assign them to any of these structures for any reason you wish.

> **BEST PRACTICE**
>
> It is a net benefit to the organization to destroy undeclared records as soon as possible. This is because they are not discoverable once deleted.

In SharePoint there is no single authoritative "source" or "location" of Policies from which you are forced to choose. For a truly comprehensive, global list of Polices, which would represent the full corporate retention schedule, you would have to identify all the policies of all libraries, folders, and content types within the entire SharePoint server farm[10].

In a classic setting, retention rules stem from a single user (the designated records administrator) and source, and are utilized throughout the system. In SharePoint, anyone can create these rules and assign them in any way they wish. Is this a problem or deficiency in SharePoint? It is not a deficiency – it is a

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[10] In the Records Center Site, we can generate a global report of all Policies

side effect of SharePoint's enormous flexibility. Recall the difference between Deletion and Disposition as explained above. Declared records have to be subjected to *disposition*, not deletion. Disposition depends on the formal assigned retention rule (policy). Thus, you have to implement SharePoint such that the policies driving declared records are created from a single, authoritative and reliable source. There must not be any means whereby these policies can be subverted, over-ridden, or conflicted with, by any SharePoint user at any time. For documents other than declared records, we are applying deletion, not disposition to them. The policies driving deletion do not necessarily have to be from the same authoritative source as declared records.

From an architectural and structural point of view, you have to organize SharePoint's underlying structures and user privileges such that:

1) There is a single authoritative source of policies for declared records
2) There is no possibility of anyone but the designated records authority altering these policies
3) There is no possibility of "competing" policies for any declared records

For all documents that are not declared records, these restraints need not necessarily apply. In theory, User A could create policy X on a Monday, and change the parameters of policy X on a Wednesday. Or User B could over-ride policy X with Policy Y on a Friday. Then user C could later modify the parameters of policy Y without the knowledge of user A or B. The salient point is that this cannot be allowed to happen with policies applied to declared records. It is therefore essential that you structure libraries, folders, content types, and user privileges such that policies for declared records are "locked down" reliably. **The inherent authority in the policies is derived from the structure you implement within SharePoint.**

Again, you simply have to structure it appropriately. SharePoint`s built-in deletion mechanisms are perfectly fine for everything except declared records. And in a less formal, more relaxed recordkeeping environment, the built-in deletion mechanisms might well be acceptable to your organization.

Implementing a File Plan

The file plan has to exist somewhere in SharePoint, and it will be used every time a document is declared, as the user needs to select the appropriate category from the file plan (classifying the document). Following are the key characteristics of the file plan:

1) Only the Records Manager (RM) can create and maintain the file plan.
2) It has to be hierarchical in nature, with properties inheriting down from parent nodes (categories) to child categories.
3) All users must be able to browse it to select the appropriate category when declaring a document into SharePoint.
4) There must be a means of adding new case files to the file plan on a daily basis, as new business activities are initiated (e.g. hiring a new contractor). This will typically be done by designated authorized users within individual departments.
5) No orphan folders permitted.
6) The values of retention rule fields (*Retention Period, Retention Unit, Cutoff, Cutoff Unit, Disposition, Archival Review*) can change at any point in the hierarchy. If changed, child folders are to inherit the changed values.

In SharePoint we will use folders to create a file plan. Each folder will require the following minimum metadata elements:

Title	The title of the category, e.g. "Safe-Tee Security". Minimum 256 characters.
Type	Case or Subject category.
OPR	<u>Office of Primary Responsibility</u>. Select from pre-defined list.
Category Number[11]	The File Number from the file plan, e.g. in the case of Safe-Tee Security, 04-50-1. If you are not enumerating all your categories in the file plan, then create a numbering schema here that guarantees a unique number for each category[12]. At the very least, use a simple manual sequential numbering scheme that starts at 000001 and goes to 999999. This is essential because we do not want to rely on a text string match of a Category name to find the right event date. With thousands of case files, we need to reliably identify each category every time.
Retention	Retention period, expressed as a measure of units of time, following the trigger date that the records must be retained before disposition.
Dispostion	Disposition action following retention period. One of the three following values: • Destroy • Transfer • Unknown
Unit	Unit of time used for calculating the retention period. Allowable values: • Days • Weeks • Months • Years
Cutoff	(Y)es or (N)o. Allows you to advance the event trigger date during calculations to end of month/year, or fiscal quarter, etc.
Cutoff Unit	Unit of cutoff period, i.e. semi-annual, monthly, quarterly, annual
Description	A full comprehensive description of the retention rule, such as "Delete 7 years after receipt of tax assessment". As some of these descriptions can be lengthy, a minimum of 256 characters is recommended.
Citations	Applicable Legislative and policy that supports this category.
Archival Review	Yes (requires an archivist's review before disposition) or No

These fields represent the minimum required for simple disposition. A more sophisticated disposition process, such as that specified in US DoD 5015.2, calls for several more fields, such as *Vital* and *NARA TRANSFER*. Obviously the Records Administrator must have Update, Delete, and Create privileges to this list.

In this list there has to be a high level of data consistency enforcement. The input form used to maintain this list must not allow inconsistent entries, such as text in a numeric field, or different date formats. This is because the custom retention formula that acts on this data has to reliably find and act on the data each and every time.

The **Disposition** field should be completed according to the following guidelines:

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[11] In traditional database terms, this is the Key data field.
[12] This is one of many good reasons why all modern files plans incorporate an enumeration scheme.

Destroy   Default value.

Unknown   Use this value if the disposition is unknown or not yet approved. This way the custom retention formula will bypass the folder until it becomes actionable (i.e. Destroy or Transfer).

Transfer   Use this value for records where the official approved disposition is KEEP PERMANENTLY[13]. The underlying assumption is that they will be moved (not copied) out of SharePoint to some physical location that is more permanent than SharePoint itself.

A summary of needed metadata is shown in Appendix 4. The need for, and usage of, the various fields will become apparent at later points in this report. We will later define a process whereby users can load a document into SharePoint. This process will allow the users to declare the document to be a record. Within this process we will have to present the file plan to them, in a manner by which they can browse it as an onscreen navigable tree structure.

The file plan can be created in any convenient location, however the Records Center site is probably as good a location as any. Be sure to assign the Records Manager full create/edit/delete privileges, and all other users read-only.

Extending the File Plan

Typically, we need a designated person in each department who can create new case categories within that department, in our case 10 departments. We therefore need to build a SharePoint module that can be used by designated users to build on the bottom layers (typically tertiary) of the file plan. See Appendix 5 for a complete list of modules needed. This module will be referred to as the FPE (**F**ile **P**lan **E**xtension) module. Key design characteristics:

1) Allows creation of new categories at tertiary-only level
2) New case categories inherit the properties of the parent folder
3) Available only to users who have been granted explicit access to the module
4) Enforces that all Category Number fields are unique.
5) Recommended configuration capability for this module:
    a. User Account Name
    b. Allow creation under specified secondary categories <Category L1/L2>, <Category L1/L3>, etc.
    c. Mask for data structure enforcement on category number, .e.g. aaa-###

Event Dates

There is one small but critical piece of the file plan we've not yet addressed – event dates. An event date is the date that triggers the start of the retention period for every case category. We now have a place to store all the elements of each category except for the one piece that matters most for all case categories – the event date.

The disposition stage of the records in a case file is triggered by an event date. This event date is rarely known while the records are being created and submitted to SharePoint. Let's say for example there are 4 different people submitting records into a case file such as \HUMAN RESOURCES\EMPLOYEES\RUBBLE, B. They are each storing an average of 1 document per week, for a total flow rate of 52 weeks X 4 documents/week = 208 records/year.

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[13]   In most organizations, especially commercial businesses, this represents a small fraction of overall corporate records (well under 5%), and are usually stored in a permanent historical archive.

We would normally have a policy (retention rule) assigned to each of the folders that contain records on Safe-Tee Security. By default, SharePoint's policies (the retention rule) computes the retention rule on an event date recorded as a document metadata field (i.e. EMPLOYMENT TERMINATION DATE). However, the people who declare the records will not know when Rubble's employment terminates[14]. There is little benefit of recording a document metadata field called CONTRACT END DATE. It would go unanswered every time it was asked, or be inconsistently completed, and therefore is unreliable as a basis to trigger disposition. In short, this metadata field serves no useful purpose.

This problem occurs on a very large scale. In our example, there are a minimum of 1,100 case files requiring an event trigger date. In the real world, typically 50% or more of all categories are case files.

Our users (records contributors) are not a reliable source of event trigger dates. Some trigger dates such as "Contract End" sound simple, but could be dependent upon legal issues arising from contract disputes. What if the contract is renewed? Even "End of Employment" could fall into some grey areas such as maternity leave, disability leave, etc. There has to be a pre-determined, authoritative source of these important dates. In the real world, the Records Administrator is the custodian of these dates[15]. This makes sense, as the records Disposition process is dependent on the integrity of these dates. There will typically be a process whereby the dates are officially determined. For instance, the Human Resources department will agree to formally notify the Records Manager each time an employee is officially terminated.

Unfortunately, SharePoint is missing this centralized EVENT DATE field associated with an event. We therefore have to construct a mechanism in SharePoint whereby these event trigger dates can be reliably recorded, and later used to trigger disposition at the proper time for all case files. We cannot use the default retention policy rule, which computes the event date on document metadata (we will deal with this later). Instead we need to create a master administrative list of event trigger dates.

In the Records Center site, create a custom list called **Retention Event Dates**. Assign data fields (columns) as shown in the sample list below:

Category	Category Number	Date	Retention Period	Unit	Disp.	Rule
Smith, J, Employee	03-10-707		2	Year	D	2 years after termination of employment
Rubble, B, Employee	03-10-909	13/10/2008	2	Year	D	2 years after termination of employment
Policies, Employment	03-20		2	Year	D	2 years or until superceded
Reporting, Finance	04-40		3	Year	D	3 years after fiscal year ends
Safe-Tee Security, Contracts, Finance	04-50-1		2	Year	D	2 years after contract end
Tasty Catering, Contracts, Finance	04-50-2		2	Year	D	2 years after contract end
Lovely Landscaping, Contracts, Finance	04-50-3	12/11/2006	2	Year	D	2 years after contract end
Tax Return 2008	04-60-2008		7	Year	D	2 years after receipt of assessment
Tax Return 2009	04-60-2009		7	Year	D	2 years after receipt of assessment

Note that we only really need to record the *Category Number* and *Date* fields. Later, when we evaluate the various records to see if they are qualified for disposition, we will go through these steps:

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[14]   Rubble may be still employed while these documents are being created. Even if the event date has occurred, not everyone will be aware of it. There needs to be a single, authoritative source of the event date.
[15]   The Custodian, not necessarily the person making the determination.

Step 1	Is this a case or subject record?
Step 2	If case, consult list Retention Event Dates
Step 3	Find the event date for Category *<Category Number>*

The remaining fields can optionally be completed from the file plan folder information, and they are useful only to aid the records manager in examining and maintaining this list. If you elect to keep these associated fields in the Retention Event Dates list, you have to maintain them. This means that any time you allow an edit of a file plan category (folder), you must update the corresponding entries in the Retention Event Dates list.

Therefore, a custom module is needed in SharePoint to maintain this list, referred to as the **Event List Module**. Key characteristics of this new custom module are:

1) Add new event date
2) Edit existing entry
3) Only allow a new entry for a valid category number
4) No duplicates permitted
5) Only the records manager is authorized to use this module

Folder Structure and Management

As stated earlier, as much as 75% or more of our documents will be case type records. This means that they have to treated as a group. Instead of a retention rule on each individual document, all the documents must be grouped, and a single retention rule applied to the group as a whole. Now we will come to realize how this will impact our use of folders within SharePoint.

Hypothetically, we could create a single folder for each case category, and all users in all departments will store the documents in this particular folder. That would work very well, however in the real world users simply do not work this way. Different departments need to create their own particular folder structures. Further, different users in different departments may be naming and storing records of a given case in different ways. Yet all these disparate documents in different departments all contribute to a single (logical) organization-wide case category with a single retention rule.

Before we decide how to structure and organize folders, it is useful to explore an example of how folders are likely to be used, and what impact that would have on our recordkeeping.

Considerations of Folder Usage

Obviously the goal of a file plan is to see that all incoming records of a given category are all classified against the proper retention rule. From the sample file plan, consider "*Safe-Tee Security*", who holds a contract with the organization for security services. It would be ideal if we designate a single location within SharePoint to hold all the records related to the Safe-Tee Security contract. This makes it simple to administer – there is a single designated location for all Safe-Tee Security records for all 1,000 SharePoint users[16]. Let's assume instead however that several departments each deal with Safe-Tee Security in some manner, and create records related to the Safe-Tee contract. Let's further assume that each of these departments has a somewhat different means of storing documents, and that each department has sufficient leeway to create their own approach to organizing their SharePoint library and folder structure within their library. Mathematically we realize four potential different scenarios that we must provide for:

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[16] Some organizations may indeed elect to implement some or all of their file plan in this manner.

OPR Folder	The OPR (**O**ffice of **P**rimary **R**esponsibility) for all contracts, including Safe-Tee Security, is **Finance**. They create the master contract and the vast bulk of all records related to contracts. Let's assume they have created a folder in the SharePoint FINANCE library called \FINANCE\CONTRACTS\SAFE-TEE SECURITY.
Secondary Folder Instance	A different department, let's say **Legal**, using a different SharePoint library, has a folder with the same name *Safe-Tee Security*, used for the records they tend to create and collect related to Safe-Tee Security. Let's assume \LEGAL\ACTIVE\SMITH CASES\SAFE-TEE SECURITY[17].
Dissimilar Folder	Some other department, let's say Safety & Security, has additional records on this particular contractor. For whatever reason, they choose to store these records in a folder of a completely different name. Perhaps this is the only contractor they work with. To make our example even more comprehensive, let's assume they store records related to Safe-Tee Security in 2 separate locations as shown:

\SAFETY\OPERATIONS\COSTS

\SAFETY\OPERATIONS\PERSONNEL

Important → We have to further assume that in each of the two folders above, there are no records OTHER than records about Safe-Tee Security, i.e. the folders are used for the exclusive use of documents about Safe-Tee Security.

Unrelated Folder	This is a catch-all category to account for all those records related to Safe-Tee Security that are NOT stored in any of the locations specified above. Let's further assume:

- The document resides in a folder of a different name that bears no Relation to Safe-Tee Security.
- There are other documents in the folder of a different subject. *This is an important note* → This means that the other documents within the host folder bear different retention rules than that for Safe-Tee Security.

Some examples might be:

\MANUFACTURING\BUDGET\INDIRECT COSTS

\HUMAN RESOURCES\PERSONNEL\THIRD PARTY

Admittedly this is a worst-case scenario. ECM best practices will minimize the number of possible different scenarios at play, but for the purposes of this report, we must show how to configure SharePoint to provide for all four possible scenarios. Continuing with this example, we can now identify a list of explicit SharePoint locations where documents about Safe-Tee Security will be found;

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[17]   Smith might be the name of the lawyer assigned to this contract file.

Scenario	Location	Exclusively Safe-Tee Documents?
OPR	\FINANCE\CONTRACTS\SAFE-TEE SECURITY	YES
Secondary Folder Instance	\LEGAL\ACTIVE\SMITH CASES\SAFE-TEE SECURITY	YES
Dissimilar Folder	\SAFETY\OPERATIONS\COSTS	YES
	\SAFETY\OPERATIONS\PERSONNEL	YES
Unrelated Folder	\MANUFACTURING\BUDGET\INDIRECT COSTS	NO
	\HUMAN RESOURCES\PERSONNEL\THIRD PARTY	NO

This example clearly illustrates the two possible document storage scenarios we have to deal with:

Homogenous Folders Contains related documents of the same subject. The *OPR, Secondary Folder Instance*, and *Dissimilar Folder* scenarios.

Heterogenous Folders Contains documents of different, unrelated subjects. The *Unrelated Folder* scenarios.

In our example we have (6) physical SharePoint locations that contain documents about Safe-Tee Security. All of these locations are being used to store an unknown number of individual documents relating to the single business activity "*Contracts – Safe-Tee Security*". Regardless of the number of documents, or the number of locations, all these records form a single logical case file with a single retention rule (Destroy 2 years after contract end). In SharePoint we must somehow apply the retention rule to all these documents in all (6) locations.

In the first (4) locations above, the folders contain exclusively Safe-Tee documents, whereas in the (2) unrelated folders, there is a mix of documents about Safe-Tee Security and documents on other topics. We will need a different approach to assigning retention rules to each of these:

Homogeneous Folders Apply a retention rule directly to the folder. All documents within the folder will be affected by the rule. Note that this is applicable because Safe-Tee Security records represent a Case file, where all records are to be disposed of as a complete group[18].

Heterogeneous Folders Retention rule must be applied directly to the document. This way, different documents of different subjects, which may (and likely will) bear different applicable retention rules, can be assigned a rule independent of the other documents within the folder. This is accomplished within SharePoint by assigning a retention rule to the **Content Type**.

The examples so far deal with documents coming from any possible source. Document names are not necessarily descriptive of the content. We do not necessarily know what the document is about. And they can be found anywhere.

What about pre-organized documents? There will always be pockets (folders) containing documents that are highly organized. All documents pertain to the same, uniform subject. There are no other documents stored with them. And they live in a consistent, appropriately-named place (folder, library, etc.). Take an

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[18] If this were a subject file, documents would be disposition processed on an individual document basis.

insurance claim file for instance. All documents in a folder \CLAIMS\SMITH\CLAIM 101 are highly dependable – they are all related to Smith's claim 101. In this case, our job of classifying the document is basically already done. All documents related to the same activity are already grouped together. All we need to do is assign a policy to the location (library or folder) in which the documents reside.

Folder Structure and Usage

So far, this is what we can safely assume about folders:

1) Users will name documents of similar subject differently
2) Users will create folder structures of their own creation in different locations, storing documents of a given subject.

We have to deal with this in a practical manner – we cannot realistically expect to impose a rigid folder structure on the users. We need a way to link together all the documents that are named differently, and stored in folders of different names, but all are about the same subject. This link is the **Category Number** field. Our category 04-50-1 tells us that all documents of all names and in all folders throughout the SharePoint universe are members of the category *Contracts/Safe-Tee Security*. We now have a means of applying the single retention rule to all these documents.

As mentioned earlier, the nature of case records leads to very important changes in the way we must deal with folders:

1) All folders need a metadata field called *Category Number*.
2) All folders must be designated as being a records folder (for case records) or not.
3) Folders used to store case records must not store any other records (subject records, or case records of a different case). It is OK if a folder containing case records also contains non-records, as the Disposition module will ignore them.

These realities have a profound impact on how we define and structure folders in SharePoint, and on how users create and interact with folders. To a user, a folder is not as simple as it once may have been:

- A folder is either a records folder or a non-records folder
- If a folder is a records folder, it must have an assigned Category
- If a records folder, only records of the same subject (category) must be stored inside it.

These three rules are inviolable. They must be universally respected and enforced, or the underlying recordkeeping breaks down. This is, without a doubt, a sea change in the way ECM systems are used. It is the price we must pay for good corporate recordkeeping.

Folder Management Practices

For each library, create a folder structure that suits the daily operational needs of each department. It is beyond the scope of this report to recommend a comprehensive approach to this, however try to follow these best practices:

Use descriptive Metadata	Utilize as much metadata as possible for all documents, in order to provide as much context as possible.
Folder Quantity	The fewer folders the better, as too many folders are more difficult to manage, with greater granularity between folders and more administrative overhead to worry about.
Folder Naming	Use folder names and hierarchical structure that makes sense for those using it.
Multiple Instances	Reduce the number of different folders being used to store documents of the same subject. Some categories of records will

naturally tend to have a single instance. "Accounts Receivable" would typically only live in the Finance department, and nowhere else. Some will have multiple instances across different departments. "Contracts/Safe-Tee Security" might exist as \FINANCE\CONTRACTS\SAFE-TEE SECURITY in the Finance department. The Legal department might also have a working folder on this particular contractor under \LEGAL\OPEN CASES\SAFE-TEE SECURITY. In the case of multiple instances, you must ensure that all folders that contain records of the same category bear the same retention rule, in this case "Two Years After Contract End".

Non-Records Folders	Expect that some users/departments will want to create folders where documents can be stored that are not records. This is OK, but the more non-records folders you have, the greater will be your challenge to encourage or force users to declare documents in these folders as records.
No Folders	In SharePoint you do not have to create folders. Documents can be stored directly into a library without any folder structure being created in that library. In this case, documents are distinguished from one another only via their metadata. Grouping, sorting, and searching can be achieved solely on the basis of the metadata. For instance, you may have a metadata field called SUBJECT and CONTRACTOR NAME. You can find and group documents about Safe-Tee Security by sorting or searching where CONTRACTOR NAME = Safe-Tee Security.

Subject records may be stored in a folder, as long as a Policy is NOT assigned to the folder (which would over-ride the policies assigned to subject records).

Folders can inherit policies from parent folders, which is acceptable as long as the retention rule does not change as the folder is broken down into subcategories. As a general rule of thumb, if the subject matter of the folder contents changes from the parent to the child, it may be subject to a different retention rule (Policy). In this case you will have to apply a different policy to the child folder.

Below are good rules to follow in creating folders;

Folder Rule 1

If records are expected to be declared in the folder, **assign a Policy** to either the folder (case documents) or the content types (subject documents) that are expected to be stored in the folder.

Folder Rule 2

You **must** create a folder to store case records, where all the documents in the folder will be of the same category/subject. You then have to assign a policy to the folder (over-riding any polices on document content types for documents stored in that folder)

Folder Rule 3

If a folder is going to be used to store documents of different subjects (heterogeneous folder), you **must not** assign a policy to the folder. Assign policies to individual document content types, so that they can all be assessed for disposition independently of each other.

Folder Rule 4

Do not mix case records and subject records in the same folder. This is because the case file records require a single policy applied to the folder, which would over-ride any policies applied to content types within the folder (for subject records).

Folder Rule 5

If a child folder is used to store documents of a different subject than the parent folder, **do not let the child folder inherit the policy from the parent** – assign a different retention Policy to the child folder.

Library Setup

In SharePoint we organize the document space into Sites, Libraries, and Folders. Which combination of these is best will be driven not by recordkeeping but by work process, and organization structure. How the users create and share documents will ultimately determine which combinations are optimal.

Ideally, we can simply apply recordkeeping to an existing Site/Library/Folder structure. This could work, but it's far better if recordkeeping is taken into account when planning out this structure. This is because recordkeeping has a profound effect on the structure of the system, or put another way, the structure of the system has a profound effect on recordkeeping, as shown in the examples:

1) Records will specify which folders can contain a mix of documents of different subject, and which must be constrained to folders of like subject.
2) Records methods tell us that fewer folders are better than many folders.
3) Records very much depends on a strong link between folder names and metadata field values.
4) Recordkeeping will be moving documents among locations
5) Once declared as records, documents cannot be deleted or edited.

In most organizations, unless some form of control is imposed on folder creation, folders tend to proliferate exponentially. In a group of 1,000 users, it's not unusual for tens of thousands of folders to appear over a period of a year or so. Too many folders is generally bad for two reasons:

> **BEST PRACTICE**
>
> Tightly restrict who can create folders, to prevent folders from quickly growing out of hand and creating a structure that is impossible to manage.

1) Information Complexity. Too complicated to understand the rationale of all these folders
2) Performance. The internal computational effort to calculate access privileges for documents versus user profiles can sometimes burden the system and reduce performance.

Allowing all users to create as many folders as they wish will quickly lead to excessive folder proliferation. On the other hand, restricting folder creation to too few users will restrict their flexibility. You have to find a balance that achieves two things:

1) Severely curtails the possibility of folder proliferation
2) Allows users the flexibility to create needed working folders.

Rimtech recommends the following best practices to reach this important balance:

1) Create an oversight committee of key users who take responsibility for overall folder structure
2) Impose a top-level, rigid structure that works for all departments, and allows growth below this top-level structure.
3) Take records management classification into account when designing and naming all folders.

It is beyond the scope of this report to suggest a "best of" arrangement, as it will vary so much among organizations. To support our example 1000-person organization however, we will assume that each department is created as a Site, as shown below:

Manufacturing

Administration

Legal

Finance

Human Resources

Sales

Marketing

Information Technology

Safety and Security

Shipping & Receiving

Declaration and Classification

SharePoint offers many possible ways to put records into the system. We will briefly examine these methods, address any advantages or disadvantages, and identify any considerations for each method.

Whenever we declare a record, it must be *classified*, or assigned a retention rule. For each different method of declaration, there are many different means whereby the user can classify it. This makes for a virtually unlimited number of possible declare and classification permutations. In some declaration methods, the classification is highly implicit – the user may not even be aware they are classifying the document. In other declaration methods the classification is highly explicit, in that the user has to manually tell SharePoint where to classify the document – it is an obvious effort. And there are many variations in between implicit and explicit. In some circumstances we will be able to hide the classification entirely from the user so they are not even aware of it.

No matter how implicit or hidden the classification may be, the following two classification realities are absolutely undeniable:

Classification is driven by document content. The correct classification is driven entirely based on what the document is about – its *subject matter*. It does not matter if the document is a single-sentence email message or a rambling 500-page report – the content determines the classification. And the user has to somehow identify what that content is about, no matter how obliquely it may be.

Classification is entirely user-driven. Something from the user will always drive the classification, no matter how oblique. It may be their selection in a CONTRACTOR field "Safe-Tee Security". It may be that they are storing the document in a working folder called ACTIVE MATERIALS, which may have a retention policy linked to "Safe-Tee Security". Perhaps the Content Type is a TRAVEL REQUEST, which routes the document to a folder called TRAVEL.

Classification is therefore only going to be as accurate as the user's ability to tell SharePoint what the document is about. Hence, in implementing good declare methods, we have to make it as easy and reliable as possible for the user to tell us what this document is about. It boils down to the act of choosing the appropriate (matching) category from the file plan. Whatever the document subject matter may be, there has to be a file plan category that matches.

As is the case with modern all electronic recordkeeping solutions, there are three "stages" that every user will have to pass through every time they manually declare a document into SharePoint as a record, otherwise known by RIMtech as the "**Three Cs**":

1) They will have to **Categorize** the document as a *Record*, *Work In-Progress*, or *Reference*
2) They will have to **Classify** the document against the file plan (if categorized as a record, or in-progress).
3) They will have to **Complete** a minimum of 4 metadata fields
   a. *Content Type* (can be auto-completed in some cases)
   b. *Subject* (What is this document about?)
   c. *Category* (If a record or in-progress)
   d. *True Document Date*

These three things take time and effort to complete, and represent a barrier to successful adoption. With email, it is vitally important that the user can declare records as easily as possible, with a minimum of time and effort. The criticality of this cannot be overstated – a good declaration capability is a make-it-or-break-it feature for any electronic recordkeeping solution.

There are an unlimited number of declaration methods, as you can use SharePoint to create any methods you wish. We will identify what we believe are the most likely to be used out-of-the-box methods that require no custom coding, and those methods that require a minimum of custom coding. These are what we believe are the most common declaration methods:

Out of the Box	
Auto-Conversion	A document automatically reverts to a record after a pre-determined period of time has passed, or certain pre-determined conditions have been met. The criteria for conversion are specified in a Retention Policy applied to the document before it becomes a record.
Manual Conversion	Manually convert an existing SharePoint document to a declared record.
Declare on Upload	A document can be uploaded to SharePoint as a declared record upon initial check-in.
Application Connection	A connection can be created from a SharePoint web application such that the SEND TO command can declare a document into a SharePoint library as a declared record.
From Office	Inside Office 2010 applications (Excel, Word, PowerPoint), a document can be saved to SharePoint as a declared record via the SAVE AS menu option, or a button on the menu ribbon. A small amount of macro programming is required to create custom ribbon buttons – an everyday capability for Office 2010.
(Minimum) Custom Coding	
Custom Workflow	A document can be automatically declared as a record as one of the steps of a custom workflow.
Email	There are several methods within Outlook to declare an email and/or its attachments a record. They are *Drag and Drop*, *Send To*, and *Send Intercept*. These are not built-in features, but methods that can be embedded into Outlook with some minimal custom programming.
Custom Ingestion	Custom code can be written such that SharePoint automatically ingests declared records from an external application, such as a database application.

Which methods should we concentrate on? In order to make this determination, let's analyze the expected flow of records into SharePoint. We will assume[19]:

- Each user receives 100 emails per day. 5% of all inbound emails will be documents that should be declared and managed as records.
- Each user creates (2) documents per week (0.4 per day). We assume all documents created are records that should be declared.
- Workflow processes create 1 record per user per week.

Each of these 8 methods readily rolls up to one of the following three categories as shown:

Category	Method
Email	Email
Create	Auto Conversion
	Manual Conversion
	Declare on Upload
	Application Connection
	From Office
Workflow	Custom Workflow
	Custom ingestion

Think of each category as a "source of flow" of incoming records. The declaration methods contained in the category are merely forms of the method within that particular flow source, i.e. there are 5 forms of creating a record, and 2 forms of Workflow. We can make some reasonable generalizations about the expected rate of document creation for each flow. Based on these assumptions we can project the total "flow rate" of records we should see in SharePoint in a given year, as shown in the table below[20]:

Records Ingestion Volumetrics, Per User						
Incoming Document	**% Records**	**Created/day**	**Incoming Records Flow**			
			Per day	**Per week**	**Per month**	**Per year**
Email	5%	100	5	25	110	1,100
Document Creation	100%	0.4	0.4	2	9	88
Workflow Generated	100%	0.2	0.2	1	4	44
Total		101	6	28	123	1,232
Entire Organization		100,600	5,600	28,000	123,200	1,232,000

Of great importance is the difference in how records will be declared in these three different flows. In the case of the Workflow, the process itself will declare the document as a record, and classify it to the proper location as part of the pre-defined workflow process. We do not rely on user cooperation in order to declare or to classify the documents – this will happen automatically.

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[19]   Based on RIMtech's past project experience

[20]   Daily rates shown are based on RIMtech user feedback received over many years. Every organization, and every department within an organization, will have different rates. These are aggregated averages useful for modelling purposes.

In the case of the Email flow, we are depending on the users to stop, think, and decide on declaration for every inbound email, then take action and actually declare an email approximately 5 times per day. Because of natural user reluctance to invest this kind of effort, it is extremely important that SharePoint makes it easy and natural for users to declare, then classify, a document to be record.

In the case of the third flow, where documents are created or downloaded, the users invest considerable time in the document to begin with, and the concern becomes – how and when do they declare this document to be a record? SharePoint has to provide an easy and natural way for the user to store the document into SharePoint as a declared record, or if it is already in SharePoint, to declare it as a record.

Analyzing these flows carefully leads to the following conclusion – ***The vast majority of records come to us from email – therefore the most important declaration method lies within MS Outlook, where we need to implement effective declaration and classification capabilities.***

Based on this analysis, and past RIMtech experience in the field, we will rank the methods in the following order of importance:

Rank	Method
1	Email
2	Declare on Upload
3	Custom Workflow
4	From Office
5	Auto Conversion
6	Manual Conversion
7	Application Connection
8	Custom Ingestion

Note that normally we would not use these methods out of the box, without modification, for these reasons:

1) They do not address our Document Status (Record, Work in Progress, or Reference)
2) They do not provide for classifying the document against the file plan
3) They do not account for case versus subject record types

Therefore we will have to custom-code our declaration processes, as extensions of these out-of-the-box methods listed above. We will define a customized manual Upload declaration process. The steps required for this can then be used as the basis on which to define other declaration methods. We will also briefly look at a hypothetical declaration of an email with attachments.

Declaration-Related SharePoint Settings

Before we get to the details of declaration processes, there are a number of SharePoint settings we should configure in order to support our declaration:

In-Place Records Management

Site Collection Settings

Automatic Records Declaration

Content Organizer

In-Place Records Management

In our opinion, it is absolutely essential that you enable this for all sites in SharePoint. Generally speaking, we do not ever want users to have to move documents to a location where they become records – it is a deterrent to user adoption. Even if the document has to be moved to another location for classification reasons, we can make this move behind the scenes via the Content Organizer. It is hard to imagine many scenarios where you would NOT want this enabled. Perhaps a site used for testing SharePoint itself.

In our opinion, it is **extremely** important to have auto-delete in place for non-records in SharePoint. Again, this is not only good content management practice, but it provides a strong incentive for users to declare as records, as users will (eventually) lose the documents that are not declared.

More specifically, under **Information Management Policy Settings**, check **Enable Retention** and create a retention policy for non-records as well as for records. The policy on the non-records is what we refer to as the general concept *Auto-Delete*. The Policy you define for non-records is what we refer to as *Deletion*. The Policy you define for records is the official *Retention Rule*.

Site Collection Settings

The following are recommended settings for the **Site Collection Settings** related to records management:

Record Restrictions	Select **Block Edit and Delete** at all times, all circumstances. There must never be a way for any user to delete or edit declared records.
Record Declaration Availability	Select Manual Declaration **Available in All Locations by Default**.
Declaration Roles	Declaration of records can be performed by **All list contributors and administrators**. Undeclaring a record can be performed by **Only List Administrators**. Undeclare is a bad idea – resist any requests for it. If someone makes a genuine mistake and needs to undeclare, they can always approach the Records administrator and have it undeclared.

These settings play to the concept of *integrity* in recordkeeping. It is important that a record is a record. Once declared, that's it – it cannot be changed in any way. Once declared, the document is in play as an official corporate record, with all the implications that this implies.

Automatic Declaration

You should enable this for every library where you believe users will allow it. Remember that once declared, a document cannot be edited or deleted (by the user). If the users are expecting to make major revisions to documents before they are comfortable letting others see it, you will encounter resistance to auto-declare. They may be more comfortable waiting until the document is "finished" or "ready" before they are willing to let it become (in their view) seen by the rest of the organization. Some practical guidelines/suggestions:

> ### BEST PRACTICE
>
> Avoid a situation where various site administrators have varying rights and privileges regarding recordkeeping. You must be consistent and firm throughout the SharePoint installation.

1) Use this for libraries where mostly completed documents will be stored

2) Avoid for libraries where there is a high level of collaborative, iterative document creation/construction

3) For collaborative documents not being declared as a record, consider using an auto-conversion rule to automatically make the document a record after a certain period of time.

4) Be sure that there is a means of proper classification in place for the library to which you are applying automatic classification

Content Organizer

This is a powerful tool, that can automatically route documents to specified locations based on document metadata. Your ability to utilize it to boost classification accuracy depends entirely on the document metadata. Put another way, the content Organizer is only as good as your document metadata. Consider the following metadata fields:

> Subject
>
> Department
>
> Author
>
> Document Date
>
> Security Level
>
> Project

Suppose the user blindly submits a document to SharePoint with no intention of declaring it as a record. If the Subject were *Safe-Tee Security*, you could build a rule that says;

> If Subject = *Safe-Tee Security*, then route to \FINANCE\CONTRACTS\SAFE-TEE SECURITY

In this folder it will be declared as a record. But what if the user enters "*Security Contractor*" or "*Security*" in the Subject field? There will be no match, and the document will languish in the **Drop-off Library**, a "dead zone" for lost documents that failed to find a match in the Content Organizer. If you elect to use the Content Organizer to automatically route documents, you must find a way to do it such that nothing gets routed to the Drop-off Library. As a general rule, only use the content organizer when you are depending on machine-entered fields for a match, where there is no risk of a mismatch.

You need to find a way to greatly increase the odds of a match. A comprehensive discussion is outside the scope of this report, but for this example, you might consider using a series of cascading fields such as:

DEPARTMENT	If Department = Finance, Prompt for ACTIVITY
ACTIVITY	Select from *Tax ,Contracts, Reporting*, or *Budgeting* If Activity = *Contracts*, prompt for CONTRACT
CONTRACT	Select from (100) contractors, e.g. *Safe-tee Security, Lovely Landscaping*, or *Tasty Catering*.

You can use the taxonomy to ensure that the terms are correct all the way along, ensuring a reliable match. So what did we just do? We *manually classified* the document, by walking the user through the corporate file plan. The full file plan selection is implemented as a series of metadata selections. This is not necessarily the best way to accomplish reliable classification – in fact; manual classification should be avoided where possible. However, the general principal is sound – leverage rich metadata to build strong Content Organizer rules that stand a very

BEST PRACTICE

Use the SharePoint Taxonomy tools to enforce reliable document metadata field value selection. This will yield a higher successful match rate for Content Organizer.

good chance of successfully classifying the document.

Often, there are important metadata clues that can help classification. For instance the DEPARTMENT might restrict the possible PROJECT selections. The PROJECT (e.g. *Contractor Selection*) might tell us that all documents in this project belong somewhere under FINANCE\CONTRACTS, but not the actual Contractor. If PROJECTS – Contractor Selection, then we can prompt for CONTRACTOR NAME, which Content Organizer can match up to our target folder.

Customizing Document Upload

"Upload" refers to the process of submitting a document to SharePoint **when you are already in SharePoint**. There are three common ways to submit a document to SharePoint:

> **Declare Record** button on Document Ribbon
>
> **New Document** on the Documents Ribbon
>
> **Submit a Record** in Record Center

No matter which technique you are using to upload a document, each and every time we have to run custom code – what we refer to as the **Upload Module**. Consider each of these upload techniques simply as entry points - they are different ways to begin the upload process in different circumstances, but they all lead to the same "core" upload process (our custom Uploader module).

> **BEST PRACTICE**
>
> Gather as much metadata as possible from all documents, so as to maximize your ability to properly classify the document as a record.

The out-of-the-box SharePoint **Declare Record** button automatically saves the document as a record – a good thing! A dialog box appears, and the user simply has to fill in required metadata fields, whatever they may be The Content Type for this document can be defaulted, which will present the appropriate metadata fields for that particular content type. Or the user can be prompted for content type, which will subsequently determine the required metadata fields. The **New Document** button allows us to upload a document as a non-record, however it can also be used to upload a record if the document's ultimate destination is a folder or library that has auto-declare enabled. Again, in both methods the crucial *Content Type* is driving the metadata fields presented to the user. The **Submit a Record** button in the Records Center will not be used by users, as they need not be concerned with the Records Center and therefore do not need to go there.

For the **Declare Record** method, the chief goal is to get the document correctly classified. This means selecting a category from the file plan that is a suitable match for the subject of the document being declared. It can happen in one of two ways:

1) Content Type has a suitable policy attached. Content Type = Safe-Tee Security, and a Policy for that Content Type triggers the **Case File Processing** custom retention formula.
2) Content Organizer routes the document automatically to a folder such as \FINANCE\CONTRACTS\SAFE-TEE SECURITY, where it will be declared as a record and properly classified in this folder.

Either way, your primary goal is to build metadata and content types that ensure the documents are properly classified. The Content organizer may be useful in some circumstances[21].

We will now detail the steps and processes required to manually upload a document into SharePoint, by outlining (only) the steps that have to happen in our Custom Uploader module. But first recall that 50-75% of the time, the document will be a case record. Case records cannot go just anywhere – they must be

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[21]   Again, the Content Organizer is only as useful as the metadata it depends upon to create a match

stored in a case folder (records folder), bearing the same category number as that of the document being uploaded. There are four possible scenarios:

1) In SharePoint, select the (appropriate) destination folder for the document. Then, Upload to Folder.
2) In SharePoint, select the (wrong) destination folder for the document. Then, Upload to Folder. There is a mismatch between the document category and the folder category. We will have to deal with this mismatch.
3) Outside of SharePoint, upload the document to SharePoint, and browse to a folder with a matching category.
4) There is no destination folder of the needed category.

What happens when a user attempts to declare the first record of a brand new case category (scenario four above)? When they declare it, there has to be a case category in the file plan, against which to classify the document correctly. If not, they will have to wait for the records manager to create one. We never want a user to wait – for anything, so this means it is incumbent on the records manager to create these new case categories quickly!

For every case working folder, there has to be a case category in the file plan, and (at least one) working folder with the same category number into which to declare the records against that case. Even more interesting, once a new case is "born" different departments may well create different folders of different names, but all storing records against the same case. This is normal and healthy.

Obviously, each department has to have a means of creating a new case working folder that corresponds to any given category. There has to be a means of creating a new working folder. This has to be a customized folder creation module, to carry out the following steps:

1) Browse to a location in SharePoint
2) Request name of folder
3) Request Category. Browse file plan and select parent folder
4) Create child case folder. Set the following two folder metadata values:
   a. Record Folder = Yes
   b. Category number

During upload, we may need to create a required case folder on the fly, as needed. In our custom upload module, we need to carry out the following steps to upload a case record:

a. Browse to a working folder
b. Working Folder = Records Folder, category = match
   i. Issue Warning "*Store Only docs of same case in this folder*"
c. Working Folder = Records Folder, category = NO match
   i. Dis-Allow "*This Folder Classified for different case <case X>*
d. Working Folder NOT a records Folder
   i. If 1 or more docs in folder = a record
      • Issue warning "*Folder not usable – contains other subjects*"
      • Force selection of a different folder
   ii. Issue Warning "*Store Only docs of same case in this folder*"
   iii. Set Folder attribute RECORDS = Yes
   iv. Store selected category in folder field CATEGORY NUMBER

Now we will walk through all the individual steps of an upload for each of the following scenarios. Note that the examples are not sufficiently detailed to code from – the intent is to give you a only good idea of how to frame out your particular upload process. Note also that there are some details omitted – space does not permit a finely detailed examination of all possibilities or all details.

Scenario 1   Status = Record
                  Case Category

Scenario 2   Status = Work In Progress
                  Case Category

Scenario 3   Status = Reference
                  Case Category

Scenario 4   Status = Record
                  Subject Category

Scenario 1 (Record, Case)

1. Navigate to destination folder
2. Record/In-Progress/Reference = **Record**
3. Content Type = **Correspondence**
   - Fill in document fields that are not auto-filled:
     - **SUBJECT**
       - Default = BLANK
     - **CATEGORY**
       - Default = BLANK
     - **TRUE Document Date**
       - Default = BLANK (calendar assist tool)
   - Fill in Field CATEGORY
     - Select 04-50-1
   - Set field STATUS = (R)ecord
   - WARNING ➔ Current folder not a record case folder. Pick one of:
   - Create New folder
     - Browse to location
   - Select Another folder
     - Browse to folder
       - If Folder = RECORD and CATEGORY = Match
         - Move doc to folder, delete original
       - If Folder Status = RECORD and *CATEGORY* NOT = Match
         - Current folder not correct record case folder. Pick one of:
           - Create New folder
             - Browse to new location
           - Select Another folder
             - Browse to new folder

Scenario 2 (WIP, Case)

1. Navigate to destination folder
2. Record/In-Progress/Reference = **Work In Progress**
3. Content Type = **Correspondence**
   - Fill in document fields that are not auto-filled:
     - **SUBJECT**
       - Default = BLANK
     - **CATEGORY**
       - Default = BLANK
     - **TRUE Document Date**
       - Default = BLANK (calendar assist tool)
   - Fill in Field CATEGORY
     - Select 04-50-1
   - Set field STATUS = (W)ork in Progress

Scenario 3 (Reference, Case)

1. Navigate to destination folder
2. Record/In-Progress/Reference = **Work In Progress**
3. Content Type = **Correspondence**
   - Fill in document fields that are not auto-filled:
     - **SUBJECT**

- Default = BLANK
  - **CATEGORY**
    - Default = BLANK
  - **TRUE Document Date**
    - Default = BLANK (calendar assist tool)
- o Fill in Field CATEGORY
  - Select 04-50-1
- o Set field STATUS = (R)eference

Scenario 4 (Record, Subject)

1. Navigate to destination folder
2. Record/In-Progress/Reference = **Record**
3. Content Type = **Accounting**
   - o Fill in fields that are not auto-filled:
     - **SUBJECT** (Mandatory)
       - Default = BLANK
     - **CATEGORY** (Mandatory)
       - 04-10 Accounts Receivable
     - **TRUE Document Date** (Mandatory)
       - Default = BLANK (calendar assist tool)
     - If Current folder = Record (Case)
       - WARNING ➔ Current folder = record case folder. Pick one of:
         - o Create New folder
           - Browse to location
         - o Select Another folder
           - Browse to folder
     - Set field STATUS = (R)ecord

Email

Here we refer to Microsoft Exchange/Outlook 2010. The goal is simple – provide a means of declaring records that is simple and fast, so that out of 100 inbound emails per day, the user will, on average, stop to declare 5 of them each day[22]. We can define three general email techniques:

Drag and Drop	Drag a document from a folder (e.g. InBox), and drop to a folder where it is a declared record in SharePoint.
Send Intercept	When the user clicks SEND on an outbound email, pop up a dialog box asking for permission to declare it, before sending it on its way.
Send To	A Send To context menu option that sends the document to a library in SharePoint that submits the document as a declared record.

Of these three approaches, we believe the **Drag & Drop** and the **Send Intercept** are extremely powerful approaches that **must** (somehow) be implemented, to encourage and enforce user participation in declaration. We will not cover **Send To** at this time.

Do we really need to take email messages out of Exchange/Outlook and store them into SharePoint in order to manage them as records? Technically, SharePoint provides a far more robust recordkeeping environment than Exchange. On the other hand, preserving them in Exchange means that the content is preserved, i.e. the full conversation thread is preserved. But how long can (millions of) threads safely be preserved in Exchange? And at some point, Exchange will suffer from congestion[23] from too many emails. For the purpose of this report we will assume that the emails are best removed to SharePoint, despite the loss of conversational context.

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[22] Five per day is what we would expect in a normal, healthy average project

[23] Exchange congestion is well documented, following so many years of usage. SharePoint may be too new to yet show large-scale congestion.

Drag and Drop

In this method, a user can click on any email in the InBox (or other folder), and drag it to a public folder that automatically routes it to an equivalent SharePoint folder, where it is declared as a record. SharePoint 2007 offered "managed folders", whereby any Outlook folder could be tagged as a destination folder in SharePoint used to store declared records. This feature was removed however in SharePoint 2010[24]. It is possible to custom-code this capability in Outlook, however it is simply too large an effort to be practical for most organizations. Therefore we recommend using a third-party product called Contributor Add-in for Outlook[25], by Colligo[26]. RIMtech in no way endorses this product – it was recommended by Microsoft.

This product allows you to open up a list of SharePoint folders from inside Exchange, then drag an email directly over a SharePoint folder. From the screenshot below, notice the Outlook folder called **Colligo for SharePoint**. You hover over this folder and it expands to reveal the full SharePoint folder tree. If you in turn hover over a SharePoint folder, it will automatically expand any child folders. When you find the desired destination folder, you release the mouse and you`re done.
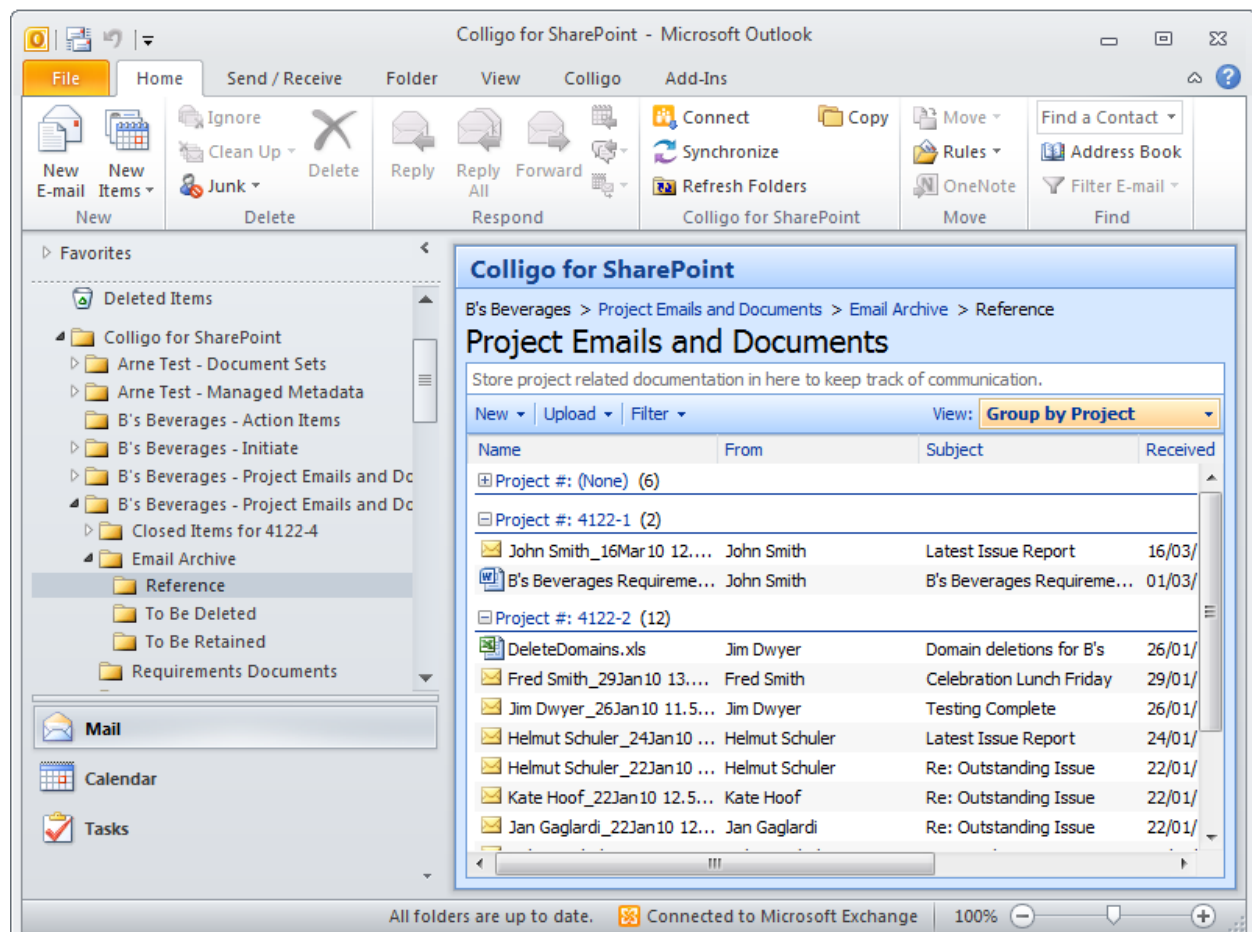
Notice that classification is indirectly achieved by selecting the destination folder. If the folder is a case file, the document can be automatically declared as a record. If it is a subject folder, the policy can be

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24   We strongly urge Microsoft to bring this feature back in future releases of SharePoint.

25   Contributor licenses are priced in the range of $100 per user, dropping in price as the number of users increases.

26   Rimtech does not endorse Colligo – there may be more suitable products than Colligo Contributor

assigned to the Content Type. The only downside is that the user has to hover over the special folder **Colligo for SharePoint** each and every time they wish to declare a document**.**

Note that once you have selected the destination folder, our standard Upload Module has to be invoked, just like any other upload scenario. This infers that you need to "hook" the custom upload module into Contributor, via its software development kit toolset.

Is it worth it to invest in a third party product just for the sake of the email Drag & Drop method? Yes – we believe it is:

1) Email is too important not to implement a Drag & Drop method. If we fail to get sufficient user cooperation, we put overall project success at risk.
2) All other methods result in fewer records, and are more labour-intensive
3) In Email we only have a brief instant (usually while reading an inbound email) that the user gives attention to the email. We must take advantage of this and present a simple declaration method.

It is important to enforce auto-delete on the Inbox and all other folders in Exchange. This is the "stick" so to speak, that encourages users to declare anything they wish to protect from automatic deletion. It is up to your organization to agree on an auto-deletion period for the InBox and other folders. Auto-delete is achieved via the use of Outlook **Retention Policies**[27].

If for some reason you cannot use Colligo or any similar commercial product, you may have to code a module yourself (not easy)[28]. If you do, keep in mind that a single email may present a number of possible discreet records within a single email. Consider the following message and attachments:

<div style="text-align:center">

Message 1 – document, type = Subject

Attachment 1 – reference document

Attachment 2 – business record, type = Case

Attachment 3 – work in progress

Attachment 4 – discard

</div>

In this example a single email of (5) candidate records yields 2 records and a work in progress document. If you can, for each email, break it into its independent constituent parts, and allow the user to select and separately declare each constituent piece.

Send Intercept

Many (if not most) electronic recordkeeping projects fail due to poor user adoption rates. Users do not invest in the time or effort to declare records. There are many reasons why this is so prevalent, mostly having to do with corporate culture regarding recordkeeping, however there are certain capabilities we can deliver in the software solution that, if implemented properly, go a long way to boost user adoption. The Send Intercept declaration method is probably the most important.

Send Intercept means that when the user clicks the SEND button to send an outbound email, a dialog box pops up asking for permission to declare the outbound email as a record. To most of us, this sounds not only counter-intuitive, but aggressive – how dare we interfere with sending our email? If implemented by itself, without the greater context of a well-managed and well-

> **BEST PRACTICE**
>
> Implement a **Send Intercept** on Outbound email to reinforce good declaration habits.

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[27] Not to be confused with SharePoint Retention Policies – Outlook Retention policies are not records-compliant.
[28] There may be some free open-source integration products on the market that integrate SharePoint with Exchange/Outlook.

supported corporate electronic recordkeeping program, this probably would be soundly defeated. Properly done however it is a powerful lever to build up a culture of recordkeeping in the organization. It is a constant reminder of how important this is to the organization, drives up the declaration rate, and eventually becomes self-sustaining as people get used to it. Many organizations are now beginning to embrace this method as they get increasingly serious about the need for electronic recordkeeping.

How would we implement this with Outlook and SharePoint 2010? It can be coded as a custom development effort, however a far easier way is to use Colligo Contributor, particularly if you already have a license for Colligo for Drag & Drop declaration. A very small, easily managed amount of customization to Contributor is required, but you can pop up any kind of dialog box you wish, to suit your particular organization. It can ask a direct question such as "*Would you like to declare this as a record*?", or an indirect question such as "*Is this work in progress*?" which we can infer to be a record but not yet complete.

If the user says "Yes", we then essentially launch our custom Upload module. It is beyond the scope of this report to design and plan the ideal Send Intercept strategy, however we recommend you do just that – come up with a strategy to make this method work for you. Some considerations that will help make it more successful:

1) Default the answer to NO, as 95% of the time, the document will NOT be a record.
2) Use the SharePoint Content Organizer to route the document to an appropriate records-enabled folder or library within a given site.
3) Declare as a record upon ingestion into SharePoint.
4) The key to success is making the classification easy. However there is no way to tell what this email is about, so we have to present an onscreen navigable folder tree of all possible classification categories in order to facilitate the proper classification selection (unless we can depend on metadata values to classify).

Custom Workflow

Suppose we use SharePoint Designer to create a custom workflow to contribute to a portion of our annual budget. Each year we pass the final budget document among top executives and the CFO for review and comments. We further create a formal approval process as part of this workflow. Once the approval has been registered in the workflow, we can easily add a step whereby the following is carried out:

1) Record the approved version as a declared record in folder \FINANCE\BUDGETING (04-30)
2) Delete the prior versions as they are not needed

The beauty of workflows is that we do not depend on a user for cooperation, either to declare the record, or to classify it properly. We know what to declare, and where to classify it, as part of the inherent work process we are automating. Some would say that we should use workflows for all possible declaration scenarios, so that we do not have to rely on our users. This is true only to a certain extent however. We still depend on users for email (the vast majority of records), and in the case where they are creating documents or importing them into SharePoint from outside.

Declaring From Microsoft Office

From within Microsoft Office™ (Word, Excel, or PowerPoint), you can easily customize the Save & Send button to save directly to SharePoint. This is a good idea, as it reinforces the importance and seriousness of corporate recordkeeping. Some considerations:

1) The first time someone presses SAVE AS, they are only beginning a document. It could take many SAVES over a period of hours, days, or even weeks before the user considers the document to be ready for corporate use. Hence, they are likely to save to local or shared disk

until they are ready for a (final) Save & Send to SharePoint (unless they are collaborating with several other users on the document, and saving all revisions to SharePoint for review and revision). In either case, there is a tangible point whereby many SAVEs have occurred, and now the document is "complete" and record to be declared a record. You simply need to connect our custom Upload module into the Send & Save trigger.

2) Configure your Office applications to always display the Policy rule, and Metadata, of documents they pull from SharePoint. This reinforces good recordkeeping practices in the user's minds, by repeatedly displaying the policies.

Auto Conversion

This is a very useful method you should apply where possible. You can define a non-records retention stage that declares the document (not declared a record) to be a record after a simple retention rule based on a date property, such as "Declare 3 years after DOCUMENT DATE", or "Declare 1 year after PROJECT DATE". To do this, you create a non-records Policy, Activate the stage on the date property, then when triggered, move to another location (a folder for declared records).

You can also get creative by using custom retention formulas in the Policy stage. You might declare 2 years after DATE SUBMITTED if the PROJECT = *New Plant* and AUTHOR= *Smith, Fred.*

As always, your challenge is to ensure that once declared, it is properly classified. Either move it to the folder you know to be correct, use Content Organizer to route it to the proper location, or a custom rule, or some combination of these features. Again, classification accuracy is driven by metadata, so be sure to start with as much useful metadata as possible.

If you use auto-conversion, modify it so that all the declaration requirements are met, i.e. case versus subject, the classification is achieved, etc. To do this, it may be necessary to create your own auto-convert application, as an extension of the out-of-the-box capability. Caution → never use auto-convert if there is any chance of breaking any of the recordkeeping structure. This will doubtless be the case in a truly "blind" auto-conversion with no attention to the infrastructure.

Manual Conversion

This simply refers to the ability in SharePoint to select a document and Declare it as a record. Because it is already in SharePoint, you already have the metadata. Your challenge now is to ensure it is properly classified, as discussed in the preceding methods.

Application Connections

This refers to the ability in SharePoint to create SEND TO menu option in a SharePoint web application, that can route a document to some other location elsewhere in SharePoint. The idea is to create a SEND TO menu option that might say "SEND TO Corporate Records". However this is rather simplistic – there is no actual "location" for corporate records – we need to get it to the proper location so it is properly classified.

When the SEND TO is activated, choose a destination location that we know in advance will be correct, based on metadata we are aware of. Or, send it to a library with a Content Organizer rule that we have a high degree of confidence will be matched. Do NOT blindly send documents to a Content Organizer rule in the hope it will match – this could result in thousands of unmanageable documents ending up in the Drop-off Library. In the sending application, we need to understand *where* we are sending it so that we can ensure it is properly classified when it arrives at its destination. We cannot simply send it blindly.

Classification Accuracy

Any electronic recordkeeping system is only as good as the accuracy of its classification. This is because if the classification accuracy drops below a certain level, the records manager will not have sufficient confidence to run Disposition. Most organizations want 100% accuracy, however that is just not possible, due to the human element – some users do not care, some make mistakes, etc. One thing is absolutely certain – every records manager will draw a line below which they will simply not feel comfortable running disposition. In our view, if the classification accuracy rate drops below this threshold, the project has failed.

Classification accuracy of a large (millions) document collection is easy, via statistical sampling. Suppose 1,000 records were declared on a given day. Sample 10 from each department (as an example) at random, and if 7 of the 10 (or 70 of the 100, assuming 10 departments) are correctly classified, we can safely extrapolate that to mean 70% of the 1,000 records are accurately classified. Put another way, we have 300 misclassified documents on that day that will ultimately be destroyed too early or too late.

Whatever your acceptable accuracy threshold may be, you must measure it each and every day. We need to build a custom SharePoint tool called the **CRT** (**C**lassification **R**eview **T**ool). This is what it needs to do:

1) Query all declared records for specified date <date>
2) Ask for a sample size, randomly select and display documents
3) Display navigable file plan tree next to document list so the records manager can easily browse and re-classify if in error
4) Display a pushbutton for each document that allows records manager to click VERIFY on each document, to verify its classification

If the accuracy rate is seen to be dropping to below the acceptable threshold, the records manager can identify the problem area, and take remedial action before it is too late.

Disposition

SharePoint continually checks the assigned Policies for every Library/Folder/Document, and automatically destroys documents that have met the retention criteria. RIMtech calls this "*Real-Time Disposition*". This is acceptable for *document deletion*, but unacceptable for *records disposition*, as it does not give us the needed opportunity for our three-phase disposition processing:

Qualify which records are eligible for disposition

Review and edit the qualified list

Process the remaining qualified records by destroying or transferring them

Proper records Disposition calls for a careful review of those records that SharePoint computes are eligible for disposition. This review may take hours, days, or weeks. The review invariably results in changes to some portion of the qualified records such that some are no longer qualified. Once the records manager is satisfied that the list of reviewed, qualified records is fully validated, then disposition can begin. It must never happen automatically, without review.

By definition, this review is to be performed on a batch of qualified records at a time. We could review records one by one, but this is simply not practical when thousands or tens of thousands of records (frequently many more) are to be processed at a time.

SharePoint does not have native functionality for these three stages built in. However, it has the underlying infrastructure that allows us to easily custom-build these needed features. There are two important considerations to know about Disposition:

Infrequent Operation	Disposition is a very thoughtful, careful process carried out on extremely large volumes of data. The implications are significant – mistakes can mean that laws are being broken, or the organization can suffer legal harm. It also is carried out on physical (paper) records at the same time as the electronic, and the paper records can take much time and effort to gather, review, and process. For these reasons, Disposition is carried out infrequently, perhaps once each year or so[29].
Large Data volumes	By its very nature, the sheer number of documents being processed is absolutely massive. For our 1000-person example organization, we realize over 1.2M records per year. If half of them expire in 2 years, then in just 2 years we have over 500,000 records to process. Handling this sheer amount of rows of data in SharePoint is a huge challenge. The scale is proportionally even larger in large organizations with tens of thousands of employees, potentially resulting in millions of documents to be processed at a time.

All software products that have achieved US DoD 5015-2 certification have the three-step functionality available out of the box. SharePoint does not, so we will have to custom-code the minimum basic capability required. The ability to handle the extremely large volumes of data effectively is a significant technological challenge for all vendors. Not many DoD 5015.2-certified vendors have achieved this ability[30]. For now, with SharePoint we will proceed to build a basic capability that will allow us to handle smaller, digestible amounts of disposition data without having to write sophisticated custom code. Once we have the basic Disposition processes running in SharePoint, we can simply run it more frequently on smaller chunks of data.

There are two things we need to effectively carry out Disposition:

Scoping	We need a way to restrict the portion of records we are going to process, in order not to be overwhelmed with millions of records in lists that quickly become impossibly large to handle. The best way to restrict the scope is by CATEGORY.
Category View	Rarely do we need to review records down to the individual *document* level. Disposition tends to take place on a CATEGORY level, i.e. "Claim Files" can mean 1,000 individual case files, each with 200 individual documents, for 200,000 documents that may well be 10-20 years old. Hence, it is important to present a high-level view of categories, with the corresponding retention metadata.

In order to properly carry out formal records disposition with SharePoint, we need to:

1) Stop SharePoint from automatically destroying any records
2) Modify SharePoint's existing policies to tag qualified records as Qualified, instead of deleting them
3) Build a module to allow us to review qualified records and un-qualify where needed
4) Build a module to carry out actual disposition (destroying and transferring) qualified records

To make this happen, we must custom-code the following five SharePoint elements:

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[29] There are advantages to carrying out disposition more frequently on electronic records.
[30] In the opinion of RIMtech

Custom Workflow **Qualify Case**	A process that does nothing. Applied exclusively to case files. Used to satisfy SharePoint Policy requirements whereby an action is needed after retention period has expired.
Custom Workflow **Qualify Subject**	Used to tag records as qualified for disposition, instead of destroying them.
Custom Query **Disposition Review**	An on-screen means of reviewing qualified records.
Bulk Updater	A means of making changes to the qualification status of qualified records.
Custom Workflow **Disposition**	A process that destroys or transfers verified records.

Qualifying Records for Disposition

Out of the box, using its built-in Information Management Policies, SharePoint continuously checks all declared records against the assigned retention period and conditions, and then proceeds to automatically delete them once the expiration date is reached. We need to replace this automatic disposition with a new concept we'll call **Qualification**. Instead of automatically destroying records that reach the end of their lifecycle, we need to have SharePoint tag them as **Qualified** for disposition. This is a simple document metadata field called *Qualified*. This way, we put a stop to automatic deletion, and we now have an opportunity to review them prior to disposition (destruction or transfer).

There are two very different approaches we can take to qualifying the declared records:

Use SharePoint Policies	The policies invoke a SharePoint object called a timer job, which checks the documents on a regular basis. The checking period defaults to once per week but can be set to any period. We can modify these policies so they instead tag records as qualified, as the documents expire.
Build a Custom Application	We can ignore the Policies altogether, and run this application whenever we wish. The application would evaluate the documents and tag them as qualified where appropriate. It is not done on a periodic basic (at least out of the box – we could configure it to run periodically).

Both of these approaches will get the job done – they will tag declared records as qualified. The policy approach has the advantage that we do not have to custom-code a qualification application however we have a substantial amount of policy management and maintenance to do. The custom application is very clean, and we do not have to worry about policies – we can totally ignore them. For now, our goal is to use as much out of the box functionality as possible, therefore we will proceed to use the Policies approach. If you should choose the custom application route, this report contains all the detail required to build it.

Policies will be assigned to individual documents (subject), or folders (case). Each is a completely different approach. First, create a SharePoint *Custom Retention Formula*. Let's give this custom retention formula the name **Case File Processing**.

This formula, when invoked by the calling Policy on the folder in question, will carry out the following steps;

1) Look up the current folder's applicable retention rule by seeking a match of the folder's CATEGORY NUMBER field with the same field of the RETENTION EVENT DATES list. Position to the correct item in the list.

2) Check the DATE field. If empty, exit and return. If there is a date, evaluate the date as follows:
   a. Compute **qualification date**[31] by adding DATE to the RETENTION PERIOD field.
      i. If **qualification date** occurs in the future, folder is not yet qualified for disposition. Exit and return.
      ii. If qualification date occurs in the past, folder is qualified for destruction. Set the following document metadata fields for all documents in the current folder:

      > **Qualified** = YES (True)

      > **QualifiedDate** = <today>. The date the document was qualified for Disposition. Needed for later Disposition Review.

When setting up the Policy for each case folder (all 1,100 of them), under the Expiration Settings, we will select the **Set by a custom retention formula installed on this server** option, and select the **Case File Processing** formula. With this in place, SharePoint will now tag each document in the folder as Qualified for disposition. Each case folder with a Policy that calls the **Case File Processing** custom retention formula will do the same.

Just because a record is tagged as Qualified for disposition does not necessarily mean it will proceed to disposition (destroy or transfer). The Records Administrator has to first review it, then confirm it is indeed ready for disposition. We therefore need 2 levels of qualification as shown below:

Qualified   SharePoint has determined the retention policy criteria have been met, and the record is eligible for disposition. It is therefore tagged by setting the document's metadata field QUALIFIED to Yes (True). Disposition may NOT proceed until it has been reviewed.

Approved   The record is qualified, and the review process has confirmed it is ready for disposition. Disposition may proceed.

Another module will set the Approved field, covered later in this report. For now, we need to disable SharePoint's real-time disposition. We actually do not need to "disable it" per se, instead we simply ensure that after the first stage is complete, the completion of this stage triggers a custom workflow that we will create. For all policies applied to records, the first stage will either **calculate a retention period based off a document date property** (for subject records), or run our custom workflow **Case File Processing** (for case records). In the Stage Properties dialog, we have to specify one of our two Qualify custom workflows, as shown below:

Case File

> *When this stage is triggered, perform the following action*:

> > Start a Workflow

> > Workflow name = **Qualify Case**

Subject File

> *When this stage is triggered, perform the following action*:

> > Start a Workflow

> > Workflow name = **Qualify Subject**

Following are the steps that must be carried out by each of our two custom workflows:

Qualify Case

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[31]   Not a metadata field – just a temporary variable used during formula computation, then discarded.

1) Do nothing. Exit and return. The Custom Retention Rule **Case File Processing** has already tagged the qualified records as required.

Qualify Subject

1) Record the following data values in metadata fields:
   a. **Qualifed**= Yes (true)
   b. **QualifiedDate** = <today>
2) Exit and return

Assigning Policies

We have to assign policies to document differently depending on whether or not the document or folder is a case or subject category. The specific configuration of the Policy you assign will depend on whether the records being stored are *case* or *subject* records:

Case Records   Use this policy assignment only when;

- You are applying a policy to a records folder (not a content type)
- It is a Homogeneous folder **only**

Enter these settings in the Policy Settings dialog for the folder:

Specify what causes the stage to activate:

Set by a custom retention formula

Custom Formula = **Case File Processing**

When this stage is triggered, perform the following action:

Start a Workflow

Workflow name = **Qualify Case**

Subject Records   Use this policy assignment only when;

- You are applying a policy to a Content Type (subject record)
- Homogeneous or heterogeneous folders

Enter these settings in the Policy for the homogeneous Folder or Library:

Specify what causes the stage to activate:

This stage is based off a date property on the item

Time Period: <date field> + <# of units>, <unit of measure>

When this stage is triggered, perform the following action:

Start a Workflow

Workflow name = **Qualify Subject**

From our folder examples above, we would assign policies to all folders and content types related to *Safe-Tee Security* as follows;

\FINANCE\CONTRACTS\SAFE-TEE

Folder Policy, Inheriting

Activate on Custom Retention Formula **Case File Processing**

Trigger WorkFlow name **Qualify Case**

\LEGAL\ACTIVE\SMITH CASES\SAFE-TEE SECURITY

Folder Policy, Inheriting

Activate on Custom Retention Formula **Case File Processing**

Trigger WorkFlow name **Qualify Case**

\SAFETY\OPERATIONS\COSTS

Folder Policy, Inheriting

Activate on Custom Retention Formula **Case File Processing**

Trigger WorkFlow name **Qualify Case**

\SAFETY\OPERATIONS\PERSONNEL

Folder Policy, Inheriting

Activate on Custom Retention Formula **Case File Processing**

Trigger WorkFlow name **Qualify Case**

\MANUFACTURING\BUDGET\INDIRECT COSTS

Assign Policy to **Content Type** *Indirect Costs*

Activate on Custom Retention Formula **Case File Processing**

Trigger WorkFlow name **Qualify Case**

\HUMAN RESOURCES\PERSONNEL\THIRD PARTY

Assign Policy to **Content Type** *Third Party*

Activate on Custom Retention Formula **Case File Processing**

Trigger WorkFlow name **Qualify Case**

Let`s further assume we have records on the category TRAVEL flowing into the following folders. We have no idea what else may be stored in these folders:

\ADMINISTRATION\TRAVEL

\MANUFACTURING\MISC\TRAVEL

\LEGAL\ADMIN\MISC EXPENSES

Policies will be assigned to Content Types that specify TRAVEL, as shown:

\ADMINISTRATION\TRAVEL

Assign Policy to Content Type = *Travel*

Activate on Date Property on the document

Time Period: Document Date + 2 Years

Trigger WorkFlow name **Qualify Subject**

\MANUFACTURING\MISC\TRAVEL

Assign Policy to Content Type = *Travel*

Activate on Date Property on the document

Time Period: Document Date + 2 Years

Trigger WorkFlow name **Qualify Subject**

\LEGAL\ADMIN\MISC EXPENSES

Assign Policy to Content Type = *Misc Expenses*

Activate on Date Property on the document

Time Period: Document Date + 2 Years

Trigger WorkFlow name **Qualify Subject**

Notice that in the Legal Department, the Content Type was *Misc Expenses*, even though the records themselves are about the subject *Travel*.

Disposition Review

Here we need to simply display the list of records qualified for disposition. We will write a custom module (script, or application) that will present a **D**isposition **R**eview **L**ist (DRL). This list will typically be massive, and it will be impossible for a single records manager to review them. In practical terms, a designated person from each contributing department, familiar with that department's business, will be tasked with reviewing the list for their particular department. Either way, we need to display this list onscreen, and likely also print it for hardcopy review. We also need to scope the list such that not too many are displayed onscreen at the same time. There are two possible approaches we can take:

On screen display	Display the list onscreen as a regular SharePoint list, allowing us to select items and edit them. Only practical for lists large enough to comfortably display onscreen (perhaps a maximum of several hundred).
Export to Excel	Export the metadata for all documents out to disk in excel format. The list can then be loaded into Excel, edited, and imported back into Excel. Excel presents many powerful tools for sorting and updating. While convenient, there is a major risk that if any data is corrupted while outside of SharePoint or Excel, the data will not load back into SharePoint properly. For instance, if you accidentally use invalid data types (numbers instead of letters), exceed maximum field lengths, or have missing parents of child items, you will run into trouble when importing.

SharePoint's native search capabilities are likely the best way to create the query that generates the DRL. This is especially important if the records are scattered across the enterprise across many servers and sites, as SharePoint will find them no matter where they physically reside. For now, we will assume everything will be presented as a SharePoint onscreen list. We will create a custom query called **Disposition Review**. The following are required for query input:

Qualified Date Range	**FROM** dd/mm/yy **TO** dd/mm/dd. Allows us to define a range on the Qualified Date field. Without this field, every time we run the same query, different results can occur, as documents could be qualified every day.
Category	Category, by File Number, e.g. **Safe-Tee Security** = 04-50-1. It would be ideal to select a branch from the retention schedule hierarchical tree display and select that particular branch.
Include Subcategories	A selection (Yes or No). If selected, all qualified records in the retention schedule tree below the selected category will be included. For example,

selecting 04-60 (FINANCE\TAX) would include any qualified records in **Return 2008** (04-60-2008) and **Return 2009** (04-60-2009).

A sample of an on-screen DRL might look as follows:

List of Documents Qualified For Disposition								
Category		**Subject**	**Doc ID**	**Retention Rule**	**Doc Date**	**Exp Date**	**Disp**	**Ver**
Title	**Number**							
Insurance Coverage, Policies, Renewals	02-20	New coverage policy	101	destroy after 7 years	1999-01-01	2006-01-01	D	Y
Insurance Coverage, Policies, Renewals	02-20	Coverage Statistics	202	destroy after 7 years	1997-01-01	2003-01-01	D	N
Insurance Coverage, Policies, Renewals	02-20	Renewals Proposal	303	destroy after 7 years	1995-03-06	2002-03-06	D	Y
Insurance Coverage, Policies, Renewals	02-20	Coverage Ideas	404	destroy after 7 years	1993-02-02	1999-02-02	D	N
Safe-Tee Security	04-50-1	Annual Evaluation	505	destroy 2 years after contract end	1993-01-01	2010-02-02	D	N
Safe-Tee Security	04-50-1	Contract Dispute	606	destroy 2 years after contract end	1998-01-01	2010-02-02	D	N
Safe-Tee Security	04-50-1	Contract Violations	707	destroy 2 years after contract end	1986-04-06	2010-02-02	D	N
Safe-Tee Security	04-50-1	Contract negotiations	808	destroy 2 years after contract end	1997-02-04	2010-02-02	D	N
Safe-Tee Security	04-50-1	Vendor evaluation	909	destroy 2 years after contract end	2001-03-04	2010-02-02	D	N

There is no "perfect" list – different organizations will need to see different things on their lists. The idea here is to create a display list that works for your particular needs. Some notes:

1) The Doc ID is the internal SharePoint Record ID. This can be used to easily jump to the document to view it.
2) Many people would want Department and Author displayed, to give more context to the particular document.
3) There is a lot of redundant display, such as the Subject and Rule fields. In a sophisticated display list this can be eliminated.
4) This module must provide a means whereby the records manager can set the VERIFIED flag for selected documents.
5) The EXP DATE (Expiry Date) field is computed to be the Doc Date plus retention period (for subject files), and the Event Trigger Date (for case files). This implies that this particular query is doing cross-tabulation and computation on the file, not just a simple display.
6) Note the VER (Verified) status is set for some documents but not for all. If a single document from a Case category (Safe-Tee Security) were set to Yes, all records would have to be set.

Bulk Updater

The Records Administrator needs a way to alter the value of document metadata within the records in the DRL. Some common scenarios:

1) Change the DISPOSITION action field to Unknown from Destroy. Records are in dispute and we need more time to agree on the retention period.
2) Lengthen the Retention Period. Change retention rule on TAX RETURN 2008 from 7 years to 9 years, as the Finance Department requires more time on these records.

3) Set VERIFIED field to YES (allow disposition to proceed). This must be done for all records, eventually. Note that update logic is required such that if a single document of a case file is flagged VERIFIED, then **all** documents for that category must be flagged VERIFIED as well. A mix of VERIFIED = YES and VERIFIED = NO is not permissible in a case file.

These are just a few examples of the kinds of changes that are typically needed to the records within a given DRL. To deliver minimum capability without any sophisticated coding, you can export the DRL metadata records to Excel, edit them in Excel, and import them back into SharePoint. Once again however, this brings a significant risk of data corruption errors outside of the safe confines of SharePoint or Excel.

Disposition Module

This is a rather simple Module that simply runs Disposition (Destroy or Transfer) against a set of qualified records that have been verified for disposition. Most organizations will want to record a limited set of document metadata for each document destroyed, to act as a form of audit trail for the disposition. SharePoint's built-in Audit trails may suffice, but for completeness we will build a simple post-disposition audit trail during disposition. Create a list called **Disposition Audit** in the Records Centre.

> **BEST PRACTICE**
>
> Always record the document *subject*, *author*, and *category code* for all documents destroyed, as this gives a trace back to the authority by which they were destroyed.

In its simplest form this module would take the following steps:

1) Locate each Document where document metadata field QUALIFIED = Yes (true). If you require an archivist's review and approval, then proceed on field APPROVED = Yes.
2) Skip unless if any of the following four values is not satisfied as shown below:
    a. Qualified = Y
    b. Approved = Y
    c. On Hold = N
    d. Disposition = (T)ransfer or (D)estroy (not Unknown)
3) Determine the disposition action
    a. If Category field DISPOSITION = Destroy
        i. Destroy SharePoint document and metadata, in non-recoverable fashion
        ii. Add document metadata to list **Disposition Audit**
    b. If Category field DISPOSITION = Transfer
        i. Export document to specified external location <location>
        ii. Destroy SharePoint document and metadata, in non-recoverable fashion
        iii. Add document metadata to list **Disposition Audit**

This list could easily be saved as an Excel spreadsheet or in XML format. This gives you the ultimate in flexibility in manipulating and analyzing the data within the list.

Recommendations/Best Practices

In order to effectively manage electronic records, regardless of which software environment is in use (SharePoint or otherwise), the following supporting best practices are extremely helpful in order to ensure successful adoption and classification accuracy. These practices reduce the user's ability to store documents outside the official corporate space (SharePoint), and provide strong incentive to declare records (they lose all emails and documents unless they declare them as records):

Auto-Delete	Auto-Delete should be enabled in the following spaces:

- **Email**. All shared and public folders in Exchange/Outlook should have an auto-delete period assigned to them
- **SharePoint**. Every folder, except those with an assigned official retention rule, should have an auto-deletion rule assigned (e.g. delete after document is 5 years old).

Restricted Office Save	MS Office has been configured such that the SAVE AS command, and other ways to save, by default save exclusively into SharePoint. With this in place, it is not possible for the user to save to a local or shared disk drive. This again reduces the ability of the user to store records outside the official corporate space, and reinforces the organization's commitment to sound recordkeeping practices.

What if the user is offline, i.e. not in the office and connected to the SharePoint server? By using Microsoft's SharePoint Workspace® 2010, the user can synchronize their local computer content with the remote SharePoint, so they are operating as if they are in the office and connected.

Disable PST Files	Outlook's individual PST files[32] have been disabled, such that archived email is stored on the Exchange server, not on the user's personal disk drive.
Open With Explorer	This is an out-of-the-box technique in SharePoint whereby you can copy and paste a document into SharePoint from Windows Explorer. It is triggered via a button on the SharePoint menu ribbon. We recommend you disable this button entirely. It can leave a document in SharePoint with undefined metadata, and could serve as a "back door" way to get documents into SharePoint by avoiding corporate control. Using the technique you can also (apparently) delete a record from SharePoint. It does not actually delete the record, but it says onscreen that it does.

The Records Center

The Records Center site was originally conceived in SharePoint 2007 as the location for storing all records. With SharePoint 2010, and the inclusion of in-place records management, this is no longer the intent of the records center – records can live anywhere. Having said that, simpler (or so-called "lightweight") SharePoint installations may find it a convenient location for records, and they can continue to use it as an exclusive location for storing declared records.

We recommend you do not use it as a principal place to store records. Use SharePoint's In-Place recordkeeping capability, for the following reasons:

1) Keeping records in their natural folder location facilities daily use of the document
2) Easier to find them
3) Less overall system complexity
4) Less resistance from users

Out of the box, SharePoint's Records Center site is your recordkeeping administrative "dashboard", where you go to carry out administrative things such as creating retention rules, generating audit reports, or producing other reports. However you can assign these tools to any site you wish. Internally the Records Center site is a template supplied by Microsoft for your convenience.

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[32] A PST file stores all of a user's MS Exchange email on a local or shared disk drive location.

You can choose to use the Records Center site as an "Archive", where you can store infrequently-accessed records after the documents age many years. You could use a policy like "Move to Records Center if last access > 5 years" or similar. This keeps the documents out of the way of the remaining more frequently-accessed documents. You may be able to realize a performance advantage if these documents are stored on a different server or storage media. Once again, you can do this with any site – there is nothing special about the records center site. For now, RIMtech recommends you use in-place records management in all libraries.

MY SITE and Folksonomies

My Site is a personal (private) space reserved for users where the users can share the space with other users, while not being seen by any other users. You can declare a document in the Shared space of Mysite, but not the Personal space[33]. We have the following concerns about the corporate usage of My Site:

- Rules are different (special to MySite)
  - o If a user declares a record in My Site, we cannot reach it post-declaration
  - o Nothing is available to any other users unless they specifically share it with other users
  - o Can designate other users to "share docs exclusively"
- We cannot allow declaration in MySite for the following reasons:
  - o Cannot open any declared docs to READ for daily classification testing (diminishes records integrity)
- Works against the goals of corporate information management governance
  - o Increasing sharing and accessibility of corporate documents
  - o Increase corporate Accountability
- My Site documents are potentially "hidden" from freedom of information requests, legal scrutiny, recordkeeping obligations

So be careful if using My Site – find a way to use it such that corporate information management objectives are not compromised. You might consider replacing My Site with a concept called **EmployeeSpace**, with the following characteristics"

- Folder of employee name under a Business Unit Library
  - o Can create subfolders
  - o Can create and store anything
  - o Can share with anyone of my choice
- Can Declare records in this space
- Subject to corporate scrutiny if and when required
- Tightly restricted, e.g.:
  - o 500MB
  - o 6 months auto-delete

Similar to My Site, Folksonomies is a feature whereby a user can arbitrarily add "personal" document metadata fields onto a document. They can then designate these fields (referred to as tags) as Private or Public. This makes for powerful document searching, but again, be careful not to violate any potential information management governance guidelines or policies. If a user creates tags that are deemed private, will we be able to access this data for freedom of information requests? Unknown, unsearchable, uncontrolled metadata assigned to corporate documents is a potential liability and may run counter to good corporate information governance practices.

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[33] Not without a potentially prohibitive amount of custom coding

Project Implementation

Many EDRMS (**E**lectronic **D**ocument and **R**ecords **M**anagement **S**ystem) projects in the past have failed to deliver on the recordkeeping element. Most projects start out with the goal of delivering recordkeeping accountability, but invariably end up abandoning recordkeeping. Fortunately the reasons for these failures are now very clear, as are the actions necessary to avoid these failures:

1) **Reason for Failure** → Insufficient emphasis on increasing the organization`s overall value of recordkeeping in the eyes of everyday users. **Solution** → There needs to be major emphasis on changing perceptions, culture, policies, and attitude toward recordkeeping.

2) **Reason for Failure** → EDRM software buyers do not sufficiently understand the recordkeeping capabilities of the software, or how to use them to achieve widespread user adoption. **Solution** → Key project managers and records managers need to master these specific features and adapt it to their organization's specific requirements.

3) **Reason for Failure** → There has been no means of quantifying or measuring the success or failure of the projects. **Solution** → The organization has to adopt a quantitative means of measuring the success of the project on a daily, weekly, and monthly basis.

RIMtech takes the position that the implementation of any EDRMS project will fail unless significant project resources are spent on implementation planning in accordance with a proven methodology that overcomes the 3 points of failure above. SharePoint will inevitably be no different than any other product. Implementation will determine project success, not product.

There are certain inviolable principals that are essential to successful electronic recordkeeping success. They are:

Qualification	How users decide which documents to manage as business records.
Declaration	Users have to decide that a particular document is a business record. Which ones? Similarly, when creating a document, at which point will they turn it over to the organization as a business record?
Classification	Each record must be assigned an appropriate retention rule from the approved list of rules, or retention schedule.

If users consistently **qualify** appropriately, **declare** the documents as records, and properly **classify** them, we can proceed with *Disposition*, where we will destroy records in accordance with the official approved retention schedule. Disposition is the "end game", where everything comes together in a way that allows us to accurately destroy massive quantities of recorded business records with full legal confidence. If declared records are not classified correctly, too many would be destroyed too early or too late, which could prevent any disposition from taking place at all.

> **BEST PRACTICE**
>
> Measure *Classification Accuracy*, by department, each day. Measure *Qualification Rate* and D*eclaration Rate* at least once per month. Take immediate action if either number falls out of range.

Each of these three factors (*qualify*, *declare*, *classification*) is in fact a **critical project measurement metric**[34]. *Everything* in any electronic recordkeeping endeavour contributes in some way, however indirectly, to one of these three factors. Each factor can, and must, be measured against an acceptable threshold. Any organization can readily agree upon a minimum acceptable threshold for each of these three factors. The following acceptability thresholds are very common, based on RIMtech's experience across 50+ EDRMS projects:

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[34] See details in RIMtech's forthcoming book "*Managing Electronic Records*"

Qualification	**5%** of all incoming email, **95%** of all documents created and downloaded.
Declaration	**95%** of all business records should be declared into SharePoint.
Classification Accuracy	A minimum **85%** of all declared records must be properly classified

Each of these three factors is easily measured, and **must** be regularly measured, by department, on a regular basis. Further, we need to "hit" all three to succeed. We cannot fail on any of the three, or the entire project will fail. Put another way, if we cannot run Disposition with complete confidence, which is based on the accuracy of the classification, the project simply is not successful.

Appendix 1 - Definitions

Auto-Delete   The process whereby a machine-driven process will automatically delete a document, without any human intervention, once a condition has been satisfied. Example – "Delete 3 years after Last Modified Date " or "Delete 2 years after receipt".

Case Files   A category containing documents whereby the business activity has a defined end date. Typically a *Person*, *Place*, *Event*, or *Thing*. Disposition is triggered by a date, such as "*End of Useful Life*" (A machine), or "*Close of all Legal Matters*" (A workplace Accident). Example – employment files, typically qualified for disposition 3 years after termination of employment. All records within a case file reach disposition and are processed as a complete, intact group – they are never separated or processed as individual records. Many organizations have 50% or more of all business records as case files.

Category   A node in the hierarchical file plan. Denotes a set of records of similar subjects, i.e. *Travel Requisitions*. All categories are linked via a child/parent relationship.

Classify   The process whereby a user assigns a formal retention rule to a document, as part of the Declaration process. Typically achieved indirectly, by virtue of selecting a storage location (typically a folder) that matches the subject of the document, and which bears the appropriate retention rule for that subject.

Declare   Make a document a record. Once declared, a document is generally tracked by software, and prevented from deletion (locked), except via a formal disposition process.

Deletion   As distinguished from ***Disposition***. An arbitrary deletion by a SharePoint user/administrator, or process. Deletion of a document by any method other than Disposition. Some examples of deletion:

1) Retention schedule has expired and SharePoint automatically deletes the document in accordance with its retention policy.
2) End user with deletion privileges deletes the document
3) A SharePoint administrator deletes a document

Disposition   As distinguished from ***Deletion***. Formal, structured process of determining what happens to records at the end of their retention period. The process is human-initiated, and the decision as to what is destroyed/transferred is ultimately decided by a human (the Records Administrator). Disposition yields (3) possible outcomes:

1) **Destroy** (typically 95-99%)
2) **Transfer** to Archive (typically 1-5%) for permanent archival storage
3) **Unknown**. Retain until disposition is known. Some Possibilities:
   - Held for legal review
   - In Dispute
   - Disposition simply not yet know or decided

Disposition Review List   **DRL**. A list of records qualified for Disposition, presented on screen in a form convenient for review and edit.

Document A single piece of recorded information stored in SharePoint. A document may be in one of the following "states":

- Being managed as a record (has been declared)
- Meets the criteria of a record but is not being managed as a record (not declared)
- Not a record. Does not meet the qualification of a business record, according to the organization's definition of a record.

DoD 5015.2 A US Government standard specifying minimum capability of software for the purpose of managing electronic records. Can be found at http://jitc.fhu.disa.mil/recmgt/standards.html.

Event Date The date that triggers the Disposition of a set of record(s) in a case file. Suppose for example a retention rule for Contracts of "*Destroy 2 years following contract end*". The trigger date for records about contracts is therefore the contract end date. If the contract for Safe-Tee Security for instance ends Jan 15 2009, the records are qualified for disposition on Jan 15 2011.

F1000 RIMtech term referring to the subset of DoD 5015.2 capabilities required to satisfy the recordkeeping needs of most organizations.

Folder, Heterogeneous A folder containing documents of different, unrelated subjects.

Folder, Homogeneous A folder containing only documents of the same, related subject.

OPR **O**ffice of **P**rimary **R**esponsibility. The "home" location of the (electronic or paper) records of a specific category. These records are considered the "master" records, as distinguished from secondary (transient) records classified to this specified category. Constituent records contributing to this category may well be stored outside the OPR's location. Typically the OPR represents the business unit with the most operational need for these records, and the hence the most authoritative position regarding their storage, use, and disposition. It is a common practice to apply the official applicable retention rule to OPR records and a different, more temporary retention rule to records of the same category stored outside the OPR (such as 2 years then destroy).

Module A piece of functionality within SharePoint that has to be custom developed. Could be a script, a custom-configured input screen or query, a workflow, a script, or a complete application.

Qualification, *Record* Determination that a document is a business record. The criteria will vary among organizations. Common criteria:

- Records a decision
- Created in the conduct of the business of the organization
- Necessary for the conduct of the business
- Constitutes evidence that a legal or policy obligation was followed
- Etc.

Qualification, *Dispostion* Determination that a document is eligible for its end-of life disposition, i.e. can be destroyed or transferred.

Record A document that meets the criteria of a record. A document that is being managed as a record. Smallest atomic unit that can reach disposition. Characteristics of a record:

1) It is assigned a retention rule from the official retention schedule
2) It cannot be deleted, except by the formal records disposition process ("locked down").

Possible forms of a record:

1) *Electronic Document.* Any electronic format (.DOCX, .PDF, TIFF, etc.)
2) *Non-Electronic Document.* Metadata of a physical document may be recorded and tracked, but the physical document is not available in electronic form. Single document, electronically profiled, tracked, recorded, but content not stored or readable. Could be paper, photograph, or a non-paper artefact (microfilm, map, core sample, etc.)
3) *Box.* Multiple documents, stored in a container (box), tracked to box level only.

Retention Schedule Also known as a **File Plan**. The list of approved retention periods and disposition rules for each business activity or subject within the organization. Driven by legislative obligation (various laws and regulations that apply to the business), and operational corporate policies.

Real-Time Disposition   Process of SharePoint whereby documents with an assigned retention schedule, where the conditions for end-of life have been met, are automatically destroyed without any human intervention.

Records Folder   A SharePoint folder specifically designated for the storage of declared records. The folder has been tagged with a retention policy, and is (supposed to) contain exclusively declared records.

RM   Records Manager/Administrator.

Schedule   Two meanings:

1) **Noun**. The "schedule". The retention schedule (list of categories and their retention rules)
2) **Verb**. To "schedule". The act of applying the retention rules to qualified records.

Subject Files   A category containing documents whereby the business activity is ongoing without any defined activity end date, e.g. "Travel". Documents are qualified for disposition once they reach a certain age, i.e. after 2 years. Individual documents reach disposition and are processed independently of the other documents of the same subject. Individual documents can reach the age of disposition, while those not yet aged to disposition are left behind.

Transfer   Move record to a physically separate storage location for permanent storage. Remove from e-records repository. Also known as "accessioning". Not needed for most F-1000 recordkeeping

Upload   To add a document to SharePoint, from within SharePoint.

Working Folder   Any SharePoint folder that is NOT a file plan folder, i.e. used to store documents.

Appendix 2 - Sample File Plan

The sample file plan fragment below shows subject files in blue shading, and case files in green shading;

File Plan Fragment						
Title			**Description**	**File Number**	**Retention**	**Disp.**
Primary	**Secondary**	**Tertiary**				
Administration 02	Travel 10		Travel application forms, approvals, Policies	02-10	2 years	Destroy
	Insurance 20		Insurance coverage, policies, renewals	02-20	7 years	Destroy
Human Resources 03	Employees 10	Smith, J 707	Employee files including offer letters, contracts, disciplinary records, promotions, etc.	03-10-707	2 years after termination of employment	Destroy
		Rubble, B 909	Employee files including offer letters, contracts, disciplinary records, promotions, etc.	03-10-909	2 years after termination of employment	Destroy
	Policies 20		General policies on employment and workplace safety, business conduct, etc. Drafts and approved copies	03-20	2 years or until superceded	Destroy
Finance 04	Accounts Receivable 10		Accounts Receivable	04-10	7 years	Destroy
	Account Payable 20		Accounts Payable	04-20	7 years	Destroy
	Budgeting 30		Budget preparation, proposed and approved budgets for current year	04-30	5 years	Destroy
	Reporting 40		Reporting obligations such as SOX, Environment Ministry, etc.	04-40	3 years after fiscal year ends	Destroy
	Contracts 50	Safe-Tee Security	Drafts and Master contracts, Negotiations, Cancellations and terminations to all contracts	04-50-1	2 years after contract end	Destroy
		Tasty Catering	Drafts and Master contracts, Negotiations, Cancellations and terminations to all contracts	04-50-2	2 years after contract end	Destroy
		Lovely Landscaping	Drafts and Master contracts, Negotiations, Cancellations and terminations to all contracts	04-50-3	2 years after contract end	Destroy
	Tax 60	Return 2008	Tax Return 2008, inc. challenges, supplementary supporting documents, notices of assessments, etc.	04-60-2008	7 years after receipt of Assessment	Destroy
		Return 2009	Tax Return 2008, inc. challenges, supplementary supporting documents, notices of assessments, etc.	04-60-2009	7 years after receipt of Assessment	Destroy
			Subject Files			
			Case Files			

Appendix 3 – 5015.2 Requirements Analysis

The table that follows shows the following comparative analysis of DoD 5015.2 requirements:

Requirement   Enumerated requirement from 5015.2 Standard

Description   Brief description of the requirement, from the 5015.2 standard

F1000 Requirements   RIMtech's F1000 (Fortune 1000) estimated electronic recordkeeping requirements for most organizations

SharePoint 2010 Out-Of -Box   5015.2 requirements met by SharePoint 2010 out of the box, with no customization.

US DoD 5015.2 - STD Requirements Analysis			
Requirement	**Description**	**F1000 Requirement**	**SharePoint 2010 Out-of-the-Box**
2.2.1 - Implementing File Plans			
2.2.1.1	File Plan Structure	✓	
Table 1 Fields 1-8	Cat name	✓	✓
T1.9	Definable Fields	✓	✓
2.2.1.2	Selection Lists	✓	✓
2.2.1.3	Metadata Edit	✓	✓
2,2,1,4	Mandatory fields	✓	✓
2,2,1,5	Container Structure	✓	
T2.1	Folder Name	✓	
T2.2	Folder ID	✓	
T2.3	Location	✓	✓
T2.4	Vital		
T2.5	Vital Review Period		
T2.6	Supplemental Marking		
T2.7	Definable Fields	✓	✓
2.2.1.6	Edit Metadata	✓	✓
2.2.1.7	Data Integrity	✓	✓
2.2.1.8	Category Linking	✓	
2.2.1.9	Metadata Alerts		
2.2.1.10	Reporting Capability	✓	✓
2.2.2 - Scheduling Records			
2.2.2.1	Edit Components	✓	
2.2.2.2	Multi-Phase	✓	✓
2.2.2.3	Parallel Phases		
2.2.2.4	Cutoff Trigger	✓	
2.2.2.5	Interim Phases	✓	✓
2.2.2.6.1	Retention Period	✓	
2.2.2.6.2	Disposition Action	✓	
2.2.2.6.3	Interim Transfer		
2.2.2.7.1	Time	✓	✓
2.2.2.7.2	Event	✓	✓
2.2.2.7.3	Time-Event	✓	✓
2.2.2.8	Multiple recurring Events		
2.2.2.9	Calculate Life Cycle	✓	
2.2.2.10	Reschedule	✓	
2.2.2.11	Recalculate Lifecycle	✓	
2.2.3 - Declaring and Filing Records			
2.2.3.1	Folder Structure	✓	✓
Table 3 Fields 1 - 13	ID	✓	✓
T3.14	Definable Fields	✓	✓
2.2.3.3	Pick Lists	✓	✓
2.2.3.4	Mandatory Fields	✓	✓
2.2.3.5	Record ID	✓	✓
2.2.3.6	Reporting Capability	✓	✓
2.2.3.7	Read-Only Record	✓	✓
2.2.3.8	Read-Only fields	✓	✓
2.2.3.9	Metadata Creation	✓	✓
2.2.3.10	Metadata Edit	✓	✓
2.2.3.11	Date Validation	✓	✓
2.2.3.12	Definable Fields	✓	✓
2.2.3.13	Reporting Capability	✓	✓
2.2.3.14	Constrain Categories	✓	
2.2.3.15	Constrain Metadata	✓	✓
2.2.3.16	Re-Classify	✓	✓
2.2.3.17	Record Linking		
2.2.3.18	Link Labelling		
2.2.3.19	Un-Link		
2.2.3.20	Link Permissions		
2.2.3.21	Renditions	✓	✓
2.2.3.22	Version Management	✓	✓

US DoD 5015.2 - STD Requirements Analysis			
Requirement	Description	F1000 Requirement	SharePoint 2010 Out-of-the-Box
2.2.3.23	Metadata Structure	✓	✓
2.2.3.24	Edit Metadata	✓	✓
2.2.3.25	Referential Integrity	✓	✓
2.2.3.26	Database Sync	✓	✓
2.2.4 - Filing Email Messages			
2.2.4.1	Manage as Records	✓	
2.2.4.2	Transmission and receipt Data	✓	
2.2.4.3	Multi-Mode	✓	
2.2.4.4	Include OLE Objects		
2.2.4.5	No external Save		
2.2.4.6	Link attachments		
2.2.4.7	DMS Header Fields		
2.2.5 - Filing Records to Transfer to NARA			
Table 5 Fields 1 -25	NARA Transfer Fields		
2.2.5.2	Font Alert		
2.2.6 - Storing Records			
2.2.6.1	DDMS compliant Portal		
2.2.6.2	Secure Access	✓	✓
2.2.6.3	Preserve Format	✓	✓
2.2.6.4	Arbitrary Delete	✓	✓
2.2.6.5	Removal Alert		
2.2.7 - Retention and Vital Recrods Management			
2.2.7.1 - Screening Records			
2.2.7.1.1	Reporting Capability	✓	✓
2.2.7.1.2	Qualification List	✓	
2.2.7.1.3	Re-order Display List	✓	
2.2.7.1.4	Event Recording	✓	
2.2.7.1.5	Interim Transfer List	✓	
2.2.7.1.6	Retention Reference Date	✓	
2.2.7.2 - Closing Record Folders			
2.2.7.2.1	Close Folder		
2.2.7.2.2	Reopen Folder		
2.2.7.3 - Cutting Off Record Folders			
2.2.7.3.1	Folder Cutoff		
2.2.7.3.2	Add to Cutoff Folders		
2.2.7.4 - Freezing/Unfreezing Records			
2.2.7.4.1	Freeze pre-qualified records	✓	✓
2.2.7.4.2	Freeze Reason	✓	✓
2.2.7.4.3	Unfreeze	✓	✓
2.2.7.4.4	Reporting Capability	✓	✓
2.2.7.5 - Transferring Records			
2.2.7.5.1	Transfer Qualification List	✓	
2.2.7.5.2	Transfer Records	✓	
2.2.7.5.3	Transfer Non-Electronic Documents	✓	
2.2.7.5.4	Post-Transfer deletion	✓	
2.2.7.5.5	Transfer Audit trail	✓	
2.2.7.5.6	Post-transfer bulk update	✓	
2.2.7.6 - Destroying Records			
2.2.7.6.1	Qualification List + Link	✓	
2.2.7.6.2	Double Confirmation	✓	
2.2.7.6.3	Expunge	✓	
2.2.7.6.4	Metadata Retention	✓	
2.2.7.6.5	Restricted Access	✓	✓
2.2.7.6.6	Store Audit as a record	✓	✓
2.2.7.7 - Cycling Vital Records			
2.2.7.7.1	Vital Records Review		
2.2.7.7.2	Review Date		

US DoD 5015.2 - STD Requirements Analysis			
Requirement	Description	F1000 Requirement	SharePoint 2010 Out-of-the-Box
2.2.7.7.3	Cycling Qualification List		
2.2.7.7.4	Report on Prior Cyycle Date		
2.2.7.7.5	Cycle Reference Date		
2.2.7.8 - Seraching for and Retrieving Records			
2.2.7.8.1	File Plan View	✓	
2.2.7.8.2	Metadata Search	✓	✓
2.2.7.8.3	Partial String Matches	✓	✓
2.2.7.8.4	Boolean Operators	✓	✓
2.2.7.8.5	Order Result List	✓	✓
2.2.7.8.6	Retrieve Record Copy	✓	✓
2.2.7.8.7	Launch Email	✓	✓
2.2.7.8.8	Launch Application	✓	✓
2.2.7.8.9	Version Display	✓	✓
2.2.7.8.10	Multi-record selection	✓	✓
2.2.7.8.11	Abort Search	✓	✓
2.2.8 - Access Controls			
2.2.8.1	Edit Roles	✓	✓
2.2.8.2.	Password Default		
2.2.8.3.1	User ID	✓	✓
2.2.8.3.2	Password Default	✓	✓
2.2.8.3.3	Alternative Control		
2.2.8.4	Create Role	✓	✓
2.2.8.5	Group Access Control	✓	✓
2.2.8.6	128-bit PK Web interface	✓	✓
2.2.8.7	Multi-User Access	✓	✓
2.2.9 - System Audits			
2.2.9.1.1	User Account	✓	✓
2.2.9.1.2	Group	✓	✓
2.2.9.1.3	Record Folder	✓	✓
2.2.9.1.4	Metadata	✓	✓
2.2.9.1.5	File Plan Components	✓	
2.2.9.2	Audit Reporting	✓	✓
2.2.9.3.1	Track by User/Time		
2.2.9.3.2	Track by record handling		
2.2.9.4	File audit as record	✓	✓
2.2.9.5	Export Audit Files	✓	✓
2.2.9.6	Edit Audit Log	✓	✓
2.2.11 - System Management			
2.2.11.1	Backup		
2.2.11.2	Backup Storage		
2.2.11.3.1	Data Integrity Checks		
2.2.11.3.2	Failure Recovery		
2.2.11.4	Rebuild Capability		
2.2.11.5	Storage Monitoring		
2.2.11.6	Safeguarding		
5.1 - RMA to RMA Transfer			
5.1.1.1	Export Context		
5.1.1.2	Import Context		
5.1.2	Import/Export Custom Fields		
5.1.3.1	JITC Transfer Schema		
5.1.3.2	Custom Fields Schema		
5.1.4.1	Matadata Mapping		
5.1.4.2	Custom Field Mapping		
5.1.5	Custom Field Schema		
5.1.6	Record Elements		
Table C5.T1	Core metadata		
Table C5.T2	Email metadata		
Table C5.T3	Scanned Documents		
Table C5.T4	PDF documents		

US DoD 5015.2 - STD Requirements Analysis			
Requirement	**Description**	**F1000 Requirement**	**SharePoint 2010 Out-of-the-Box**
Table C5.T5	Photo documents		
Table C5.T6	Web Records		
Table C5.T11	Core Record Fields		
Table C5.T14	Lifecycle Data		
Table C5.T16	Folder Metadata		
Table C5.T17	Folder Lifecycle Metadata		
Table C5.T18	Folder Data		
Table C5.T20	Custom Folder Fields		
5.1.7.1	Document Grouping		
5.1.7.2	Read Documents		
5.1.7.3	Record Metadata		
TOTAL		168	105	72

Appendix 4 – Metadata

The following tables show the suggested minimum metadata required to support the SharePoint customization outlined in this report:

Name	Man/Opt	Details	Notes
Minimum Metadata Fields			
Name	**Man/Opt**	**Details**	**Notes**
File Plan Folders			
Category Number	M	72 characters, alphanumeric	Unique Number or Identifier, e.g.04-50-1
Title	M	Alphanumeric, 72 characters	Unique Number or Identifier, i.e. *A* for Administrative or *01* for Policy
Description	M	1000 characters	Scope Notes. Detailed description of what is to be filed in this Category
Type	M	C (Case) or S (Subject)	
OPR	M	Select from pre-defined values	Office of Primary Responsibility
Citations	O	Alphanumeric, 1000 characters	List of citations used
Retention Period	M	numeric nnn	
Retention Unit	M	days, months, years	Unit of measure of retention period
Cutoff	M	Yes or No	Cutoff being applied?
Cutoff Unit	O	Semiannual, Quarterly, Monthy, Annual	
Disposition	M	(D)estroy, (T)ransfer, (U)nknown	Default = D
Archival Review	M	Yes or No	This category must be reviewed by Archivist before disposition allowed. Default = No
All Folders			
Record Folder	M	(Y)es or (N)o	Identifies if the folder is a CASE Folder for storage of case records, or not.
Category	M	Category Number	Unique Number or Identifier, e.g.04-50-1
All Documents			
Content Type	M		SharePoint requirement
Subject	M	Alphanumeric, 124 characters	Subject matter of this document
Category	O	Select Category from File Plan navigation tree	Mandatory for a declared record.
Security Level	O	Select from pre-defined List	Denotes Record-level security
Business Unit	M	Select from pre-defined values	Same selection list as OPR above
Author	M	72 characters, alphanumeric	Who is principally responsible for this content?
True Document Date	M	Date	Date that best reflects date of content
Status	M	(R)ecord, (W)ork-in-Progress, (R)eference	
Notes	O		Anythig that would help find or explain this document
Qualified	M	Yes or No	Qualified by disposition. Not user-entered
Qualify Date	M	Date	Date this document was qualified for disposition
Verified	M	Yes or No	Yes of verified as classified correctly. Not user-entered.
Approved	M	Yes or No	Yes if approved for disposition by archivist

Appendix 5 – Module List

Below is a comprehensive list of the modules that must be developed within SharePoint:

SharePoint Modules Needed		
Module Name	**Purpose**	**Notes**
Event List	Records event dates for each case category	Standard SharePoint LIST structure. Allows additions, updates, depeteions as needed
Qualify Case	Replace auto-destruction	Custom Workflow for case records only
Qualify Subject	Replace auto-destruction	Custom Workflow for subject records only
Disposition Review List (DRL)	View records onscreen that are qualified for disposition. Allow user to unqualify	
File Plan Extension (FPE)	Allows a user to create new case categories	Restricted to teritiary level file plan creation only
Classification Review Tool	Allows RM to quickly review documents declared that day, and review a statistical sampling for classification accuracy	Application.
Bulk Updater	Mass update of affected records on fields such as Qualified, etc.	
Disposition	Acts on qualfiied records. Destroys or transfers qualified records	Application.
In-Progress Follow-Up	Follow up on in-Progress docuemnts	Custom Workflow
Records Folder Creation	Creates a new records folder	Embeds a category from file plan
Upload	Upload a document as a declared record	Custom App/script. Re-usable in most Upload/Declaration scenarios

Appendix 6 – Microsoft Resources

Below are some online Microsoft Resources for learning more about recordkeeping in SharePoint 2010:

Technet – RM Overview	http://technet.microsoft.com/en-us/library/cc261982.aspx
ECM Team Blog – Records Management	http://blogs.msdn.com/b/ecm/archive/2010/02/13/introducing-records-management-in-sharepoint-2010.aspx
RM in SharePoint Server 2010	http://technet.microsoft.com/en-us/sharepoint/ff598594
Government Solutions for Records Management	http://www.microsoft.com/industry/government/solutions/records_management/default.aspx
Records Management Programming Model	http://msdn.microsoft.com/en-us/library/ff465318.aspx
Implement Records Management in SharePoint 2010	http://office.microsoft.com/en-us/sharepoint-server-help/implement-records-management-HA101836358.aspx
Configuring In-Place Records Management	http://office.microsoft.com/en-us/sharepoint-server-help/configuring-in-place-records-management-HA101729118.aspx
Understanding Messaging Records Management	http://technet.microsoft.com/en-us/library/dd335093.aspx
Plan Records Management	http://technet.microsoft.com/en-us/library/cc262114(office.12).aspx
Records Management Roadmap	http://technet.microsoft.com/en-us/library/cc263372(office.12).aspx
Managing Records and e-Discovery	http://msdn.microsoft.com/en-us/library/ee557329.aspx
Design Records Management Topology	http://technet.microsoft.com/en-us/library/cc263440(office.12).aspx
Case Study – Towers Watson	http://www.microsoft.com/casestudies/Case_Study_Detail.aspx?CaseStudyID=4000006779
Messaging Records Management Strategy	http://technet.microsoft.com/en-us/library/cc262982.aspx