



ENTERPRISE CONTENT MANAGEMENT STRATEGY



Stephen S. Choolfaian



Executive Summary

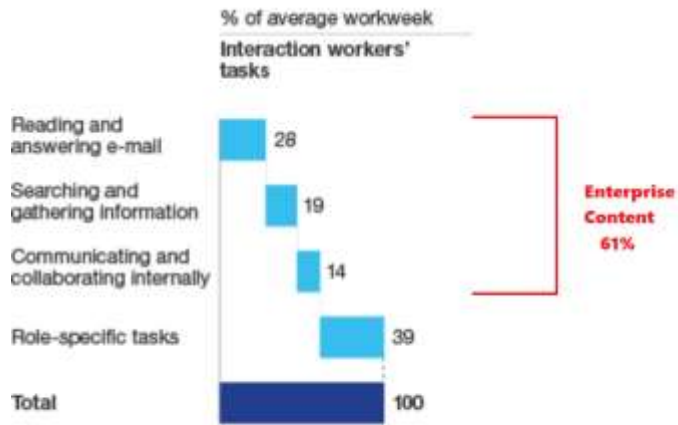
Enterprise Content Management (ECM) is a systematic approach to managing content throughout its lifecycle. It enables unstructured information — such as Word documents, PDFs, emails and scanned images — to be securely stored and made accessible to authorized users. While content is a broad term, for the purposes of this document it can be considered unstructured data that is transportable and meant to be interacted with directly by end users.

This strategy document covers these key points:

- The types of enterprise content
- An analysis of the enterprise content lifecycle
- A description of ECM core features
- An inventory of existing [REDACTED] ECM platforms
- An analysis of the ECM features implemented on those platforms
- Principles and ideals that govern this document's strategic recommendation
- A three-phase strategy for the implementation of ECM features, transfer of content into ECM platforms and eventual re-evaluation of platforms

Overview

In an average company, studies have shown that workers spend an average of 61% of their workday performing tasks that involve either the production (e.g. writing a document) or consumption (e.g. reading an email) of content. Consider the composition of a typical corporate meeting; it is scheduled via email, directed via a digital slide deck, questions from attendees are microblogged to the presenter/organizer, the meeting is recorded to a multimedia stream for future viewings and meeting minutes are gathered into a word processing document and disseminated via a follow up email.



Source: International Data Corporation (IDC); McKinsey Global Institute analysis

What is Enterprise Content?

The simplest definition of enterprise content is that it is unstructured information created for the direct use of end users. Some analysts break enterprise content down into hundreds of categories. However, most content falls into one of seven types:

- Document - Generally a single content item that is meant to be created or consumed by an end user directly e.g. a guide or report and is shared with other users.
- eMail – Electronic message correspondence from internal or external users to individuals or groups. Used for communication and to share documents which can be embedded into the email as an attachment.
- Microblog – Also known as a chat or text, a microblog is an electronic message that is usually less formal and more direct than an eMail. Microblogs may contain attached documents, but technical and interface limitations usually preclude them from being an efficient form of content sharing.
- Media – Videos, sound clips or presentations usually streamed versus stored or cached locally due to their large size. The multimedia aspect provides an interactive quality to the content.
- Message Board – Also known as a forum, a message board is an online discussion site where people can hold conversations in the form of posted messages that can be seen by all members of the message board. The style of the platform encourages open communication.

- Web - Hypertext based content often organized into a 'site' that contains multiple pages. Webs may also reference documents stored locally or elsewhere. The attractiveness and functionality built into a Web make it a great place to present information to a wide audience.
- Wiki – Similar to web content, Wikis are hypertext content edited and managed by end users directly via a standard, simple interface for the purposes of maintaining an internal knowledge base. Usually less polished than a Web, Wikis emphasize function over form.

Enterprise Content Lifecycle

A more important aspect of content than its type is how it relates to active business processes. **Content that is part of a business process is valuable; content that is not is a liability.** According to the Association for Information and Image Management (AIIM), a typical content lifecycle includes seven steps:

- Capture – The scanning of images, creation of word processing documents, etc.
- Preserve – The storage of captured content.
- Categorize - Categorization or grouping of content allows for repurposing, maintenance and compliance review.
- Process – Applying workflow and rules to content to ensure compliance with business processes
- Publish – Pushing content to platforms where it can be consumed by end users (e.g. publishing a web page)
- Archive - Identifying "good" content to only include currently approved content or content with decision-making purposes, moving the rest to ancillary storage platforms.
- Remove - The permanent deletion of content at the end of a defined retention period to remove risk and clutter.

These categories cover most business scenarios. However, for the purposes of the [REDACTED] strategy, we will adopt a simplified approach and categorize the content into four lifecycle stages:

- Draft – Content in this stage is in a temporary and/or transitory state e.g. draft documents or notes and is usually stored in the private drive of an end user.
- Store - Content that needs to be stored in a centralized location as it provides information, reference, guidance or proposals e.g. a F.A.Q., summary report, lists of information, etc. **While this content provides value it should not define policy or contain customers' private/confidential data or legal agreements.**
- Record – Content that is marked as an official record, denoting it has advanced through company business processes/approvals. **This content holds private and/or confidential data, business decisions, policies and/or legal agreements e.g. contracts and should be moved to a strictly controlled record management platform.**

- Dispose – Content that has no defined organizational value because it's old, outdated and/or its retention period has expired will be marked for permanent deletion without recovery. **This content is a potential risk and/or liability, as it may negatively impact business operations or be discovered by legal proceedings, and it may inaccurately portray [REDACTED] business policies or decisions. Additionally, its existence may violate data disposal/privacy laws.**

An example of a content lifecycle can be illustrated with the development of this document:

1. While the author works on the initial document it is in a 'Draft' state and has the fewest organizational controls and is stored in the personal drive of the author.
2. When the first release version has been completed, the document advances to the 'Store' state, where it is put on a centralized platform for review by peers. Some controls, e.g. version management, are implemented.
3. When management approves the strategy, there might be changes to IT operating procedures or policy. At that point it would advance to the 'Record' stage where there is implied legal significance.
4. Once the strategy has expired or has been replaced, the document moves to the 'Dispose' stage. At this point it no longer provides value to the company and instead increases risk in that it provides incorrect guidance to employees and possibly legal liability.

It is important to emphasize that the primary purpose of the enterprise content lifecycle (and the management of the lifecycle) is to ensure security and compliance and decrease enterprise liability. **End users like to store 'CYA' content to prevent career liability; however, this cannot be at the expense of company risk.**

Enterprise Content Management Core Features

When we consider enterprise content 'managed', this means that several technology features/capabilities have been implemented. These core features include:

- Document Management – Storing, managing, tracking and disposing of multiple versions of large numbers of electronic documents through standard sets of features e.g. major/minor versioning, check in/check out, workflows etc. *These features facilitate controlled collaborative content development, so that users don't step on each other as changes are made to content.*
- Data Categorization - Ability to assign descriptive data to content e.g. a keyword, reference information or publication state via property fields, tagging or content typing.

Categorization allows the grouping of content for repurposing, applications, workflow/compliance review and search accessibility.

- eDiscovery – Functionality to assign content retention policies, legal holds and to generate content searches based on parameterized requests from general counsel regarding litigation. *Legacy systems often use painful, overly broad manual processes to search for documents across a period, whereas ECM platforms have capability built into the platform to discover results quickly and surgically.*
- Data Loss Prevention – Real time prevention of potential data breaches/data exfiltration transmissions by monitoring, detecting, and blocking sensitive data while in use, in motion, and at rest. Capability to encrypt or partially encrypt documents so that content access can be managed even though it is outside of the organization. *These features provide highly advanced capabilities to protect data even once it has left the organization and to discover and deal with breaches immediately.*
- Record Management – Systematic management and control of the creation, maintenance, and destruction of content-based records and related business transactions. *Record Management provides the capability to rigidly lock content into a controlled state where it is controlled by automated business processes e.g. retention schedules or privacy policies.*
- External Content Sharing – Ability to share content with users outside of the organization. *Provides a mechanism for partners, vendors and customers to securely collaborate with pockets of internal content while limiting exposure to the wider Enterprise.*

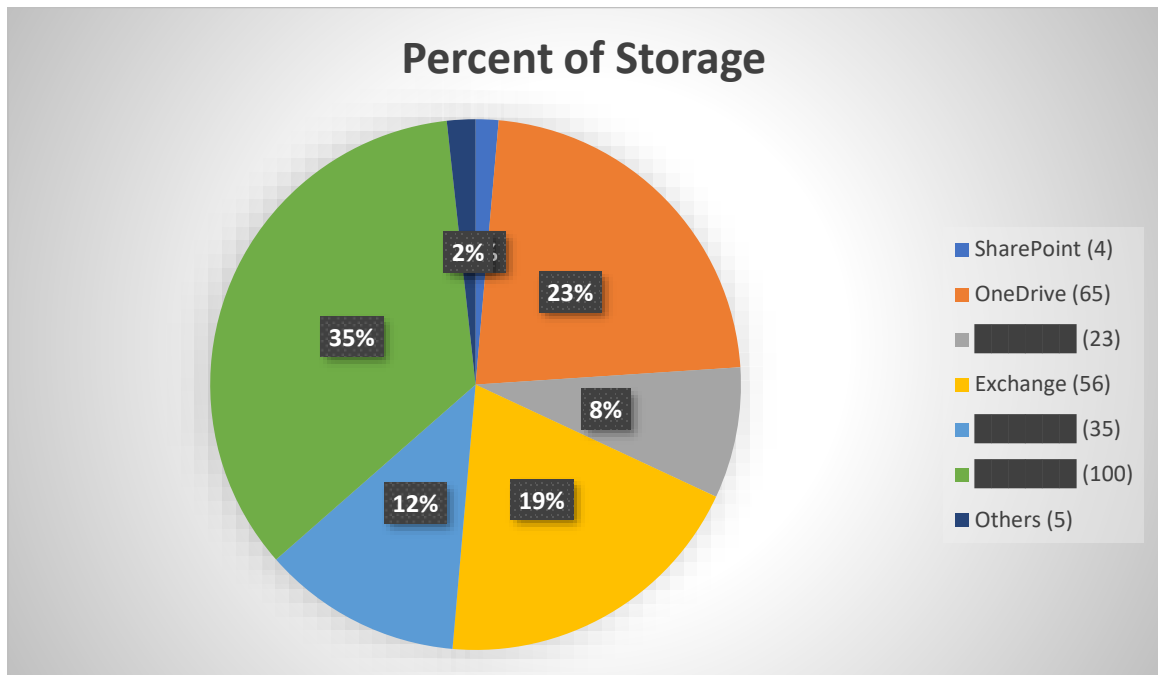
ECM Platforms

itself utilizes a variety of ECM platforms, each providing specific business and technical advantages. As many of these platforms have been implemented at different points serving different business requirements and have been subsequently upgraded, there is significant feature overlap.

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- Exchange Online - Microsoft Exchange Online is an Azure SaaS based messaging solution that delivers email, calendar, contacts, and tasks to end users. Email is also commonly used by end users for content management and storage, either personally or in a group setting through shared mailboxes.
- Microsoft Teams – Azure SaaS collaboration solution offering workspace chat and videoconferencing, file storage, and application integration.
- [REDACTED]
- [REDACTED]
- OneDrive – An Azure based file hosting service operated by Microsoft providing personal file storage, client-side file synchronization and cloud backup for client devices.
- [REDACTED]
- SharePoint Online – Azure hosted SaaS web-based collaborative platform that integrates with Microsoft Office that functions primarily as a document management and storage system. SharePoint Online is extensible and integrates with the Microsoft PowerPlatform and other tools for easy development. Integrated with [REDACTED] Azure AD for authentication and authorization.
- [REDACTED]

Assessing the actual use of these platforms would be difficult given the various patterns of use (i.e. integrations, some being app platforms as well as content platforms, etc.) However, we can partially assess their enterprise impact based on storage.



Core ECM Feature Implementations

The implementation of core features across platforms:

								Exch. On.	MS. Tms			OD		SPO	
Document Management	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes
Data Categorization	Yes	No	No	Yes	No	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes
eDiscovery	No	No	No	No	No	Yes	No	Yes	Yes	No	No	Yes	Yes*	Yes	Yes*
Data Loss Prevention	No	No	No	Yes*	No	Yes*	No	Yes*	Yes*	No	No	Yes*	Yes*	Yes*	Yes*
Record Management	No	No	No	No	No	Yes	No	Yes*	Yes*	No	No	Yes*	Yes*	Yes*	Yes*
External Content Sharing	Yes	No	No	Yes	No	No	No	No	Yes*	Yes	No	Yes*	No	Yes*	Yes

Color codes:

- Green denotes available and implemented
- Yellow denotes available and unimplemented
- Red denotes unavailable in current platform
- Highlighted platforms are locally managed.

The platforms can be grouped as follows:

Partial ECM	Full ECM (Locally Managed)	Full ECM (SaaS)
• [REDACTED] • [REDACTED] • [REDACTED] • [REDACTED] • [REDACTED] • Exchange Online • [REDACTED] • [REDACTED] • OneDrive	• [REDACTED] • [REDACTED]	• Microsoft Teams • SharePoint Online • [REDACTED]

Methodology for Developing a Strategy

In developing the ECM strategy, there were five key principles to keep in mind:

1. **Unmanaged/uncontrolled content presents security, compliance, and liability RISK to the enterprise**
2. **Where reasonable, ECM controls should be enabled on existing platforms**
3. **Where reasonable, content should be moved from platforms with weaker controls to platforms with stronger controls to lower risk**
4. **Developing management policies and implementing technical controls on existing platforms should be the primary objective of the strategy; gap, synergy, and cost saving analysis should be a secondary effort**
5. **Implementation of the strategy will require a multi-phase, multi-year effort**

Implementation of the strategy would yield these ideal outcomes for the company:

- Reduced risk, through improved security, compliance, and eDiscovery controls
- Minimal disruption to business users through the implementation of the strategy, with transparent, automated controls existing afterwards
- Content moved from legacy platforms to modern platforms with better controls
- Movement from locally managed on premises or IaaS to SaaS ECM platforms

Strategy

Given the amount of content and potential disruption to the user community, the proposed strategy for ECM at [REDACTED] is recommended to be broken into three phases, each of which could be expected to take 6–12 months and require capital expenditure to complete.

Phase I – Implementation

[REDACTED], Microsoft Teams, the [REDACTED] SharePoint Online instances, and [REDACTED] have been assessed as ECM capable platforms while others, e.g. OneDrive and Exchange Online, are partially capable. This strategy proposes these platforms implement their native ECM capability when possible. The tasks would include:

- Create security, compliance, legal, human resources, and office of the customer work groups to make policy decisions
- Design policies to support Document Management, Data Categorization, eDiscovery, Data Loss Prevention, Record Management, and External Content Sharing feature sets
- Plan with the platform support teams what configurations and integrations are required to support ECM policy and determine impact to existing business processes, if any.
- Implement the changes to raise all platforms to maximum ECM capability

Phase II – Transfer

The primary goal of the transfer phase is to move content from less controlled areas to more controlled ones and to change business processes so that content is correctly routed to the right areas initially.

- Assess content that needs to move to ECM platforms due to security or compliance concerns (e.g. [REDACTED]) and develop an order of transfer based on severity and ease of move
- Determine what business processes need to be changed to get content to the correct ECM state (e.g. declaring an email a record) or platform (e.g. transferring a SharePoint file automatically to [REDACTED])
- Communicate to the business on how the new ECM strategy affects their operations (e.g. how disposal means they will not be able to keep some documents)
- Plan with each platform support group how content will transfer to and from their platforms and coordinate the moves with the office of the customer

Phase III – Re-Evaluation

Once existing content has been moved to the appropriate ECM platforms, this strategy recommends re-assessing the existing technology stack to determine if gaps exist or synergies are available. These questions need to be explored:

- What platforms do not have sufficient ECM capability? Do these platforms increase risk?
- Are the remaining ECM capable platforms feature redundant? If so, does consolidation cut costs and make business sense?
- Can we move locally managed platforms to SaaS solutions hosted by the vendors?
- Are there any feature gaps in our platforms that we can close with third party vendors or custom solutions?

Conclusion

An Enterprise Content Management strategy is going to be a very necessary and very large undertaking. [REDACTED] has the platforms to execute a strategy; the biggest challenge will be to define the policies that inform controls and to implement those controls on existing systems.

Once we have gotten our content into the best controlled environment possible there will be opportunities to adjust our technical landscape and find synergies and cost saving opportunities.