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An Enterprise Approach to Managing Content

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When an organization receives thousands of pieces of client information a day in all different kinds of forms, managing content effectively must be a core focus. An efficient content management system should quickly capture, identify and file content while alerting business processes and users that it arrived. Many of our client's systems cannot execute this process because it was originally designed for a single department and then later extended across the enterprise. They find that some of the original design elements simply do not hold up when users across multiple departments need to use the same documents.

Indeed, managing content can be overwhelming in a multi-faceted business environment that is not designed to handle the growing complexity. **Without an enterprise approach to managing content, costs skyrocket, duplicate documents enter the system, it is unclear if information is up to date and the management team has little insight to improve process efficiency.**

To prevent these consequences, organizations must consider an enterprise approach to managing content from the outset. It is not as hard as it sounds as long as you apply a few guiding principles and have the right tools.

Consider the following example of a customer working with a bank that has not adopted an enterprise approach to managing content:

We will reference the below scenario throughout the white paper although this approach does not strictly apply to banks.

> John is an entrepreneur who uses the same bank for the small business he owns and his personal needs. He has a business loan, home mortgage and a couple of car loans. John is successful and quite busy with his business. When he wanted to get a line of credit to make home improvements, he was frustrated that the bank asked him to submit a series of credit and collateral documents. "With all the business I have with your bank, why don't you just look it up?!"

What John did not realize is that his bank has siloed departments, each with their own set of business processes that do not share client information or documents with each other. Each department is responsible for collecting its own applications, collateral documents and reviews. So, the line of credit department needed to collect much of the same information that the mortgage and business loan departments already had.

John's story is increasingly emblematic for any organization looking to improve its client experience. Collecting information once and reusing it for each product reduces the amount of effort on your client's part. More importantly to organizations, it brings to light new and different potential sales opportunities — aka upselling. Perhaps John would be interested in a summer home so he can get away from the business. Now imagine that the suggestion for the summer home came from the bank that assured him that financing would not be a problem. Now John is really considering it!

Document Indexing Strategies for an Enterprise Approach

The first step is to determine how to collect, describe and store content in an easily-searchable way. Some terms to know:

- Metadata: Information that describe content
- Indexing: Process of planning and assigning metadata to content
- Taxonomy: How an organization classifies written, printed or electronic content

A common poor practice in legacy business processes is to create metadata that describes how the content was used, not what the content is.

Let's use a W2 form as an example. John wanted a mortgage loan so he submitted his W2. The loan processor approved it then set a metadata property on it called "Reviewed and approved for mortgage."

Later on, John wanted to open a line of credit which also required his W2. When the bank looked at his W2, the metadata property "Reviewed and approved for mortgage" was confusing and not helpful. The processor could have added a new property called "Reviewed and approved for line of credit," but you can see how this approach quickly clutters the document's taxonomy.

Instead, most banks ask for another W2 form. How do you think John felt about this?

Limit Metadata to Describe What the Document is, Not How it is Used

We have all heard the expression "less is more." In the case of content metadata, this adage is true. Rather than include properties to describe how the document was used ("Reviewed and approved for mortgage"), **include properties that describe what the document is (W2) and who it came from (John).** Then, no matter what business service or new product John asks for, the W2 is still relevant and there is no need to ask John for a new copy.

But then how does the bank know that the W2 helped approve the line of credit or any other decision?

The answer depends on the type of content repository you use. Here are a few design guidelines that we apply in IBM FileNet systems:

1 Use Folder Properties to Identify the Business Process

Folders are a way to describe the business process and organize related content. For example, John's bank could create a folder for "Mortgage," "Line of credit" and "Small business." **The W2 document is then linked to each of those folders, making it available in each business process without duplicating the document.**

Using well-described folders to file documents is the first step in an enterprise architecture. It ensures that content and processes are appropriately separate. It also enables the business to grow as it establishes new product lines.

Don't stop at better filing though. Recall we also want to know if the W2 was part of the approval process…

2 Tag Documents With Process-Specific Information

An approach we recommend is to use process-specific tags (icons placed on content) for each process within an organization. For our mortgage example, there could be a "Decision document" tag that indicates the W2 was part of a set of decision

documents. Since mortgages are often resold, a tag could also indicate that the W2 was reviewed and is "Ready to export."

These tags have little meaning for any other process, so they **are only visible within the context of the process for which they were assigned.** This avoids confusion and makes the process crystal clear.

3 Bookmark Key Information on Documents

At this point, the business user found the W2 in the "Line of Credit" folder and it has an "Approved" tag on it. To get more specific, the user can also add bookmarks to information on the W2. For John, the bank was only interested in the total wages paid to him by his company, so the user could add a bookmark to the "Wages, tips, other comp." field. By placing a bookmark there, any user can quickly jump to that information instead of looking through the document for it.

Extracting and exposing key information on documents streamlines business processes and ensures that it is used across the enterprise.

RECAP

To recap, here are the document indexing strategies we applied to John's W2:

Metadata = What the content is
Examples: W2; John

Folders = Process content involved in
Examples: Mortgage; Line of Credit; Home Loan

Tags = Process-specific information
Examples: Ready to export; Decision document

Bookmarks = Key information within content
Examples: Name; Wages, tips, other comp.

Processing Tools that Support an Enterprise Approach

Okay, so we went through scalable methods of storing and characterizing content, but what about the tools that actually work with the content?

Quality tools are essential in facilitating a positive user experience for employees. They can make the difference between a content structure that works or one that is simply unusable.

Search Feature

Organizations often need to know content's location and use/purpose. For example, John's bank may need to know that his W2 is in four separate loans so if a correction is made to it, the bank knows which processes the change will impact. Recall that we already recommended a single document be linked to all the folders where it is used. **A search tool needs to be able to return all of the folders in which a document is filed.**

Conversely, you may want to know the content associated with a decision for a particular process. In the case of a loan, your search tool should return all the documents tagged as "part of the decision."

Users cannot perform this kind of search with outdated content management tools. They can usually only look for folders, then drill down to see the filed documents. It's a multistep process best replaced with a more capable search tool.

Process Tags

Process tags, as we mentioned before, are **a way to describe how content is used and characterize documents by business process.** Tags must be extremely flexible so they can change with your organization without the need of approving

an IT project. Business users should be able to configure tags as needed. If the bank institutes a new process, the tags should be able to easily accommodate it.

At the same time, tagging should not be so open that any user can create them. New tags should be reviewed and approved by the business based on an accepted process change.

Bookmarks

Users want to open and read documents as little as possible. They are on the hunt for something specific, so a **system that can automatically identify, extract and create bookmarks that display key information through a simple search, is ideal.** That way, users can find what they are looking for without ever opening the document. Some example bookmarks include "Date of birth," "Salary" or "Loan rate."

> "Characterizing content and extracting key features by process should be a fundamental strategy in any enterprise content management system."

It is best to categorize key information (bookmarks) by type. For example, you could have categories for:

- Personal information
- Financial details
- Loan related

The ability to categorize bookmarks by information type and then search the categories, makes it easy to find key information for decisions.

If a user does need to open the document to gain context around the information, they simply click on the bookmark and it jumps straight to the information on the page. Bookmarks improve process efficiency and reduce verification errors.

Document Viewer

Characterizing content and extracting key features by process should be a fundamental strategy in any enterprise content management system.

Our recommendation and what we see work best is a document viewer capable of creating bookmarks and tags while the user views a piece of content. **A document viewer should be aware of which process a document is in so only bookmarks and tags pertinent to the current process are visible.** For example, when viewing the W2, only the tags that belong to the "Line of Credit" process should be available for use.

Automated techniques to create bookmarks and tags should also be an option. Modern scanning tools find, highlight and bookmark key information when content first enters the system.

Split and Merge

Splitting or merging documents together can be an onerous task. Many users print, reassemble and re-scan content back into a system, wasting an incredible amount of time and paper. Do you know what this does to your processes? Quality, time and association between the original content and final document is lost.

Split and merge tools should preserve content, tags and bookmarks. It should automate indexing so metadata from the original document transfers to the new document without re-coding. There should also be an audit trail for the actions performed to maintain traceability across the process. Exceptional document processing tools make it

easy to find information and thus create a positive user experience. Essential tools that any content management system should have are a search feature, document tags, the ability to create categories, an efficient document viewer, and the ability to easily and accurately modify content.

Securing the Content

In any content management system, controlling who can see and act on content is a critical design element - especially when that content may be used across the enterprise for multiple purposes. This is another reason to limit the taxonomy of documents to focus on what it is and not how it is used.

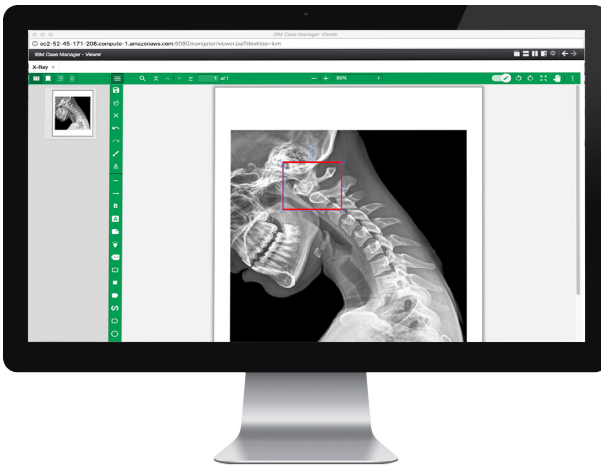
But there are still questions as to who can change document properties or make an update. In one process it may be necessary to retain the precise version of the document, while in another process users can add new versions. So how can we reconcile this?

The answer is not simple and you will need to apply several tools to help.

Security Groups

Divide users into different groups and apply document rights based on these groups. This will identify who is allowed to see, modify or delete a document and who is not. The model also needs to identify groups allowed to markup a document and groups allowed to see the markups.

In a content management system these markups



need to be process specific. You may not want to allow the markups made in consumer lending to be visible to users in the commercial department. In this case, creating classes of markup that are process-specific is a good approach. Even while creating a departmental system, consider that there may be a department in the future that will view and interact with the document.

For business processes that use a specific document version, design the process to point to that specific version. That way, other departments can update the document for their own needs and it will not invalidate the version you are using.

Managing the Content Life Cycle

All content has a time when it needs to leave the system. Keeping old content does not help an organization. Expired content clutters a system, creates a resource burden and potentially increases legal liability.

In the vernacular of content life cycle, content is referred to as a record and is handled using a records management policy. The policy is based on legal, regulatory and business requirements. When considering content end of life, assume that

different business units will use the same piece of content. This means that you need to **design a system that allows multiple policies to apply to a single piece.** Whether the content can be disposed will depend on whether any one policy requires the content to remain active.

Pyramid eXpeditor for Content

Pyramid Solutions' Pyramid eXpeditor for Content is a set of tools designed to ease the challenges of content management. It is a bundle of feature-rich plug-ins that extend the capabilities and functionalities of IBM Content Navigator.

The Bookmarking Viewer is a high-speed HTML5 document viewer that loads small and extremely large documents (i.e. hundreds of pages) and provides a powerful workbench to find and characterize key information.

The Content Explorer finds and returns filed documents so retrieval in enterprise configurations is straightforward. It can also search for and return bookmarks for instant access to a specific page of a document.

Split/Merge makes it easy to manipulate and modify content without printing. You can create or correct documents, scan and classify errors, or assemble document packages.

Users can also leverage the Tagging feature to create icon representations of tags — a way to label the status, location and purpose of content.

Learn more about PX for Content at pyramidsolutions.com.

If you're interested in trying Pyramid eXpeditor for Content, go to pyramidsolutions.com/px-content-trial/ to participate in a free two-week trial.

About the Author

Kevin Knill is passionate about using technology to create a better world. He has worked in a variety of industries including mining, petrochemical, power generation, aerospace, automotive, insurance and banking. At Pyramid Solutions, Kevin applies his software engineering and managerial experience to develop and deliver products and services in our ECM line of business. He has his Bachelor's, Master's and PhD in Mechanical Engineering.

Outside of work, Kevin taps into his Canadian roots by coaching little league hockey.

About Pyramid Solutions, Inc.

Pyramid Solutions develops products and innovative solutions for organizations in a wide range of industries – from financial institutions to insurance providers to automotive suppliers and industrial automation companies. We serve primarily as an Intelligent Automation company that specializes in RPA, Business Process Management, Content Management, Capture/OCR and Industrial Automation solutions including MES software and embedded software development. With more than 30 years of experience, we know a thing or two about automation.

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