


CHAPTER 3: Implementation



After you decide what your system needs to be, you need to create it.



A large, stylized, olive-green letter 'Y' that serves as a decorative element on the left side of the page. It is positioned vertically, with its top extending near the top of the text area and its bottom extending near the bottom of the text area.

You've learned how to capture, manage, and store your content. You've convinced management to purchase an ECM technology. Although it involved considerable time and effort, you found the right vendor and ECM technology to solve your content problem.

An implementation involving managing all of the content in your organization (or of one or multiple departments) has many moving parts. In addition to managing the project, there are other issues to consider. This chapter highlights a number of trends that affect how you manage your ECM project. In addition to outlining common steps in ECM project management, turn the page to learn:

- MOSS and where it fits in the context of ECM
- Why teamwork is important
- Service-oriented architecture's place
- What shared services are

Once you understand that resistance to change is human nature, develop a concrete education and training program that will promote the benefits of ECM technology to your end users.



Enterprise Content Management: The Business Case For “Transformative Outsourcing”

By Charles Brett, Managing Principal and Thought Leader, Xerox Global Services

Today, leading organizations around the world are making a major commitment to the process of business transformation. The goal of the re-shaping effort is to achieve greater efficiency, profitability and agility—three vital ingredients in the recipe for 21st century business success.

Typically, organizations begin this transformation by taking a long, hard look at the way they run all of their operations and their business processes. The result of this intensive self-analysis is a crystallized focus on the specific elements of the business model—the core competencies—that enable it to deliver a unique value to the customer and create a sustainable competitive advantage.

BENEFITS BEYOND LABOR COST REDUCTION

In the past, outsourcing was driven by the desire to reduce labor costs in manufacturing, IT, back office operations and other non-core business functions. What's different today is that reduced labor costs are just one component of the outsourcing value proposition. Companies also experience improvements in efficiency, productivity and quality of work by letting outside operational experts handle business processes. This allows for staffing, technological, and financial resources to be re-allocated to “mission critical” core competencies that are focused on generating a competitive advantage in the marketplace.

The result: the organization is more agile, enabling it to respond more quickly to changing internal and external conditions.

Additionally, companies will receive the added benefit of industry-standard best practices and the latest technological innovations in the field from experienced service providers.

When all of these benefits are added up, it is easy to understand why senior leaders at many innovative global companies are now talking about “transformative outsourcing.” In other words, outsourcing is no longer just a cost reduction tool—it is a powerful way to re-engineer operations and accelerate strategic business transformation. Outsourcing has even led some business experts to speculate that, in the future, the most creative corporations will outsource everything but the most critical functions and tasks.

THE INDUSTRY SPEAKS FOR ITSELF

Since every enterprise has to manage content and records that are in both hardcopy and digital form, Enterprise Content Management (ECM) is an essential activity today. And they have an important impact on everything from daily operations and risk and records management to knowledge sharing and organizational efficiency. But for the vast majority of businesses, ECM is not “core competency.” By definition, then, they represent a potential diversion of resources and attention from the enterprise’s “mission critical” activities.

Medco Health Solutions Inc., for example, decided to outsource its document management services to Xerox. As America’s leading manager of prescription drug benefit programs, Medco

Health Solutions realized that an outsourcing services provider would liberate internal resources to focus on the company’s core business objectives.

GETTING TO THE HEART OF THE MATTER

However, few organizations are equipped to manage their content in a way that fully leverages the content’s value. Even in cases where the required ECM infrastructure is in place, business processes rarely help an organization sustain a competitive advantage because it is not the core function or role for internal employees.

This further proves that ECM is too often a non-core process that has an unintended side effect of diverting resources from strategic initiatives designed to help the organization achieve long-term growth and improve its competitive position in the marketplace.

To get to the core of whether your company requires a services partner, there are clear steps an organization can follow:

- *Understand the issues that affect ECM:* Know how your current approach to content and records management directly impacts content-related business activities, including strategy, staffing, process, and technology.
- *Examine the role ECM plays in key operational functions:* ECM is integral to operations at both the enterprise and line-of-business level, such as customer service, invoicing and purchasing, and litigation services, which may represent a significant, ongoing management

challenge if not handled properly.

- *Assess the potential impact of outsourcing:* The ultimate test of whether outsourcing ECM makes sense for an organization is whether it will experience significant improvements in the quality, efficiency, and cost-effectiveness of ECM operations.
- *Choose a qualified outsourcing partner to manage your ECM operations:* Clearly define your company's requirements for a successful relationship, which will serve as the foundation for a partner evaluation process. Remember to develop these requirements with colleagues from IT, sales and marketing, human resources, operations, and other internal ECM stakeholders.

IF THE SHOE FITS...

Organizations ready to outsource its ECM activities should keep in mind the following insights in selecting a services partner.

A long track record. Years of experience are no guarantee of success, but they do indicate whether or not a company has been able to satisfy a large number of customers over a long period of time.

Financial stability. A stable, well-capitalized company offers advantages in terms of talent, resources, technology, and viability.

Expertise in technology and service delivery. Since ECM services depend on technology, the partner needs to have in-depth understanding of all of the technical issues involved as well as broad expertise in service delivery.

Industry expertise. In today's competitive environment, the learning curve needs to be short. Finding a partner with industry experience is a must. Partners can employ industry best practices, which will lead to a faster ROI.

The ability to respond quickly to change. Flexibility is a key requirement for any business relationship in an age of constant change. Make sure that the outsourcing partner is ready and willing

to adapt to the planned and unplanned changes and be aware of new ECM technological innovations.

Performance management experience.

Companies that have experience with a metric-based performance management system, such as Lean Six Sigma have an advantage over other providers in their ability to operate effectively in systems based on quantifiable performance monitoring and measurement.

Continuous improvement commitment.

In a business environment that places a premium on operational efficiency, continuous improvement is a necessity, not a luxury. You'll want to ask potential partners how they intend to deliver continuous improvements to you.

Committed to communication. Open, ongoing communication is a priority in outsourcing. A partner must be able to develop and implement a detailed, multi-faceted communication plan that will help build an effective relationship with all of the company's stakeholders. It's important to remember, however, that regular, high-level strategic reviews are only one aspect of an effective communication plan.

Expertise in information security. Documents, records, and images are valuable intellectual property and the services provider needs to have the experience, expertise, and technology to protect this information. Consider it a bonus if your partner has hands-on experience in the development of innovative information security technology and processes.

NOW IS THE BEST TIME TO EVALUATE OPTIONS

What's important to keep in mind is that the best time to begin evaluating an ECM solution is now. Of course, a truly effective solution involves the entire enterprise—strategy, people, processes, technology, and policies. So it's important to work with a vendor who has the ability to provide a comprehensive and holistic solution rather than one with the capability to only address a "piece of the puzzle."

ABOUT XEROX GLOBAL SERVICES

Xerox Global Services looks at business challenges in a whole new way. More than 15,000 consultants and service delivery experts help companies reduce costs and dramatically improve communications by managing office assets and output, re-engineering document-driven processes, and optimizing print production environments.

Xerox Global Services employs Smarter Document ManagementSM technologies to add intelligence and structure to both paper and digital documents and activate the content they contain. Our extensive industry expertise, combined with tools like Lean Six Sigma, creates a powerful portfolio of services that adds real value to enterprises worldwide. For more information visit: www.xerox.com/globalservices.

The value of taking early and effective action will be clearly visible where it counts most—on the bottom line.

Charles Brett, managing principal and thought leader for Xerox Global Services, is an industry-recognized expert on enterprise content management, archival and storage strategies, records management, and compliance issues. At Xerox Global Services, he is responsible for helping a broad range of clients find more efficient ways to secure, access and control their most critical information. Brett has extensive experience improving document-driven business processes designed around delivering measurable results for clients. For more information visit: www.xerox.com/thoughtleadership

Ten Steps to Building an ECM System

Effective project management is crucial to any successful IT initiative, ECM included.

By Steve Kass

Whether you are implementing a new ECM system, converting an old or departmental one to a new or enterprise installation, or converting a backfile, you will be managing a project in that process. This article will discuss the common steps and stages of managing that project.

According to the Project Management Institute (PMI), there are five standard stages relevant to project management. They are initiating, planning, executing, controlling, and closing the project. Within them are many techniques and steps that are specified, but no matter which type of project you are managing, these steps can be applied. Here are ten steps you can apply to ECM projects. This process works!

Depending upon the size, scope, and budget, you may use more or fewer of these elements. Guided by these ten steps, you will follow the correct path and the essential elements of creating an ECM system. Also, depending upon your organization's policies and customs, templates, forms, or styles may be used that will dictate the shape of the project ingredients.

You may be the initiator of the project, you may be named the manager by another individual, or you may be called in at some point during its progress. Whatever the case, you will need to know these basic steps that will take you from the beginning ideas about a project through to completion. If you join after the beginning, you can pick up at the appropriate place,

or even use these elements to complete the formality of the project documentation.

1. PROPOSING AN ECM SYSTEM

If you are involved from the beginning, the first thing to do is develop a project proposal. This precedes the initiation phase because until the proposal is accepted or approved there is no project. Your objective is to make an initial case for your management to justify the expense, time, and resources to pursue this project. Once the green light is given, you will initiate a project.

It is in this document that your strategy begins to take shape. You will want to sketch out the idea for the initiative by beginning with its need, and the problem it is intended to solve. It may be for one application in a single department, or an enterprise platform encompassing documents, email, and workflow (obviously, the larger the scope, the larger the proposal). Talk about the scope in general, high-level terms, and include a few paragraphs about potential cost, time to implement, and what kind of resources it will take to complete. If you can generate an estimated ROI, include it.

2. ECM SYSTEM PROJECT CHARTER

Once a project has been given the green light, it is time to prepare a project charter. This is the document that gives the project and the project manager formal authority. It is signed by the sponsor(s) and states the terms of the initiative. It is also where the concepts

and ideas are formulated for the scope, the requirements, the statement of work (SOW), and the project plan. By this time, it is important that you have identified at least one sponsor, and your potential stakeholders. Name them and their roles here, along with a descriptive project title for reference throughout the organization.

Begin to describe the problem as it exists today and then how this initiative is intended to remedy it. Try to keep this statement in business terms with the technology terms kept to a minimum. There will be plenty of time to spend on technical documents in later phases of the project. Once the problem is clear, state the goals and objectives for the project. Be sure to talk about the benefits to the stakeholder's departments and your entire organization as well.

Include your name as project manager. Your authority will flow from this document and those who sign it. It's an important ingredient in the success of the project.

Fully describe the scope of the initiative at a high level including all of the major features. Be sure to state what is NOT included as well. (We'll want to avoid scope creep, and here is where your basis for controlling scope begins.) As with most major documents, circulate and solicit feedback from stakeholders and sponsors so that you are all in agreement and there will be few surprises. You need everyone's support to succeed.

3. ECM SYSTEM SCOPE

The important scope document serves to define the project in some detail. With the objectives stated in the charter, you will begin to lay out the project in terms of the deliverables. You must try to include everything in this document that is to be accomplished in this project. This goes deeper than the high-level or overview. In fact, give a summary in the beginning of the scope. It does not necessarily need to contain detailed technical information, but does need to describe the technology architecture and topology, if that is relevant to the project. Also, recap all the charter information in this document for reference. It's OK to even use the same words...if it works in the charter, it will work here.

Be certain to cover all of the features and functions that will be included. This document becomes one of the fundamental building blocks for the entire project

plan, so it is good to put some work into this to get it right and complete. Also, be careful to progress logically from goals and objectives to solutions that are aligned with them. As with the prior step, say what is not included for clarity purposes. A statement of resources required along with budget, time, people, and systems would complete this document.

Even if you are doing this entirely in-house, you need to have a tight statement of work to act as the basis of understanding between you, the eventual users (owners), and those who will build and implement it (the technologists).

4. ECM SYSTEM REQUIREMENTS

The scope document will give you guidance on how to proceed to gather requirements. It is a relatively straightforward approach in that the scope states the problem and deliverables...the requirements represent the information you'll need to fulfill those deliverables. If the project addresses an enterprise need, you will need to meet with each department and determine how they will benefit from your efforts and what they require in the solution. If you are developing something for a specific business unit, then focus on their needs. You will also need to interview and develop questionnaires for the other stakeholders: legal, finance, audit, regulatory compliance, technology, or any other involved entity.

Your role is to guide and be the subject matter expert, leading them into an understanding of the possibilities of the new system. In ECM systems, users always need guidance on indexing and metadata. Capture in all aspects will usually be a part of this. In the end, it is their business need that your project will have to satisfy, so be certain to understand what they need to accomplish, and what their hot buttons are.

5. ECM SYSTEM ROI ANALYSIS

While this may be a part of any of several other documents, the step of calculating a return on investment (ROI) is something that management nearly always

expects. In some cases, a compelling ROI is the only way to get approval for a project. There may be many reasons an organization wishes to do something (business advantage, efficiency, expansion, competition), but most of the time it ties back to an ROI...saving or making more money.

Also known as a cost/benefit analysis, an ROI may be hard (saving money on hardware or cutting steps out of a process to make more profit) or soft (improving customer service or improving brand image). Use a spreadsheet and calculate all of your costs and savings in detail. This is the essence of an ROI: a simple matter of having more savings than cost. Look at this over time (including cost of maintenance) and if you have a positive picture, then you have a solid ROI.

The RFP will place vendors on an equal playing field and make evaluation (your next step) easier as it will keep a structure and commonality to the bids. You can require bidders to follow your format.

6. ECM SYSTEM STATEMENT OF WORK

The statement of work (SOW) is one of the most crucial documents in your process. Taken mostly from the requirements and the scope, this serves to identify exactly what has to be delivered. Since it is common to utilize outside services for a system implementation or custom development, this spells out what is to be done. It is an integral part of the contract you will have with the vendor, so it is most important to have precisely what you do (or do not). This will cost you (your firm) money. Even if you are doing this entirely in-house, you need to have a tight SOW to act as the basis of understanding between you, the eventual users (owners), and those who will build and implement it (the technologists).

If it's capture, outline the specs; if it's conversion, state the deliverable in detail; if it's workflow, describe it in detail as well. Include all terms, service level agreements (SLAs), timing, milestones, quality, testing criteria, and acceptance criteria. Be as thorough as you can. Additionally, include assump-

tion, limitations, and risks to the extent that you can identify them at this point.

7. ECM SYSTEM PROJECT PLAN

Entire series of books have been written about project plans, but we'll stick to the essentials. A project plan needs to contain (depending upon the size and scope of the initiative) from dozens up to hundreds, and even in some cases, a thousand or more lines of detailed tasks that must be performed in order to complete a project.

Each task line will generally include a start and finish date, a duration of how long the task is expected to take (actual person days), the assigned resource either by name or role, a percentage complete, and a dependency such as "cannot start before task #x is complete." Project plans can be quite complex with far more information than this, but these are the basics and are very important.

Plans usually have milestones which may be "pilot delivered," or "phase I complete," or "unit testing complete." Milestones are a good way for progress to be measured and major accomplishments to be communicated, and keep focus and enthusiasm on your project.

Although not part of the project plan, these are other components:

- Communications plan – used to outline the methods, frequency, and recipients of regular communications about the project.
- Risk assessment and plan – used to identify, evaluate, track, and mitigate potential risks associated with the project.
- Team roster and contacts sheet – used to list the members of the various teams associated with the project, and provide their complete contact information (also included is their role in the project, and what constituency they represent).
- Roles and responsibilities – outlines each member of each team, and all ancillary participants (for example, you may need a specialist to participate one day to hook up a special device). This identifies every member and provides information about them.

In particular, larger projects may have additional elements such as quality tracking, budget tracking, and any other specialty that may pertain to the project. There is no hard and fast rule, and many of these depend upon your organization or management's customs.

8. ECM SYSTEM RFP

The request for proposal (RFP) is surely one of the most common ways to formalize the procurement of an ECM system or services. Many organizations already have RFP templates you can use as a guide for your project, but whether you re-use a form or create a new one, they must contain some common elements. You must fully describe the objectives, goals, business and technical requirements, background, architecture, company information, contract and legal requirements, dates and rules for bid submission, and deliverables of the project. A thorough job here demonstrates commitment to the vendor, and you want commitment in return. If you have followed this process from the beginning, you have much of this information (and even text) that can be adapted to this purpose.

The RFP will place vendors on an equal playing field and make evaluation (your next step) easier as it will keep a structure and commonality to the bids. You can require bidders to follow your format.

9. ECM SYSTEM RFP EVALUATION

If your bidders have followed your format, it can still be a tremendous effort to evaluate what they have said. It will be your responsibility first to determine that, at a high level, the vendor and the bid are qualified by your own standards.

In most cases, products and approaches can vary, sometimes widely, and comparing and assessing them can be complex. Many organizations use consultants to evaluate and prepare comparative tables for the most complex RFPs, but you can certainly do this with your own resources. Large documents can be parsed and delegated to team members, and smaller ones can be done by you or a single individual.

To be fair, you must assign a rating system for each criterion and treat this like a giant tally board, scoring each line item with a value. Add comments on subjective submissions and note exceptions. The evaluation team and your presentation to management will address these items, and make decisions based on the raw numbers and the subjective issues.

After this process, you may utilize demos, reference checking, interviews, “best and final” offers (BAFO), negotiations, and any other procedure or technique you wish to complete the evaluation. Make your recommendation and eventually proceed to contract.

10. EXECUTING AND CONTROLLING THE ECM PROJECT

You will utilize your project plan to execute and control your project. You will use your communications plan elements to keep everyone informed and get their feedback. You will receive and prepare various reports on status, milestones, issues, risk, quality, testing, and more. You will also handle everything that comes along while being agile enough to accept and deal with change. (Change is a constant. Don't let it throw you. Just document it, get approval, and move on.)

Be sure to collect and publish all documentation as you go along including your meeting minutes. When you are complete, get sign-offs and keep them, and write a lessons learned document to help those who follow.

FINAL THOUGHTS

As stated in the beginning of this piece, this process works. Take the time to understand a little more about it with research, reading, and discussions with your peers and it will serve you well. The structure itself helps you to be better organized, remember more of the details, and do a more thorough job. Add to that your expertise as a subject matter expert in ECM and you are on your way to a successful project. Good luck!

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The Swiss Army Knife of ECM?

What is Microsoft Office SharePoint Server and what role can the tool play in your ECM strategy?

By Russ Stalters

Microsoft Office SharePoint Server (MOSS) 2007 is the next generation of Microsoft's SharePoint technologies and replaces SharePoint Portal Server (SPS). With MOSS, Microsoft now has many of the capabilities needed to offer an enterprise content management (ECM) suite. MOSS is also a development platform for building rich collaborative Web applications. This is a key Microsoft marketing message. We will take a tour of MOSS and explore some of the core capabilities offered, then review some of the business scenarios best addressed by MOSS 2007.

A TOUR OF MOSS 2007

Before we start exploring the six major areas of functionality provided by MOSS 2007, it is important to understand what Windows SharePoint Services (WSS) 3.0 is and how it relates to MOSS.

FIRST, THE FOUNDATION: WSS 3.0

WSS is the foundation for MOSS 2007 and provides some of the core ECM features. Included with Microsoft Windows Server™ 2003, WSS provides collaborative features, platform services, and a common framework for document storage and management, search, workflow, rights management, administration, and deployment features. Microsoft positions these services as the foundation for building business applications, including their own MOSS 2007. Microsoft SQL Server is the relational database

used for storing all content, data, and configuration information used by WSS. You should only use the included Windows Internal Database for very small installations or evaluation purposes only.

The following are the core platform services provided by WSS:

- **Storage and repository services:** WSS provides a repository for lists, documents, metadata, and Web pages that make up the content contained in a WSS site. Some of the big improvements with WSS 3.0 include item level security, Content Types, and extensible field types. When creating a new list item, the Content Type defines the template and associated metadata properties used. Other behaviors that can be associated with a Content Type include workflow to execute, the resulting actions, and retention and expiration policies.



- **Document management:** A WSS Document Library is a hybrid list that supports uploading/storing documents, document check-in/check-out, and document versioning (both major and minor versions).
- **Site model with provisioning:** WSS uses a site model that supports rendering a website using templates, providing navigation, and a visual blueprint. Sites can serve a general purpose, such as storing schedules, guidelines, files, and other information or a site may serve a more specific purpose, such as keeping track of a meeting or hosting a blog. You add content to sites by adding lists, libraries, and pages.
- **Security model:** Permissions are set on sites themselves and the permissions for lists, libraries, folders within lists and libraries, items, and documents are inherited from their parent site. Assigning permissions on an item within the site will break this inheritance.
- **Application programming interfaces:** WSS provides a rich set of services for customers and partners to extend and customize WSS including customizable property fields and forms, a rich object model, an event framework to trigger actions automatically, and a “feature” deployment model for enabling customization to WSS sites.

COLLABORATION

The underlying enhancements to WSS 3.0 provide the core collaborative functions in MOSS 2007. I define collaboration as staying connected to the people, documents, and information users need to make well-informed decisions and get their job done. Collaboration capabilities include:

- **Mobile device access:** This is a new capability that allows lists to be rendered appropriately on mobile devices.
- Wiki or blog site templates are included, and all lists and pages in MOSS 2007 automatically provide an RSS feed so users can subscribe to changes.
- People and group lists.
- **Email integration:** Document libraries, blogs, discussion boards, calendars, and announcements can receive new postings via email.
- **Task coordination:** The new Project Tasks List template provides lightweight task management functionality, including Gantt charts for visualization of task relationships and status.
- **Improved document collaboration:**
 - The ability to check out documents locally
 - Offline document library support in Outlook 2007

- Major and minor version numbering and tracking
- Support for multiple Content Types
- Policy, auditing, and workflow
- Tree view support for navigating libraries

PORTALS

Think of the portal and personalization capabilities of MOSS 2007 as a series of additional functionality built on top of WSS 3.0. The intranet portal template provides topics and a site directory, and the means to target content to various audiences based on sets of rules. Users can search for people, including an expertise search, and then connect in a number of ways using the built-in social network support. My Sites, in Figure 1 below, provides a Web-based workspace where users can create information about themselves, share documents, aggregate information from other sources, and choose the information and content they want sent to them.

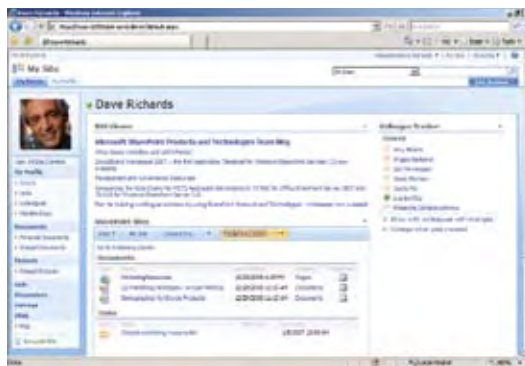


Figure 1: My Site

Microsoft uses Web parts as “mini applications” to deliver content within the portal or site. These would be equivalent to portlets in the J2EE world. Web parts allow for the display and format of customized content and can surface other business applications directly within the site Web page.

ENTERPRISE SEARCH

MOSS 2007 provides searching across all content stored within MOSS 2007 and WSS 3.0 sites. Some new functionality includes “*Did you mean?*” for handling unrecognized keywords that may have been misspelled and duplicate handling. Duplicate search results indicated by a “Duplicates” link are displayed under an individual search result. You can configure best bets for search queries and add them as a callout box on the search results page.

One of the significant new MOSS 2007 search features is the ability to index structured data from external business systems through the Business Data Catalogue (BDC). We will explore the BDC later. Another nice feature of the search (the “**Search Center**”) interface is the extensible tab metaphor, allowing users to select custom search types. Searching for general content, people, certain portions of SharePoint content like employee information, and business data is configurable.

ENTERPRISE CONTENT MANAGEMENT

The three main categories of MOSS 2007 enterprise content management capabilities include document management, records management, and Web content management.

DOCUMENT MANAGEMENT

The following are some document management features:

- Support for major/minor versions
- Protect documents outside the repository by setting information rights management (IRM) policies on the library
- Audited document operations
- Built-in document workflows using Workflow Foundation; the following shipping workflow processes include:
 - Collect signatures
 - Collect feedback
 - Disposition approval
 - Web content translation
 - Issue tracking
 - Three-state workflow
- Content Types, a new addition to WSS 3.0, allows predefined metadata boilerplates so that all newly created documents of a given type automatically have appropriate metadata and business rules
- Metadata displayed with document contents through a Document Information Panel which is shown at the top of Office documents

RECORDS MANAGEMENT

New to MOSS 2007, the Records Center is a SharePoint site template that includes the Records Center Web Service and other features, installed in this special SharePoint Site. The Records Center becomes the hub for all records management processes, including content collection, consistent policy enforcement,

item retention management and holds in response to external events, and content expiration. The Records Center site includes the following features:

- Enhanced security so that records stored in this site are never automatically modified by the system, and records managers can add and maintain metadata on items separately from the record’s metadata
- Information management policies defined for a specific storage location or content type provide consistent uniform labeling, auditing, and expiration of records
- Hold capabilities that make it possible to apply one or more holds that suspend the records management policies on items
- Records collection Interface to aid in content collection for people and automated systems
- Records routing for submitting records to its proper library based on the corresponding content type

WEB CONTENT MANAGEMENT

By migrating Microsoft’s Content Management Server 2002 functionality into MOSS 2007, SharePoint now has integrated Web content management capabilities built in. Some of the features include:

- Support for websites (both intranet and Internet) with consistent branding
- Automatically rendered site navigation links and navigation controls
- Browser-based authoring using the WYSIWYG Web content editor (shown below)
- Publishing and content deployment using workflow
- Site publishing templates
- Multilingual site support

SharePoint Designer 2007 is a new product (based on FrontPage) for creating and customizing MOSS websites and building workflow-enabled applications hosted in SharePoint. You can use SharePoint Designer to customize a site, design and extend portal sites or portal pages, edit cascading style sheet (CSS) files, and create the Master Pages and Page Layouts that control the look and feel of websites. MOSS 2007 also provides the ability to create Web pages by converting documents created using applications such as Word and InfoPath automatically.

BUSINESS PROCESSES AND FORMS

MOSS 2007 includes two new capabilities, InfoPath Forms Services and the Business Data Catalogue (BDC),



Figure 2: WYSIWYG Web Content Editor



Figure 3: Web Browser Enabled InfoPath Form

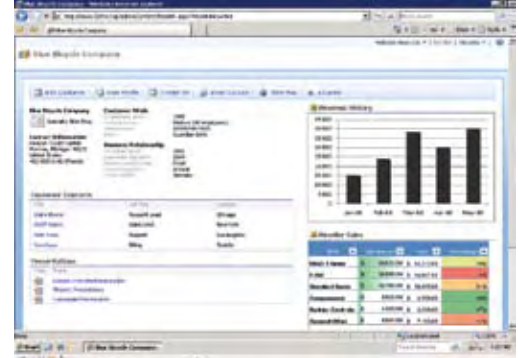


Figure 4: Using the BDC with Search

that provide for automating business processes and bringing together structured data from external applications and SharePoint-managed content.

To support forms-driven business processes, InfoPath Forms Services enables the design of electronic forms using the InfoPath 2007 client application and deployment of these forms across internal and external websites by using MOSS 2007. Users can access these forms through a Web browser or an HTML-enabled mobile device without requiring any custom client software or application components.

The BDC tightly integrates business data into the MOSS 2007 user experience, providing access to external data residing in back-end line-of-business or external applications. Using the BDC, organizations can expose information from databases and line-of-business applications via Web Parts and Search in MOSS 2007. The following figure is an example of searching an external system for information about a customer and then displaying both structured data from the database and unstructured documents and content stored within SharePoint.

BUSINESS INTELLIGENCE

A great new capability provided by MOSS 2007 is business intelligence (BI), which supports decision-making, allows users to analyze and view data, and share business data with others. Excel services allows users to publish and run spreadsheets on the server. Users access spreadsheets through a Web browser without the need for any custom browser components and the server performs all data access and analytic functions. Creating fully interactive, data-bound spreadsheets including charts, tables, and PivotTable® views as part of

a portal, dashboard, or business scorecard, is possible without requiring any custom development. The search result screen above in Figure 4 includes two Excel Web Parts that display customer information from an external database, both in a graph and table.

Another new BI capability provided by MOSS 2007 is data connection libraries. These libraries provide a centralized store for Office Data Connection files that describe connections to external data. Additional business intelligence features of MOSS 2007 include:

- Integrated BI dashboards
- The Report Center site optimized for report access and management
- Key performance indicator (KPI) list templates and Web Parts
- Data filter Web Parts

HOW MOSS 2007 SUPPORTS YOUR ECM STRATEGY

As you can see, MOSS 2007 provides some very broad capabilities, which are better suited for some business scenarios over others. MOSS and the underlying foundation provided by WSS 3.0 works well together to provide a very robust and fully featured intranet solution. MOSS also is well-suited for document creation, review, and approval scenarios that can leverage the strong collaboration capabilities.

MOSS can also provide a good portal solution for aggregating disparate sources of data and other content repositories. Several Microsoft partners, including Vorsite and Syntergy, have developed integrations with other ECM vendors like EMC (Documentum), Open Text, and IBM (FileNet). Using the BDC you can also expose and search application data from other databases and applications like Seibel, SAP, and other customer

relationship management (CRM) or enterprise resource planning (ERP) solutions that support Web services.

MOSS 2007 does not have all the bells and whistles that some of the more mature ECM solutions offer but offers an extensible .NET based platform for creating customized content-centric business applications and information sharing portals.

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Question and Answer

A series of talks with users of ECM technology.

Q: WHAT WAS THE PROCESS PRIOR TO THE IMPLEMENTATION?

A: Our central role in the construction process places us as a “point person” in the relay of information from many different business partners including the owner, architect, engineers, inspectors, subcontractors, and suppliers. One of our primary duties is to analyze, organize, and disseminate information between project team members so that each can achieve their individual goals for the project. We have experienced first hand (and watched others in our company) struggle to keep up with the flood of information from so many different sources. We didn’t have a strong documented taxonomy and records management policy when we began our implementation.

Q: WHAT WAS THE CONTENT, DOCUMENT, AND/OR PROCESS MANAGEMENT TECHNOLOGY USED TO SOLVE THE BUSINESS PROBLEM?

A: Our largest effort was the creation of a single central repository for all project related information that is searchable and accessible from both internal and external partners. For many end users, the reasons for document management come down to subjective judgments. Our group’s focus was to identify issues that influence our business and implement solutions from both a technology and business process perspective.

Christopher T. Scanlon, Vice President, Operations Support and Information Technology, James G. Davis Construction Corporation

Q: WHAT WERE THE BENEFITS FROM IMPLEMENTING THE SOLUTION?

A: We tried to implement too many features of the document management system at once with project teams. We learned it was much better to show people one way to do something (even if there were six different ways to do it). Once they got the basics, we then followed up with the more advanced capabilities of the product.

We went overboard initially when we defined our document types and property information that we set up for capture. We quickly scaled back the number of document types as well as the amount of required information. It’s not enough to say “it would be nice to have this information.” You really need to be at the point of saying “I’ve got to have it” to justify the additional time to capture the info.

Early on (from a cultural perspective), our company was not ready to apply best practices across project teams. As our company has grown and matured, our people began to ask for the creation of guidelines so they did not have to recreate the wheel every time. In the beginning, our deployment was a bit backwards from a perspective of “here is a great piece of technology,” but not a lot of guidance available about how it was to be used at our company.

Janelle Julien is AIIM E-DOC Magazine’s former associate editor.

The E-Team

Teamwork is key to successfully implementing ECM.

By Bob Violino

Many factors go into ensuring a successful enterprise content management (ECM) implementation. One of the most important is building the right team to plan, deploy, and maintain

ECM so that the technology delivers the maximum payback. Selecting people with the knowledge and experience to carry out an ECM implementation, and then leveraging those abilities on an ongoing basis, will help organizations keep ECM projects on track and meet their goals.

Putting together the best ECM team is vital, whether the organization is using a commercial ECM system, customizing a vendor offering to meet the specific needs of the organization, or developing an ECM system in-house. “ECM deployments are similar to other enterprise software deployments in that the implementation process can be, and typically is, a very complex and time-consuming undertaking,” says Michael Knight, vice president of Unbounded Solutions, a consulting company in Atlanta that focuses on ECM. “Investment in hardware, software, and services in support of ECM deployments are most often significant, and without commitment throughout the organization, it is not difficult to allow milestones to be missed and for timelines to grow.”

When an ECM project fails, sometimes it's because of the technology. However, in many cases “It's because an organization doesn't have the right team in place,” says Michael Maziarka, director of the Dynamic Content Software Strategies Service at InfoTrends, a market research and strategic consulting firm. “You

need people who understand the technology, people who understand the process, and people who understand how the content is going to be used,” Maziarka says. “You also need strong sponsorship; proponents of the system to provide the cheerleading behind it.”

TEAM PLAYERS

The ECM team should include representatives from all the groups in the organization whose input is important to the implementation, as well as those most likely to use the system and who can weigh in on the features and functionality needed.

“As with any enterprise systems implementation, getting end-user commitment and involvement throughout the process is critical to success,” says Knight. “Too often, I've seen systems implemented by IT without end-user commitment turn out to be little more than shelfware.” Knight recommends that people from departments that will use ECM should be on the project team along with a strong executive sponsor to consistently articulate management's commitment to the success of the project.

According to Kyle McNabb, principal analyst at Forrester Research Inc., content's importance to many core business operations warrants someone from the COO's group to lead the initiative. “The effective management of content can lead to improved business processes, improved customer experiences, and reduced risk,” McNabb says. “Letting the CIO own it can lead to just a focus on IT cost reductions based on the reduction of vendors and consolidation of initiatives. With the COO team involved, there's more of a push to understand business operations—and context.”

Often the need for content management will spring up in individual departments, and the initial implementation team will include a mix of line-of-business managers and people from IT. “As ECM moves into an enterprise deployment, IT needs to play a significant role in the process,” Maziarka says.

WHAT ARE YOU TRYING TO DO?

To help decide who should be on the ECM team, organizations must understand what they’re trying to accomplish. “What is the content? What is its relationship with other information, and how are you going to make [content] accessible?” Maziarka says.

To help decide who should be on the ECM team, organizations must understand what they're trying to accomplish.

The ECM team should create a “strategy document” that outlines what is important to the organization and its goals for ECM. “Based on the needs and context they’ve discovered, [team members] can prioritize what problems need to be addressed and can map those problems to different categories of ECM—transactional, business, and persuasive,” McNabb says.

TEAMS IN ACTION

Companies that have deployed ECM say the creation of an effective team was pivotal to their success.

Dow Corning Corp., a Midland, Mich., chemicals manufacturer, first began using content management solutions on a limited basis in 1983. In 1995, the company launched an ECM effort in large part to deal with fast growing volumes of information related to litigation.

In addition to managing legal documents, ECM helps Dow Corning manage the numerous controlled documents related to its products, as well as patent information and other content. One of the key drivers for keeping this content well managed is compliance with government and industry regulations, says Steven Hershauer, senior applications engineer & IT architect, BPIT Enterprise Applications.

The initial ECM effort was sponsored and run by the legal department. But over the past ten years, Dow

Corning has expanded its ECM deployment to multiple departments and divisions of the company. ECM has been especially important for Dow Corning’s expansion of operations in Asia. “The language differences and high employee turnover rate means it’s vital to have reliable documentation and control of content,” Hershauer says.

In the past seven years, the company has relied more heavily on ECM to manage Web content. Dow Corning has customized portions of the ECM software, including developing a Web-based client to meet the company’s needs. “Our client allows us to generate information in a shorter amount of time than the original client from the vendor,” Hershauer says. “We have close to 100 applications off the custom client.”

ECM has given Dow Corning greater control over which groups and individuals throughout the organization have access to which documents, improving security and enabling the company to comply with a variety of regulations. Having electronic documents also helps the company save time in locating specific information.

Hershauer says there has also been improved workflow and cost savings for Dow Corning. Groups try to use digital storage whenever possible, cutting down on the need for costly storage of paper documents. About 90 percent of the information used day to day by the company is produced and stored electronically.

One of the keys to Dow Corning’s successful deployment of ECM was having the right team in place to implement and support the technology. The team, called Web Collaboration & Enterprise Content Management, includes senior managers and people with expertise in operating systems, relational database management, content management, and development of interfaces to the ECM system.

“One person can’t do it all,” Hershauer says. “In some cases during the early deployment, one person did [wear] several hats.” But after ECM was used more broadly, “we assembled a team so we have experts in each area giving us the best choice for how to proceed,” she says.

New Plan Excel Realty Trust Inc., a real estate development firm in New York, began deploying an ECM system in July 2006 to “Internalize its website, gain control over growth, increase productivity, and reduce paper storage needs,” says Robert Lieberman, senior vice president and CIO of the company.

New Plan has seen a number of benefits from ECM, including enhanced productivity, cost savings, and improved collaboration.

New Plan selected appropriate groups from within the company to direct design of the ECM system and deliverables. Members of the ECM team included people from all levels of the organization.

When an ECM project fails, sometimes it's because of the technology. However, in many cases "It's because an organization doesn't have the right team in place," says Michael Maziarka.

"Better ideas come from the people that are in the trenches and perform the day-to-day work," Lieberman says. "Having ECM users involved in the implementation helped keep implementation challenges to a minimum."

"Since we have been scanning and organizing documents for years, this was a natural extension to a full ECM suite," Lieberman says. "Training was done in house and several departments were part of the implementation teams."

Having the right team in place was critical. "If you don't get the proper buy-in, your project will fail. Inclusion always leads to success."

Another company, CPS Energy, has relied heavily on teamwork for its ECM deployments. Like Dow Corning, CPS first launched content management in its legal department before expanding it more widely in the organization. The San Antonio, Tex., energy company implemented a system in 2004, and has seen benefits such as easier collaboration and improved ability to manage vital documents and information.

When identifying people to work on the ECM implementation, CPS looked for those with a background in Web development, systems integration, and systems configuration.

"We also went after individuals who had experience working with customers or, at a minimum, who could look at a potential solution from a user's perspective," Lawanda Parnell, Web solutions manager says. "The customer-centric member of the team was able to see and articulate the business value required from the solution to the rest of the team. The entire team had to keep the company's ECM goal in mind—enterprise-wide use of our ECM system."

It's necessary to have the right level of technical skills on the implementation team. "You need individuals who understand hardware, networking, and databases," Parnell says. "Equally important, you have to include representatives from the organizations that will be using the ECM system. These are people who understand their business processes and their data/information needs."

TOOLS FOR TEAMWORK

For many organizations, good collaboration among team members is important for an ECM deployment. Some are using the latest Web-based tools to share information and ideas.

"Collaboration technology allows for enhanced communication as well as providing for a central repository for greater document control," says Knight. "It is indispensable for project teams, particularly those that involve outside vendors, consultants, and remote employees."

At Dow Corning, collaboration has been especially important during the expansion in Asia. The ECM team uses Web conferencing, audio conferencing, and other collaborative tools to work with people in remote locations. "We've been heavily using collaboration technology on a day-to-day basis because the team is geographically dispersed," says Horcher.

Dow Corning also used Web collaboration to work with an outside consulting firm during its ECM implementations.

The CPS Energy team "spent months collaborating on how to design and deploy [ECM]," says Parnell. "The team continues to collaborate internally and with other teams to develop and deliver solutions."

Ensuring ongoing communications and monitoring how the implementation is going are vital to success. ECM projects can last anywhere from a few months to several years. "This is a learning process, so the ability of the team to continue to collaborate is very important," says Maziarka. "The other thing collaboration tools can give you is a historical [record] of conversations that have taken place and why decisions were made a certain way."

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SOA and ECM Solutions

The What, Why, and How of SOA.

By Gary Gershon

Service-oriented architecture (SOA) has attained a strong foothold in the minds of business executives and enterprise architects. With successful systems in production, executives are gaining an appreciation for the business agility and flexibility that SOA offers. Technical architects understand that SOA design principles will simplify their work and reduce time, effort, and costs for building, connecting, and maintaining application systems as well.

Since almost all business systems create or consume documents it follows that business personnel making purchasing decisions for enterprise content management (ECM) need to position these acquisitions within the enterprise's SOA initiatives.

In this article, we'll focus on a number of business and technical drivers for deciding why, how, and when SOA should be part of an ECM solution.

First, however, we need to point out some important variations in the use of the term SOA. Hopefully, it will be a useful distinction to consider in your SOA discussions.

SOA—WHICH ONE?

To a large number of users and vendors, the term SOA is used synonymously with having support for *Web services*—that is, referring to a particular technology of supporting SOAP-style (alas, no longer an acronym) Extensible Markup Language (XML) messages that are sent using the Hypertext Transport Protocol (HTTP).

This concept of SOA is sometimes referred to as *SOA Lite*. As we will see, there are very valid and

important benefits to be enjoyed by systems that implement SOA solely with Web services—particularly concerning connectivity and the broad availability of tools with SOAP/HTTP support.

For larger enterprises, supporting SOA Lite is indeed quite useful, but not enough.

Enterprise architects use the term SOA more broadly to refer to an architectural and business approach whereby a service paradigm is used to interconnect diverse systems to gain *business agility* as well as *flexibility* to easily *change* systems over time.

These enterprises desire to be able to quickly assemble and readily alter the flow and processing of service messages, often by injecting new validations and transformations of message data, routing messages to different systems based on their content, and adding mediations in the message flow to augment or filter the data in messages.

Such larger enterprises will often need support for formats and protocols beyond SOAP and HTTP, including, for example, queued message support for scalability in order to match system speeds, handle differing systems' periods of availability, as well as provide the ability to work with legacy applications.

To support *agile SOA*, large enterprises will commonly insert middleware, often conforming to the enterprise service bus (ESB) software pattern, to process, transform, and route messages flowing between the service consumer and the ultimate service provider.

If your enterprise embraces the service middleware concept (that is, it has access to the requisite skills and software tools), then it gets to play the ECM connectivity and interoperability game with a com-

pletely different set of rules. With SOA Lite, both ends of the conversation need to support the same protocol, data formats, and message semantics. With an ESB, the middleware can mediate, transform, and federate protocols, data formats, and message semantics, if and as necessary, to allow disparate systems to quite effectively interoperate.

SOA PLUS ECM—WHY, WHEN, AND HOW?

SOA elegantly solves a number of difficult-to-address technical, organizational, and management issues involved in assembling and interconnecting business systems. It is quite likely that your organization is facing one or more of these issues. By examining them separately, we can both design the best solution as well as provide clarity for articulating the benefits and justification that resonates with a particular enterprise audience.

The SOA vendors, analysts, and consulting community have been employing the term “SOA Entry Points” to differentiate the solution drivers that provide justification and prioritization to SOA adoption efforts. While this terminology somewhat presupposes that SOA is the goal itself (rather than a means to another goal) the taxonomy serves well to frame the discussion, and we will utilize this helpful framework here.

Discussions of SOA Entry Points often draw from the following areas of business focus: *connectivity, interoperability, reuse, people, processes, and information*. From these, one can articulate why, when, and how to use ECM together with SOA.

CONNECTIVITY

A service-based solution may provide the best mechanism to interconnect systems within the enterprise that utilize disparate technology platforms. By simplifying connectivity, SOA can broaden the vendor solution choices available for business applications. SOA solutions—either by using industry standards or by inserting software components known as adapters—can transport data and transactions using protocols and data formats that are independent of proprietary languages, platforms, and operating environments.

Thus, in an SOA environment, a departmental ECM solution such as an accounts payable invoice scanning and processing package could be selected with primary weighting based on how well it meets the needs of business users and less concern on its implementation language and platforms.

INTEROPERABILITY

Beyond connectivity, SOA provides powerful capabilities for facilitating interoperability between systems. Here, we consider interoperability in the sense that a service consumer or provider from different sources or vendors each supports the same service requests so that one could be substituted for the other—much like a desktop Web browser interoperates with many websites.

One may get interoperability out-of-the-box if both the service consumer and the service provider abide by—and have been tested against—the same standards. However, in the SOA world, this means more than simply both ends supporting SOAP/HTTP. The request and response message contents and semantics must also be compatible.

There have been prior efforts at standardized service-based interoperability. A widely implemented example is the family of specifications known as Web Distributed Authorizing and Versioning (WebDAV), and there are additional standardization projects underway in the ECM space.

A significant obstacle to solving interoperability via standards is that ECM systems are generally not replaced frequently, so that the potential benefits of new standards might not be enjoyed for many years to come.

The current SOA enterprise solution of using ESB-pattern middleware to connect systems that otherwise are not interoperable can be used for ECM systems. This approach also allows the clients and servers to evolve separately over time. Such evolution might involve upgrades within the vendor product line, or complete replacement of an ECM system with a new solution. Service-oriented middleware also provides the logical place to accomplish federation of searches between repositories as well as inject transformations and lookups to mediate the semantic and data representational differences between systems.

Interoperability may or may not be a key consideration for a particular situation. For example, a departmental ECM solution, such as the accounts payable example earlier, may be quite self-contained with relatively narrow requirements to interact with other enterprise systems.

On the other hand, a financial services organization often has dozens of different line-of-business systems receiving and generating documents related to a customer relationship. If they share a common repository, then changing the widely deployed repository application programming interface (API) when the repository

is replaced will be a very expensive exercise with few business benefits.

If each line-of-business has its own repository, then the even more painful requirement is exposed of having to federate search and retrieval across multiple diverse repository service interfaces and technologies to satisfy customer relationship and discovery retrieval needs. Thus, we see that using SOA middleware can greatly simplify system evolution and transitions.

REUSE

SOA can provide interfaces to ECM subsystems that can facilitate reuse of existing or newly purchased or developed assets between organizations and systems. Defining integrations with business systems as services allow these specialized applications to be reused to satisfy similar requirements from other parts of the business. For example, a business service to validate a customer number might be used in many applications that electronically receive or manually input customer data.

There are also major and expensive sub-systems within an ECM application that would be candidates for reuse to meet other document-centric needs in the enterprise. Achieving reuse is facilitated if these subsystems have been exposed as services. For example:

- Capture (scanning) components and subsystems
- Optical character recognition (OCR)
- Virus checking of received documents
- Document transformations (e.g., fax to PDF)
- Repository capabilities for document storage, indexing, and search
- Records management facilities

In the end, achieving this reuse is subject to the existence or creation of service interfaces to vendor products and, of course, the limitations and financial considerations of the vendor's product licensing.

PEOPLE

SOA offers the architectural base to build rich collaborative platforms and portals for increasing productivity, providing higher levels of customer service, and making better business decisions by knowledge workers.

Many organizations are gaining an appreciation of the internal business value of the Web 2.0 social networking and collaboration tools such as wikis, blogs, document-sharing portals, instant messaging, and personal profile tools.

Wikis, blogs, and document-sharing portals all are intrinsically evolved forms of content-based solutions that allow knowledge and information to be captured, searched for, and utilized to answer questions that otherwise might take much longer to resolve—or wouldn't be answered nearly as well.

Instant messaging applications are being used within organizations to rapidly resolve questions more quickly and with less effort than using voicemail or email. SOA provides the mechanism to effectively design, build, and maintain corporate (rather than personal) "buddy" lists that are related to business transactions, knowledge domain specialties, customer relationships, or business geographies.

Personal profile tools that support employee-maintained information and their photographs can greatly facilitate locating and overcoming reluctance to chat with individuals with particular expertise, responsibilities, or relationships to customers or work being processed. SOA services and service-based portals provide the ideal tools to construct such profiling applications and maintain databases that link people to transactions, documents, and workflow tasks.

PROCESSES

At the very core of SOA are technologies to choreograph and orchestrate the use of services to retrieve information, perform validations, or process transactions. The term business process management (BPM) now enjoys a dual definition of describing human workflows as well as service flows.

Many, if not most, human workflows are initiated from an ECM application's receipt of a document and result in a final transaction being submitted to a business system and more documents being produced. SOA and services can provide support along each processing step to automate data and business logic activities in support of the human resources' productivity.

Advanced organizations have optimized this service workflow with SOA to invert this relationship, begin processing of documents in an automated service flow, and only involve human interaction to handle errors or perform actions and decisions that cannot be effectively automated.

Other ECM-centric processes, such as records management, can be effectively addressed using SOA to integrate document repositories built on diverse technologies with enterprise records management systems that must take responsibility for tracking documents across

multiple repositories and eventually initiate lifecycle actions for document destruction or accession.

INFORMATION

The last entry point for SOA in our list is the very important fundamental use for retrieving and updating information from diverse sources and repositories. Information gathering and processing is a natural and effective use of SOA for both structured and unstructured documents. Besides standards- and adapter-based connectivity, the SOA middleware can federate requests across multiple repositories and consolidate the responses to provide a unified and consistent user experience. Finally, the SOA middleware can be used to transform the response into the desired format for a particular request—perhaps converting a TIFF document into a PDF format for the convenience of Web browser clients.

Many of these connections and transformations are conceptually quite simple, but without SOA, there was not a standard interaction pattern or middleware approach available to create such solutions.

With SOA, you will be gaining the ability to more readily integrate ECM with your business applications to provide your enterprise with agility to respond to new market opportunities, increase productivity, improve customer service, and satisfy regulatory requirements.

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Question and Answer

A series of talks with users of ECM technology.

Q: WHAT WAS THE PROCESS PRIOR TO THE IMPLEMENTATION?

A: Salans is an international law firm that has advised blue-chip multinational organizations on a full spectrum of business and legal issues for over twenty-five years. With over 160 lawyers, including forty-six partners, the Paris office is among the leading law firms in France.

Q: WHAT WAS THE CONTENT, DOCUMENT, AND/OR PROCESS MANAGEMENT TECHNOLOGY USED TO SOLVE THE BUSINESS PROBLEM?

A: Salans needed to digitize paper so it could be emailed and/or saved into the Hummingbird DM system. We needed OCR capability to be able to transfer paper into Word, to search documents, and to save administration time. After researching the products on the market, Salans implemented enterprise-wide the eCopy ScanStation, eCopy Desktop, and Copitrak with Scan to Fax, Scan to Mail, and Scan to Desktop capabilities.

As part of an international group with offices in the U.S., Salans must comply with the Sarbanes-Oxley Act. eCopy also enabled Salans to be International Standards Organization (ISO) certified. One of the require-

Marcel Henri, Global IT Director, Salans

ments for this certification is that all pieces related to a file should be digitized and saved in one location.

Salans now operates in an eCopy/MFP environment (Canon) with twenty-five MFPs in one location. The total number of users across all office locations is 300.

Q: WHAT WERE THE BENEFITS FROM IMPLEMENTING THE SOLUTION?

A: We tackled the biggest obstacle, which was digitizing paper. Additionally, Salans was able to improve overall communication between departments. Instead of having disparate systems globally, we were able to put different pieces of software (and therefore functionality) on one machine.

We no longer use couriers between the two sites in Paris. The audit trail for invoices sent internally by email and the electronic copy is saved in Hummingbird. It's user friendly and intuitive.

Janelle Julien is AIIM E-DOC Magazine's former associate editor.

What You Should Know About Adopting ECM as a Shared Service

Many organizations are now considering offering enterprise content management (ECM) functionality as a shared service. A discussion of benefits, guidance, and best practices for you to keep in mind.

By James Watson

It's taken awhile, but organizations are now coming to recognize the value of truly "enterprise" ECM. The problem is the struggle it's been to take ECM enterprise-wide. Among organizations we've consulted for, relatively few have ECM deployed to the entire user base. Whether for reasons of price, usability, or feature overload, all too many ECM implementations start out with the best of intentions, and then stall out at a couple of departments or business units. Meanwhile, the potential economies of scale, not to mention the other enterprise benefits, go unrealized.

As organizations seek to address the problem of increasing volumes of unstructured data, they have also been coming around to the idea of offering ECM as a shared service, as a way of cost-effectively meeting the content management needs of large (and potentially diverse) user bases. For an increasing number of these organizations, a shared-service model is becoming the prerequisite for enterprise-wide implementation—and for wider user adoption.

So what does a shared service model for ECM look like? What are the benefits? And what does it take to roll out ECM as a shared service?

THE SHARED SERVICES CONCEPT

The concept of shared services has been around since the introduction of mainframe computing, when centralized IT shops began to charge back for usage of processing cycles for certain applications. In the 1980s, the shared services model was applied more widely, as a way for large organizations to streamline and standardize their business processes across multiple businesses or business units. Under this approach, common activities for related businesses (back-office functions such as finance, accounting, and human resources, for example) were centralized and grouped into shared service centers, thereby reducing the number of redundant operations organization-wide.

Many organizations have since taken the shared services approach into the technology domains: networking, database, security, and storage, among

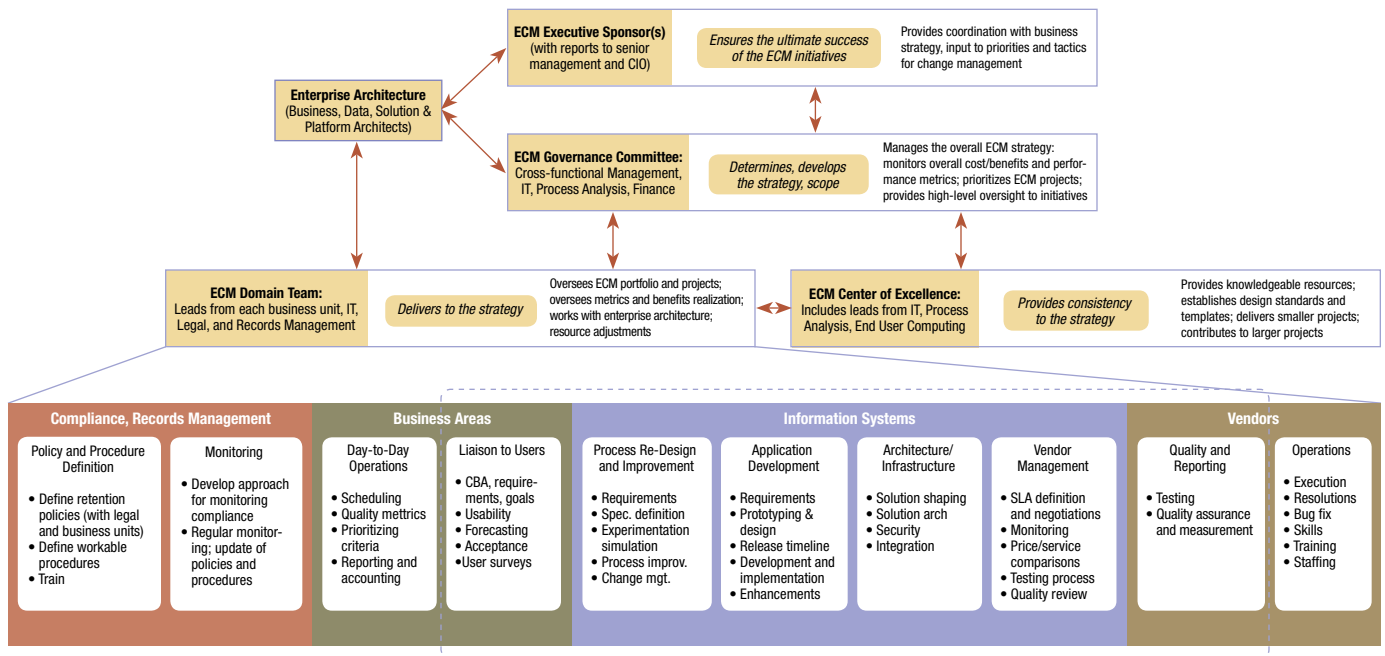


Figure 1: Defining an ECM Center of Excellence

others. Now, other facets of ECM technology (for example, various document management capabilities, collaboration, and Web content management) can be deployed in a similar manner.

Basically, a shared services approach to ECM involves IT and the business units working together to define “packages” of ECM components or modules—packages that correspond to tiers of ECM functionality that meet the business units’ respective needs for ECM functionality. The packages might include basic store-and-retrieve capabilities, for instance, to more sophisticated document management functionality, to more advanced revision-control and automated workflow capabilities. Each tier of functionality has an associated chargeback for cost recovery, and each tier can be rolled out to various user groups through a utility approach, using a deployment methodology with repeatable engagements that require configuration rather than customization—thereby maximizing productivity and knowledge re-use among IT staff.

THE BENEFITS OF OFFERING ECM AS A SHARED SERVICE

When ECM is offered as a shared service, there are benefits for both IT and the business units. IT benefits because it now has a more consolidated and simplified technology infrastructure to manage and maintain. And the business units benefit because they can share not just the fixed costs and assets, but the technology and the standards and the process innovation enabled by the technology.

Consider the way IT shops now tend to fulfill the items on their project request lists. Increasingly, a significant percentage—perhaps ten to fifteen percent—of the projects on those lists are likely to require one or more components of ECM functionality. In a time of scarce IT resources, it makes no sense to handle each of these requests as a “one-off.” In contrast, the shared service approach to ECM reduces operational costs and allows greater technology re-use across deployments. The packaging of ECM components ensures more rapid time to benefit for the implementation of ECM applications; it also helps to ensure greater alignment between business unit demand and the delivery of shared services. The result is more rapid rollout, enabling IT to more easily meet the demands of the business units—a win-win from both the IT and business-unit perspectives.

One of the most compelling benefits of ECM shared services is that it allows an organization to make the most of its ECM technology investments. Many organizations that purchased enterprise licenses have found those licenses going underutilized. For these organizations, ECM has tended to remain a niche application. But the shared services approach allows IT to define appropriate levels of functionality for various segments of the potential user base, while also ensuring more rapid deployment—thereby enabling the organization to roll out ECM to more users, and lower the actual per-seat cost of the technology. The bottom line is that the shared services approach is the path to the lowest per-seat cost for ECM—and the best way



	Solution Package Description	Typical Audience/Application	Major Technology Components	User Training Complexity
BASIC Low-cost solutions that aim to keep things simple and meet the basic needs of most users in their common day-to-day tasks	 Packages in this grouping offer a broad set of capabilities to a wide audience. Focus of the packages in this category is simplicity over depth of functionality. Packages in this category are best suited for wide-scale deployment, ideally to all users in the enterprise.			
Basic Document Services	Simple check-in/check-out capabilities for documents from common desktop productivity applications, and enterprise search best suited to the knowledge worker that is creating ad-hoc content (e.g. Microsoft Word documents, PowerPoint presentations, Excel spreadsheets, etc.)	Information workers doing ad-hoc document creation and information retrieval	Document Management, Enterprise Search	VERY LOW
Collaborative Content Development	Typically supports a synchronous collaboration aimed at the creation, updating, and finalization of content (typically a single document or piece of content; e.g. a contract, invoice, etc.), ideally, this will reduce the use of e-mail as a document collaboration platform.	Information workers doing ad-hoc document creation and information retrieval	Document Management, Collaboration, Workflow	LOW
ADVANCED Moderate cost, high-impact solutions that meet the needs of most users in their day-to-day tasks	 Packages in this grouping offer deeper functionality to users that need more powerful tools to accomplish their jobs. Packages in this category often support targeted applications such as project management, team collaboration, and business process-driven applications. Packages in this category are best suited for targeted deployment as needed.			
Process-Driven Content Management	Addresses the general needs of task workers and task managers with robust support for pre-defined and ad-hoc workflow and automated content flow. Provides capabilities to create and manage work queues and move documents through a pre-defined or ad-hoc information lifecycle, all while maintaining strong audit trail and work-item management. Should also support capabilities like task escalation and alerting so work items don't get stuck in process.	Task workers, task managers, process managers	Document Management, Workflow	MODERATE
Project-Based Team Collaboration	Supports complex, multi-document projects with a few to many members that may simultaneously be editing one or more pieces of content over a finite project lifecycle.	Information workers working on specific projects with a small to large number of internal and/or external participants	Document Management, Collaboration, Workflow	MODERATE

Figure 2: Defining ECM Service Packages

for an organization to cost-justify an enterprise-wide investment in the technology.

Finally, from a governance perspective, the shared-service approach to ECM allows an organization to identify measurable key performance indicators (KPIs) that can be translated directly into process improvements to ensure better application deployments. Such metrics allow IT, and the business, to better understand the parameters that drive ECM shared services success within the organization. And providing ECM as a shared service also greatly simplifies change management across the organization, which means not only faster time to implementation, but can also lead to greater user acceptance.

ROLLING OUT ECM AS A SHARED SERVICE

Implementing ECM as a shared service requires the involvement of both IT and the business—from planning, through execution, to governance and ongoing maintenance. When it comes to deploying shared services, the critical considerations are as follows:

- **Program organization:** Program organization is the foundation of a best-practices approach to rolling out ECM shared services and setting up the strategic structure of the shared-services environment. An organization should define its management structure for the future ECM shared services program, including roles and responsibilities that indicate clear ownership of all components of the shared services deployment process. Many organizations establish an ECM center of excellence, which provides clear

responsibilities and reporting directives at all levels, as well as ensuring that resources are dedicated to the ECM program (see Figure 1). The prerequisite of this approach is strong, business executive-level support for the ECM program.

- **Deployment methodology:** One of the chief advantages of the shared services model is that it allows an organization to roll out ECM functionality to its various user groups, using a repeatable deployment methodology that requires configuration rather than costly customization. But considerable upfront work is needed, involving both IT and the business, in order to define both the user groups and the service packages that will meet the needs of those user groups. Make sure to invest the time and resources in this upfront effort.
- **Packaging:** Many of the ECM products on the market today comprise a number of different components or modules. Some can be used independently; others depend on foundational utilities. But overall, the systems are flexible, so the challenge is not about the technology, but whether the organization can effectively assess its requirements for content management functionality and define packages of services that will meet the needs of its various user constituencies—from those users that need only basic capabilities, to those that require more advanced capabilities (see Figure 2).
- **Chargeback:** The distinction between basic and advanced capabilities must be carried through into

SERVICE LEVEL	Standard	Enhanced	Mission-critical	Specialized
USER/CLIENT SUPPORT LEVEL	Basic	Full-time		Dedicated
Document Services Basic	\$103 / seat	\$160 / seat		
Document Services Advanced			\$350 / seat	\$500 / seat
Collaboration Basic	\$120 / seat			
Collaboration Advanced			\$160 / seat	
Web Content Mgmt Intranet		\$200 / seat		
Web Content Mgmt Extranet/Internet			\$250 / seat	\$425 / seat

Figure 3: Chargeback for ECM Services by Service Level

the chargeback mechanisms (see Figure 3). This can require some level of enterprise “underwriting,” where initial costs are borne by the organization overall and then recovered over time, based on utility to the business unit. We’ve seen schemes that range from per-user to per-seat (concurrent) to per-transaction. But the key to effective chargeback is to offer tiers of recovery pricing—such that a price of \$50/year for an infrequent user for basic store-and-retrieve is differentiated from the \$300/year price for a “heads-down” user.

- Resource and capacity planning: If an organization is considering “underwriting” the investment in ECM as a shared service, there should be some understanding of potential demand, and sufficient resources should be in place to service that demand. Too many organizations are willing to underwrite the cost of the technology at an enterprise level, but they then neglect to fund the manpower as well. Thus, business units can readily access an inventory of “shelfware,” but don’t have the human resources to gather requirements, configure systems, etc. If an organization is to deploy ECM as a shared service, a team of dedicated ECM experts should be made available to the business units—again, with a fair chargeback mechanism that incents business units to leverage these resources.
- Information organization: Taking content management enterprise-wide requires some attention to how that content is organized and categorized for access by users. Information organization is a critical (and often neglected) aspect of ECM deployments, and it is particularly essential to enterprise deployments to enable future sharing of

information on an enterprise-wide basis. It includes the development and implementation of an information taxonomy, along with the policies, procedures, and guidelines for maintaining the taxonomy, to ensure that it continues to meet the needs of the enterprise as it grows and changes.

SOME PERSPECTIVE

We’ve seen many organizations struggle to manage the increasing volumes of unstructured content that their users rely on in the course of doing business. Now, these same organizations are being driven by compliance requirements and competitive pressures to get their unstructured content under control, which makes content management an enterprise-wide proposition. At the same time, large organizations that have centralized and standardized their IT shops are now looking for new ways to contain costs and improve quality of service to their customers. Many of these IT departments are under pressure to more effectively meet the needs of rapidly growing global operations.

The solutions for ECM are mature, providing all of the functionality an organization could ask for to control its content. What’s been lacking is a cost-effective way of deploying ECM to the enterprise—one that maximizes the economies of scale for the investment in the technology.

The arguments in favor of delivering ECM as a shared service are quite convincing. Cost containment generally leads the list, along with compliance, as risk management has become top-of-mind for executive management within many organizations. ECM, which can manage content throughout the lifecycle, offers the tools to address legal discovery and other compliance concerns. But if an organization is to achieve enterprise-wide com-

pliance, those ECM tools must be made available to users throughout the enterprise—not just to those users whose departments have deployed point solutions to manage their own content.

The shared services approach represents a new way of thinking about how to deliver content services; certainly, it requires some upfront effort to put an ECM shared services program in place. For many organizations, it may be the only way to

achieve true enterprise adoption—and the only way to achieve the economies of scale to cost-justify the investment in ECM technology.

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Question and Answer

A series of talks with users of ECM technology.

Q: WHAT WAS THE PROCESS PRIOR TO THE IMPLEMENTATION?

A: There was no process or system in place to manage document output devices. The college had 100 computer lab printers and 97 copiers that were unmanaged. Excessive student printing was a major problem since it was untracked and free in the computer labs. Inevitably, this “system” abuse led to waste. It was obvious that print and copy use were out of control, but we didn’t have the data to confront the problem. Although some of the campus copiers were coin-operated, it was a laborious administrative task to collect coins and tabulate campus-wide usage.

Q: WHAT WAS THE CONTENT, DOCUMENT, AND/OR PROCESS MANAGEMENT TECHNOLOGY USED TO SOLVE THE BUSINESS PROBLEM?

A: Initially, the team set out to replace the copy system on campus. There was about four or five different contracts. I consolidated all of the contracts into one vendor to remove the coin operation in the public areas. We selected *Equitrac’s Education* solution, which replaced the coin operation from libraries and implemented a card system. The solution included installing *PageCounter* terminals on the coin operated copiers to enable use of TCNJ campus cards to charge for copies.

Tied into the Blackboard campus accounting system, the Equitrac solution enabled print and copy charges to be added to student billing. These ID cards provided students with services like meal plans, ac-

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cess to the dorms and computer rooms, and the convenience of payment without using coins. Overall, it was better for the students not to carry around quarters, and better for public areas not having to manage cash.

Q: WHAT WERE THE BENEFITS FROM IMPLEMENTING THE SOLUTION?

A: Cost reduction was the major benefit. Previously, funds had been diverted from educational budget items to support the ballooning print budget. In 2004, budget spending on toner and paper in the computer labs was \$75,000. By 2005, there was a significant decrease in budget spending on toner and paper to \$45,000.

Other benefits include environmental responsibility by reducing unnecessary print waste and abuse, simplifying IT and administrative processes, better management of output devices by collecting printer and copier statistics enabling fleet management, extending printer life, optimizing printer deployment, and improving service to constituents.

It was a great initiative for the college. Although we cut costs, we were also aware of environmental issues. People don’t think about delivery, print-out buildup, etc. Students are happy that printers are no longer tied up. It wasn’t a fair system.

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