Xerox
DocuShare®

Selecting a Practical Enterprise Content Management Solution: Critical Considerations

XEROX®

Selecting a Practical Enterprise Content Management Solution: Critical Considerations

With the proliferation of Enterprise Content Management (ECM) solutions available in the marketplace, organizations must resist accepting a solution at face value and instead adopt a thoughtful, practical approach to meeting ECM needs. Practical ECM involves a thorough assessment of business needs, organizational structure, and strategic objectives. While many organizations may lead with technology when building a content architecture, it is more productive to focus first on business outcomes. Enterprises should develop a business content strategy that supports the strategic direction of the business, rather than simply accepting a content architecture that meets IT goals for standardization. As industry firm Gartner, Inc. states, "Don't build a content architecture without a business content strategy, following the strategic direction of the business."[1]

Equally important are the requirements, skills, and aptitudes of the knowledge workers and business process managers. Will the solution positively impact the core work process? Are contributors willing to learn new ways of doing things, even if it involves extra steps? For example, decision makers need to consider whether users will enter metadata, declare records, and perform other manual tasks. Input from knowledge workers and process managers is critical when selecting a solution that impacts individual areas as well as the enterprise as a whole.

Another important step is to evaluate content and decide what will need to be retained and managed and what can be deleted. According to Gartner, "Content has no value unless people or systems use it within business processes. First, you have to determine which content your people or systems should use and which they shouldn't."[1]

After conducting a thorough assessment of content usage, a company may find a single vendor can provide all necessary ECM functionality. However, many organizations will discover using a shared services strategy—interconnected applications from different vendors to provide workgroup collaboration, basic content services, and enterprise-class content management—will better meet their ECM objectives.

A Shared Services Approach to Enterprise Content Management: Many Constituents, One Solution

An ECM solution must balance the content management needs of all stakeholders across the enterprise. Some more recently emerging basic content management systems, also called basic content services (BCS), offer free or low-cost components that are good for single authorship, small group management, and lightweight routing and approval. The tradeoff with these systems is their limited internal "stretch" capability. Third-party applications and significant customization is necessary to round out the feature set. Conversely, traditional enterprise-class content management

systems may offer all the capabilities a company might need, but may leave end users confused and resistant due to the application's inherent complexity, and do so at an extremely high per-user cost. Before finalizing ECM vendor selection, it makes sense to explore configurable document-centric systems, such as Xerox DocuShare, that enable more advanced ECM processes at an affordable price point.

DocuShare is unique in the ECM space because it uses a shared services strategy through its "one platform, multiple products" approach, thus effectively overcoming the critical shortcomings of both the BCS products and the high-end ECM applications. With a shared services approach, as defined by industry consultancy Doculabs, Inc., organizations can fine-tune the toolset delivered to end users, both in terms of features and time.[2] Human resources, for example, would receive their new employee on-boarding system exactly when they are ready in terms of processes, resources, and infrastructure. This "just-in-time" system upgrading is entirely realistic with a document-centric ECM application such as Xerox DocuShare.

Implementing a document-centric system does not preclude using a BCS system or a traditional, very high-end ECM system that an organization may already have invested in for specific processes. In fact, an assessment will likely show that several or all of these options should be in place in order to achieve the greatest flexibility at the lowest cost. If an organization has already deployed a global-class repository, a configurable document-centric system makes even more sense, as it delivers flexibility not available with the larger repositories and opens a clear channel between repositories and basic systems. Furthermore, a document-centric system that also offers flexible user levels makes it easy to manage user access on a continuous basis.

The only way to know for certain whether a single vendor offering or a shared services solution is the best approach is to assess an organization's content usage and needs across a representative number of critical areas.

"Consider BCS to be a relatively inexpensive enabler of work-group and team interactivity and productivity: it is a first step to building a high-performance workplace. …business planners need to assess where a high-end content management tool will offer benefit. They should look at their business scenarios and assess where the use of a highly scalable, process-enabling, and content-centric application could deliver benefits."

—From Gartner, Inc., "Microsoft Content Management Topics from PCC Conference," by Mark R. Gilbert and Regina Casonato, 2 April 2007

Practical Checklist for Assessing Content Usage

❏ **1. Content types:** Understanding different content types and how each fits within the organization is critical to properly assessing ECM requirements.

❏ **2. Email:** Email is unique in that it is both a document and a communication medium utilized across all types of content and process tasks.

❏ **3. Collaboration:** Basic content management or BCS systems are very effective for simple content sharing within an enterprise, but they do not perform as well for in-depth process collaboration, particularly across open networks and between organizations.

❏ **4. Workgroups:** Many elements impact solution choice, including workgroup size and location, types of documents shared, work methods, when information is shared, and how transactional content flows within and between groups.

❏ **5. Workflow:** Business processes typically involve a wide range of workflows, from high-end, full-scale business process management (BPM) to complex, user-authored workflows to more basic routing and notification.

❏ **6. Extensibility:** Extensibility is crucial when the ECM solution must support application-specific business processes, such as human resources and accounts payable.

❏ **7. Scanning:** Incorporating paper into the ECM system and managing it as both a discrete document and part of a process is key.

❏ **8. E-forms:** If e-forms are used, the ECM solution needs to facilitate managing the completed form as a document of record and enable the ECM system and other applications to leverage the data in business processes.

❏ **9. Content federation:** Federation is essential if there is more than one document repository or distributed teams need to share discrete information repositories, especially if the repositories reside on different networks or are protected by unique security and authentication mechanisms.

❏ **10. Content storage and relocation:** Tools that manage how documents move through the underlying file storage systems ensure efficiency and compliance.

❏ **11. Compliance and records management/retention:** Consistent information management and retention is necessary to address legal and regulatory requirements and to protect an organization from spurious litigation.

❏ **12. Changing user population and needs:** The more users come and go and responsibilities change, the more critical system flexibility becomes.

Clear Insight: The First Step Toward Practical ECM

Examining business and user needs within the framework of the following 12 areas can offer valuable insight into an organization's specific ECM requirements. With this information in hand, enterprises can determine the range of solution components necessary to best serve constituents and organizational goals.

1. Content Types

As Forrester Research states, "The ECM governance and project management team should look at the enterprise's content from these three perspectives: transactional content, business content, and persuasive content."[3] Understanding the differences between the three and how each one fits within the organization is a key factor in properly assessing ECM requirements.

Transactional content involves documents related to running the business, such as invoices, loans, claims, and tax returns. It also includes some organizational and employee content, such as employment applications. As Forrester defines it, "Content that originates outside the enterprise, such as a faxed purchase order or mortgage application, drives internal, back-office transactional processes."[3]

Moreover, transactional content has high value, often documenting business exchanges, collaborative efforts, or official approvals by multiple parties. Organizations may want to keep a final approved version as a record or capture approval phases for compliance, all of which requires advanced ECM features, such as process management, auditing, records management, and archiving.

Business content comprises documents that communicate ideas, such as sales proposals, technical documentation, employee training materials, and contracts. Or per Forrester, "Content created inside the business, like a business plan or operating procedure, can capture or disseminate knowledge."[3]

Basic content management or BCS systems can handle this type of ad-hoc content well, but care must be taken to ensure adherence to the appropriate long-term retention and compliance guidelines. Typically, organizations need to move documents to a higher-end system, such as DocuShare or DocuShare CPX, where archiving, retention and auditing, process automation, or other activities can be performed.

Persuasive content includes documents and other content that sell products and services and otherwise influence external audiences, such as product catalogs, marketing communications collateral, channel extranets, Web sites, blogs, wikis, Flash content, and rich media files. According to Forrester, "Content delivered externally—such as a graphic, logo, product catalog, or rich media file—can influence and persuade customers to take action."[3]

Even if persuasive content has a very short "shelf life," industry and organizational guidelines may still dictate that it be handled similarly to

"Although implementing a common infrastructure is ideal, many organizations already have solutions installed and/or can't find a single ECM vendor that meets all their business requirements for all types and uses of content. For this reason, business process owners, information and knowledge management professionals, and enterprise architects must understand content usage when developing an ECM strategy."

—From Forrester, "Topic Overview: Enterprise Content Management," 26 December 2006

high-value transactional or business content. For example, a company may choose to declare all datasheets as corporate records with a retention period equivalent to legal contracts.

2. Email
Email is unique in that it is both a document in its own right as well as a "transmission envelope" utilized across all types of content and process tasks. If an organization uses email for transactional, business, or persuasive content, the emails need to be managed and stored just like any other document; otherwise the organization may be at risk for noncompliance with various regulatory requirements. Unfortunately, most basic content management systems cannot handle even selective email storage and archiving.

Companies should also consider how email can be utilized to trigger workflows and whether the organization would benefit from this capability. In accounts payable, for example, "approved-for-payment" invoices that are emailed to a specified folder could invoke an automated workflow that routes the invoices through finance for review and payment, and then stores the invoices as records. Typically, a more advanced ECM system, such as DocuShare CPX, is necessary to achieve this capability.

3. Collaboration
Every company is structured to operate collaboratively, with people working together to create, review, and process business and persuasive content. Collaboration is necessary even for automated transactional content when exceptions happen, requiring the document to be pulled out of the standard process until resolution is reached. Basic content management systems are fine for simple sharing but do not perform well for business processes and collaboration that require structured reviews and conditional pathways. Many companies also need to support collaboration outside of the firewall, resulting in significant additional costs with some basic content systems. Organizations need to assess how, when, and why users collaborate to ensure the solution accommodates the various ways users interact.

4. Workgroups
Understanding how people need to work together is critical in developing user requirements. Workgroup size and geographic location, types of documents shared, work methods, when information is shared, and how transactional content flows within and between groups all impact solution choice. For example, small teams located in one defined area have very different requirements compared to large workgroups distributed worldwide. Moreover, some systems only support workgroup members who are named users in the directory (e.g. LDAP). This significantly limits capabilities if the workgroup includes contractors, clients, or business partners, or if the team wants to create generic user accounts for testing.

Systems, such as DocuShare, that support a combination of application-specific and enterprise-controlled user accounts—without requiring IT involvement—make workgroup collaboration much more effective.

Microsoft Office SharePoint and Practical ECM

Microsoft Windows SharePoint Services (WSS) and Microsoft Office SharePoint Server (MOSS) have a place in a shared services approach, offering direct integration of desktop applications and small workgroup collaboration for some non-transactional content creation. However, organizations should not presume that SharePoint will solve all ECM problems, as it is yet unproven for more advanced ECM processes. Moreover, if an organization adds functionality and application-specific capabilities to SharePoint to address this concern, the resulting development costs will likely override the very reasons the organization chose the solution in the first place: simplicity and low cost.

5. Workflow

Well-tuned organizational processes involve a wide range of workflows. Process-centric workflows, such as employee benefits enrollment or online product purchases, are the most well known. The specialized business process management (BPM) tools often used to handle these workflows (such as Pegasystems or Savvion) are typically optimized for high-volume, high-value transactions where speed, security, and auditing are key requirements. Unfortunately, these systems are complex, brittle, and not easily changed by individual process owners and team members. Conversely, the ad-hoc document routing and approval capabilities available with BCS systems are extremely easy to use but very narrow, with almost no extensibility and none of the security and administrative oversight available with high-end systems.

User-authored document workflows are a useful hybrid, particularly for typical enterprise content flows. Work teams or departments can create user-authored document workflows to streamline content and information flow locally. For example, a human resources department could easily generate a document workflow that automatically routes newly-received resumes to discrete hiring managers. This is where systems such as DocuShare CPX excel. Most BCS systems do not offer the tools or underlying technologies needed for user-authored document workflows; and those that do often require expensive programming to develop even simple workflows like the one above. High-end ECM systems are simply too unwieldy, lacking the "just-in-time" capacity that a shared services approach offers.

6. Extensibility

Extensibility is critical to developing ECM solutions that support the automation of departmental business processes, such as those found in human resources, accounting, and customer service departments. To be extensible, the ECM system must have a comprehensive suite of application program interfaces (APIs) and allow the prototyping, refinement, deployment, and replication of business applications. BCS systems are not typically an option in this area, and traditional ECM systems are more expensive and often less agile than a configurable document-centric system, such as DocuShare with the DocuShare Developer Network.

7. Scanning

Despite the proliferation of electronic communications, paper is still at the heart of most business processes. Many ideas, concepts, and designs are first recorded on paper. Invoices, purchase orders, and forms are frequently handled as paper documents. And many organizations still require a "wet" signature on legal documents. In fact, the volume of paper circulating in a typical company still increases every year. Reducing the cost and complexity of managing paper is frequently the deciding factor for funding and adopting an ECM solution.

Organizations should consider the multitude of ways that scanned content can enter an ECM system. Scanning from a dedicated station by skilled operators is becoming less the norm. The proliferation of networked, scan-enabled multifunction devices allows content to be routed by anyone to just about anywhere in the organization. Xerox Global Services is seeing an increasing demand for inter-enterprise scanning, where content is scanned on one network and delivered into another enterprise ECM system via secure protocols, such as HTTPS or digitally signed email "data pockets." This increase in capability can have a big impact on an enterprise's business process requirements and solution choice.

8. E-forms
While paper forms are still in abundance, e-forms are a growing way to present and collect information over the Web. If e-forms are used in the organization, the ECM solution needs not only to facilitate collecting this information in static form for records-keeping purposes, but also to enable the data contained in the form to be incorporated into the overall enterprise content system and business processes quickly and easily. Again, a more advanced ECM system, such as DocuShare, is typically necessary to achieve this capability.

9. Content Federation
If multiple individuals or teams are working on and accessing content and using more than one document repository, then federation is a necessary consideration. Numerous federation models exist, from simple "portlet" views into third-party repositories to real-time, bi-directional synchronization of content between distributed, heterogeneous systems. These capabilities are offered in product, through third-party applications, or through customization. Determining the right solution depends on a number of business factors, some of which may be orthogonal or even contradictory. For example, a business unit may determine they need real-time content synchronization between their South African and U.K. offices. However, system cost and network fragility may obviate any benefits that could otherwise be realized with a simpler, federated search portlet.

10. Content Storage and Relocation
Where content is logically stored during the document lifecycle—from creation to review and approval to long-term retention and final destruction—is predicated by an organization's size and geographic scattering. The ability to determine how documents move through the ECM system ensures efficiency at every point in the solution. Other factors to consider include backup against human error, disaster recovery, storage optimization, and the immediacy (or latency) of content access.

Most BCS and ECM systems can work with network-attached storage (NAS) systems, treating it as one large attached drive. However, organizations increasingly want to use rules-based file storage methodologies to balance cost, speed, and compliance needs. Many low-end BCS and ECM systems do not offer interfaces to these rules engines, resulting in poor optimization and increased storage costs.

11. Compliance and Records Management/Retention

Retaining and managing information—including email—under a records-compliance framework is a legal requirement for publicly traded companies or organizations that work with the government. While not mandatory for other enterprises, it is still critical. Unfortunately, defining and implementing an enterprise-wide records management (RM) policy across multiple content management platforms can be challenging. Moreover, the three content types— transactional, business, and persuasive—may each have different retention requirements, further complicating the process. For example, long-term retention is essential for transactional content; while ad-hoc business content (a customized presentation, for example) may have a retention period of weeks or even days. Automated disposal of expired documents within the ECM environment protects the organization against unwarranted discovery and optimizes the computing capacity of the overall ECM system.
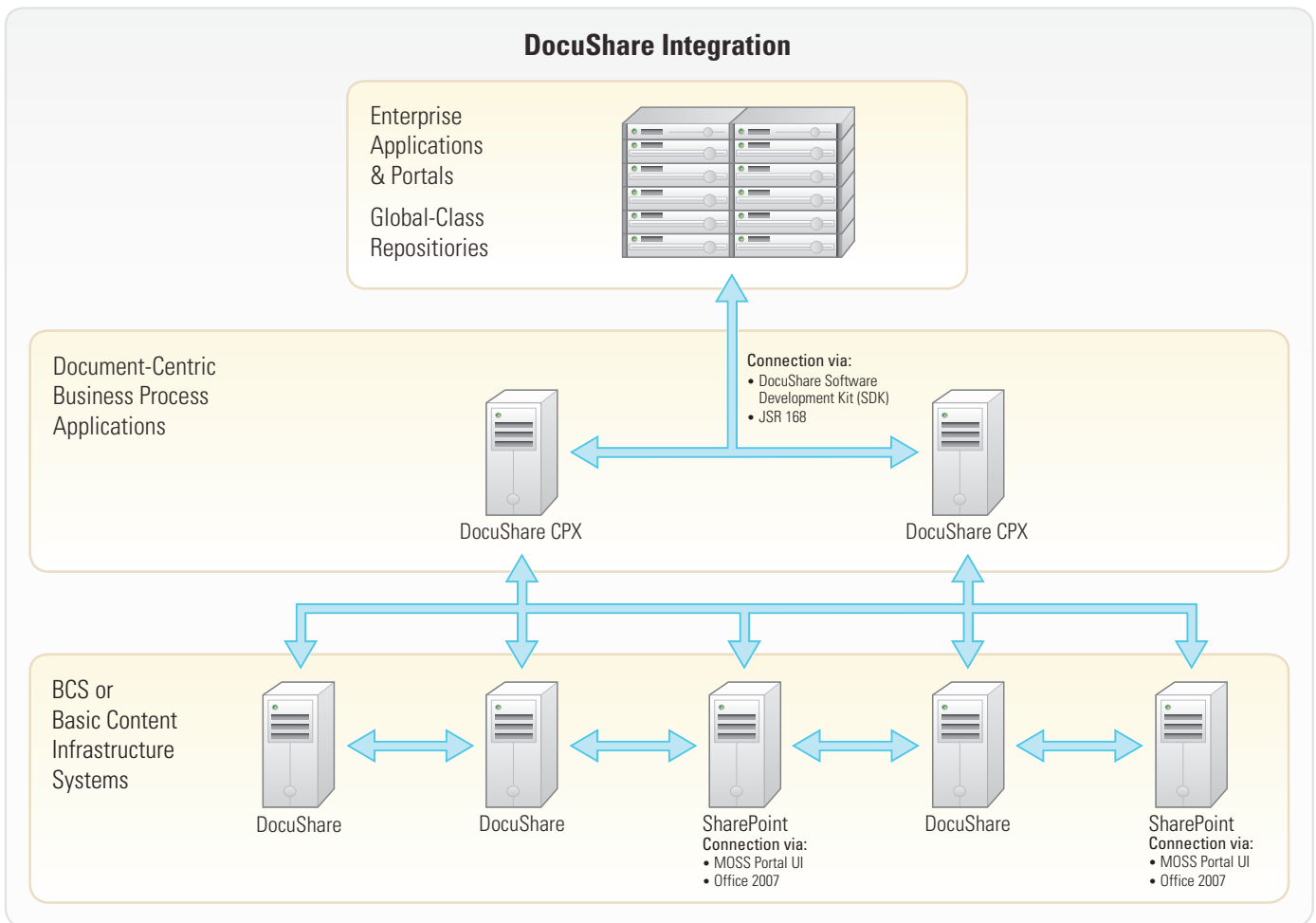
12. Changing User Population and Needs

In all companies, a percentage of employees leave or change jobs internally each year. For outsourced engineering services and similar industries, this percentage is as high as 70 percent. Even within a "typical" enterprise, workforce fluidity can be a challenge when considering ECM systems. Roles and responsibilities change over time. Teams form and disband. Departments and even entire divisions merge. The more dynamic the organization, the more crucial it is that the ECM system offer out-of-the-box flexibility around user, group, and role management, enabling the organization to:

- Adjust user seat counts and user types

- Migrate or reassign users from one team to another as job responsibilities change

- Offer increasing levels of product richness as users' technical skills evolve

- Provide access to constituents outside the firewall

- Deliver a consistent user experience across all levels of functionality

- Employ role-based workflows, so in-flight flows are not disrupted by recipient changes

Participation by users external to the firewall is particularly complex because of the varying degrees with which users interact with the content. How do vendors, contractors, customers, and other supply chain participants interact with content located inside the firewall? Is secure access to protected documents, customer transactional records, or promotional marketing materials required? Which external users need secure access and which do not? A solution that provides flexible access to users within and outside the firewall makes this entire process easier to manage.

DocuShare Integration

Enterprise
Applications
& Portals

Global-Class
Repositiories

Document-Centric
Business Process
Applications

Connection via:
- DocuShare Software
  Development Kit (SDK)
- JSR 168

DocuShare CPX

DocuShare CPX

BCS or
Basic Content
Infrastructure
Systems

DocuShare

DocuShare

SharePoint
Connection via:
- MOSS Portal UI
- Office 2007

DocuShare

SharePoint
Connection via:
- MOSS Portal UI
- Office 2007

DocuShare and SharePoint in Action

DocuShare delivers several powerful capabilities in a blended ECM environment that includes Microsoft SharePoint:

- Federated access to all DocuShare and SharePoint content as peers (via MOSS Portal UI)

- Integration of DocuShare and SharePoint servers into a combined content infrastructure that smoothly manages content through business process workflows (via DocuShare Developer APIs and the integrated workflow engine)

- Migration of any single user from basic, read-only DocuShare access to full DocuShare CPX access over time, at any time (via the DocuShare administrative user interface, with no programming or software installation necessary)

DocuShare also provides rapid implementation tools and the necessary bridging infrastructure between SharePoint and enterprise "repositories of record," enabling users to access content from multiple repositories across the enterprise.

An Ideal Platform for Practical ECM

Xerox DocuShare and Xerox DocuShare CPX are good examples of highly flexible ECM solutions that can excel either on their own or in conjunction with high-end ECM and low-end BCS systems. Organizations making a commitment to practical deployment of an ECM solution should look closely at these two products due to the extraordinary flexibility and extensibility they provide.

DocuShare ECM products offer federation, extensibility, collaboration, user-defined workflow, and a compelling blend of basic and advanced content management capabilities at a price point all organizations can accept. Moreover, a simple license change permits a dynamic blend of user levels and capabilities—no other vendor can make that claim—enabling businesses to deliver targeted, cost-effective, and appropriate content management capabilities across the entire enterprise. Using a true shared services approach, companies can deploy the DocuShare platform at any point in the organization (departmentally or enterprise-wide) and scale it horizontally or vertically in combination with other vendors' products. The net result is optimized content management, accessible to all users, at a preferred price point.

Conclusion

When considering a practical ECM solution, it is critical that an organization take the time to conduct a thorough assessment of strategic goals, document usage, and users' needs. Not doing so could result in a solution that is more costly in the long run because it is unwieldy or does not offer the expected flexibility. In a worse-case scenario, a one-size-fits-all solution results in a one-size-rejected-by-all response from users. Some companies may find that one system can provide everything necessary for a successful deployment, but more likely they will discover a shared services approach is best. Xerox DocuShare products are good examples of ECM solutions that provide the extensibility, flexibility, and integration points required to support blended ECM configurations.

Interested in Learning More?

For more information on how practical ECM delivers broader capabilities than individual applications can provide independently, please call **1.800.735.7749** or visit **docushare.xerox.com**.

About DocuShare

Xerox DocuShare, a highly intuitive and secure Enterprise Content Management (ECM) application, enables users in document-intensive organizations to dynamically capture, manage, retrieve, and distribute information, regardless of skill level or location. DocuShare customers can significantly improve productivity, streamline business processes, and reduce the time and cost of managing routine business documents and information. Leading the industry in speed of deployment and ease of administration and use, DocuShare significantly reduces installation cost and complexity by leveraging an organization's existing infrastructure and offering near-pushbutton installation. Tightly integrated with Xerox multifunction devices, DocuShare can manage both hard copy and electronic content with unsurpassed ease and convenience.