

Content Management Integration
The triumph of the foot soldier

A Xythos Whitepaper

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Executive Summary

The first Content Management (CM) applications addressed complex business problems with complex solutions. While they filled a niche—serving, for example, biotech researchers who were almost legally mandated to use a high-end document management system—early CM systems didn't address the growing need to help all users manage content better. Nowhere is this more evident than data integration. Identity management, standardized metadata and workflow, security, retention—these are a few areas in which organizations struggle to link CM to other business processes on a technical level.

The need for integration already exists at a business level. For example, users seek to consolidate their view of the bewildering variety of information that demands their attention, whether or not they access to this information through a portal. With increasing compliance demands, the business driver for data integration among “unstructured data” systems (CM) and “structured data” systems (everything else) has grown that much greater. Data integration has replaced complex business rules as the core CM requirement.

This whitepaper explores the “the triumph of the IT foot soldier” and why the most successful integration between ECM applications and other software components – the IT infrastructure – is the least celebrated, but the most important.

The Social History of IT

The history of the CM market emphasizes the rise of specialized Enterprise Content Management (ECM) applications, such as Document Management (DM), Records Management (RM), Web Content Management (WCM), Digital Asset Management (DAM), and Digital Rights Management (DRM). Emphasis is usually on functionality, which has proved to be the wrong place to start. Professional historians group themselves into people who study political history, the narrative of great people and grand events, and social history, the stories of average people. History needs both perspectives, since political history shapes social history, and vice-versa.

Napoleon may have commanded the French army, but victory and defeat often depended on the average French soldier. When that soldier wasn't trained to fight elusive Spanish guerrillas, or equipped to last in frozen Russia, even the world's best army could fail. When someone writes the social history of CM, the IT department, not the name-brand ECM vendor, will be the focus. These foot soldiers will finally tell their story, in which impressive functionality was often far less important than other requirements. Integration often tops the list of these other priorities, partly because the word "content" was all that ECM applications had in common with one another.

Integration

Integration Between ECM Applications

During the early history of ECM, attention centered on functionality in each ECM segment. For example, customers pondered whether they should build custom WCM solutions, or buy packaged solutions. Vendors raced to build the most impressive set of features, from dynamic content assembly to automated localization. Whenever a new technology area became hot, the functionality arms race shifted to a new battlefield. This strategy overlooked the overall business processes and underlying technologies in which ECM played a part. For example, the person responsible for updating the Service Level Agreement (SLA) on the company Website might have started by extracting the old SLA from the legal department's DM system. Once the new SLA was drafted, a workflow process needed to start, involving the lawyers and departmental heads in the decision-making process. Once the final SLA was ready, the Web team needed to upload the new content to the corporate Website, via the WCM system.

Unfortunately, none of these applications had anything to do with one another; they didn't even share the same usernames and passwords. Not surprisingly, integration among CM applications quickly became a priority. Vendors developed or acquired ECM technologies to round out their portfolios. For example, recognizing the compliance market opportunity, several ECM vendors went on a records management buying spree, snapping up small companies such as TruArc and Tarian. Unfortunately, both the build and buy options proved inadequate. Building another complex ECM system from scratch was time-consuming and difficult; integrating an acquired technology into existing applications could be equally hard.

As difficult as integration among ECM systems proved to be, customers often were focused on a different problem. If DM systems handled your strategic documents, and WCM systems determined the success of your business, then what connected these ECM applications to the rest of your business? The answer, unfortunately, was nothing,

unless you spent considerable time, money, and effort integrating ECM with other applications.

Integration with ERP / CRM Systems

In response, many ECM vendors shifted their attention to Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) integration. They realized that their customers were already doing custom integrations between their Web-based, order-entry applications and back-end inventory and accounts payable applications. Selling pre-built integrations with Siebel, PeopleSoft, and SAP seemed a logical, potentially lucrative step. These integrations begged a key question: How did customers want to integrate their ECM and ERP/CRM systems? The answers weren't always consistent.

One company's biggest concern might be observing, analyzing, and predicting customer buying habits, which requires integrating the Web-based product catalog to the CRM system. Another company might worry about contract management, a problem that could only be solved by integrating DM and ERP applications. Integration ultimately still fell primarily on the shoulders of the IT department and systems integrators.

Integration with Collaboration Tools

As important as the structured content in ERP/CRM systems were, organizations were also feeling the need to manage the explosion of email, documents, chat, and other forms of "unstructured content." Important business content usually started in collaboration tools, but ended up in ECM systems. A company announcement started as an email, but evolved into a record. The employee handbook started as a word processing document on a user's hard drive, but appeared later on the company intranet. ECM vendors, looking for useful but easier integrations, seized the opportunity to offer integrated collaboration tools and ECM applications. Again, integration proved harder than expected. Specialists in complex ECM problems, such as Documentum and Interwoven, struggled to "dumb down" their technology to create "content management for the masses" (what Gartner Group now calls "basic content services"). Even a company with as huge a piece of the collaboration tool market as Microsoft has not yet successfully broken into the ECM market. And again, acquisitions—Documentum's purchase of eRoom, or Microsoft's purchase of nCompass—didn't provide any immediate solutions.

Now What?

While the history of ECM integration may not be encouraging, it isn't cause for despair. ECM vendors won't ride to the rescue on application integration— among ECM applications, between ECM and ERP/CRM systems, or between ECM and collaboration tools. However, there's every reason to expect ECM vendors to help integrate at the infrastructure level. The infrastructure was always the logical place to start, and it's increasingly important with the advent of new compliance demands.

Infrastructure Integration

The most successful integration between ECM applications and other software components—the IT infrastructure—is the least celebrated, but most important. We use the word “infrastructure” so often that we lose its significance: the skeleton that binds and supports everything in IT. Meaningful integration between ECM and anything must start there. The most successful points of integration are security and identity management. Single sign-on may not be as sexy as multi-channel publishing, but it influences the success of any application, ECM or otherwise. Single sign-on can be harder than it looks, leading to unpleasant surprises. The ECM applications that did a cursory job integrating with Microsoft’s ActiveDirectory, a Lightweight Directory Access Protocol (LDAP) service, can be completely stymied when dealing with an advanced policy and access management tool such as eTrust’s SiteMinder

Integration at a platform level can be equally important. For example, nearly all ECM tools have a database component. ECM vendors who aren’t database companies themselves have to strike a balance between supporting enough database formats to be attractive to a broad audience, but not so many that their development resources are completely tied up in testing and certifying databases. However, these certifications usually say little about how well the applications work with advanced database options, such as Oracle’s Real Access Clusters (RAC) feature.

It’s critical, therefore, to ask the infrastructure integration questions first. While verifying single sign-on and platform support may apply to every sort of application, they can pose especially acute problems in ECM. When selling a car, salespeople must use the order-entry application. When archiving any special aspects of the service contract, they might use the DM system— but only if the username and password are the same for both systems.

Integration often tops the list of priorities, partly because the word “content” is primarily what ECM applications have in common with one another.

Portals Integration

Portals have become the last, best hope for easy integration between different systems, including ECM applications. After all, if all the content that’s important to me can’t be presented in a single Web page, what hope is there for integration?

Content integration through a portal has special resonance for ECM. WCM systems are designed to generate Web content such as portals. Portals face many of the same challenges (dynamic assembly, content caching, content security, etc.) as other species of Websites. Moreover, the value of the content in a portal determines its attractiveness to the content consumer. If ECM systems can’t produce interesting content, they’ve failed a fundamental test. However, portals must be more than just a mosaic of unrelated content. Content integration makes the portal attractive; application integration makes it useful. Since users are increasingly accustomed to staying in the portal to perform many application functions, the ones that involve ECM and other applications need to operate in the portal itself. For example, if an insurance agent can create a new customer record

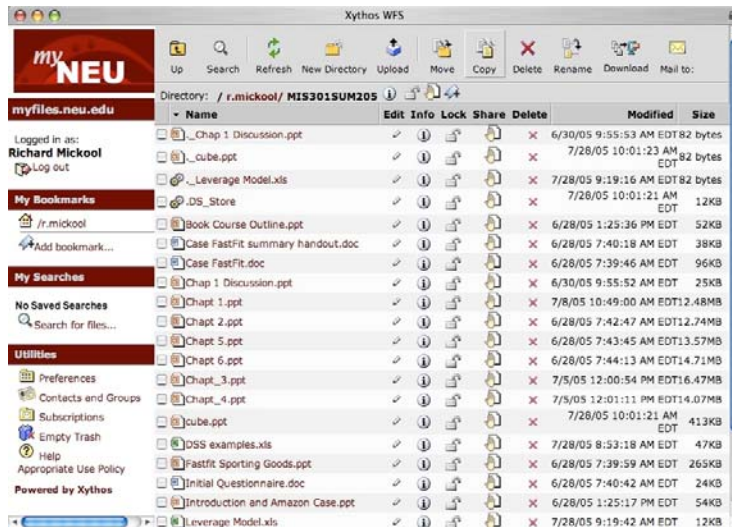


Figure 1 – Screen shot of Xythos-powered myFiles within the Northeastern University portal

in the portal, there's no good reason why the portal shouldn't let the agent upload customer documents into the DM system.

Integration with Compliance Enforcement

Compliance has had a profound impact on the IT world, and ECM is no exception. Again, integration is often more important than features.

For example, electronic discovery—the challenging task of collecting and delivering electronic content for a lawsuit—nearly always poses an integration challenge. Content relevant to the legal action may be in the:

- WCM system (how did the company represent itself on a particular day?)
- Workflow system (who approved that Web content for publication?)
- Email (what were the internal discussions about a particular piece of Web content?)

The content collected for discovery may be stored in a DM or RM system. Compliance may impose immediate, unexpected integration challenges, but they may not be unwelcome ones. The IT department may already have wanted to better integrate the LDAP repository with important applications. A Sarbanes- Oxley (SOX) audit may provide the extra impetus for doing that project. Compliance's gravity pulls most strongly in the direction of unified rules. For example, the goal for retention is a consistent set of policies that extend from the application layer to the storage tier. Ideally, when the CFO creates a new internal controls manual in Microsoft Word, her tools ask what sort of document this is. Once the document is finished, these tools “promote” the final draft to the DM or RM system.

Having applied a category (financial policies document) to the file, a specific set of backup rules—how often, how many redundant copies, and to what media—now apply. The storage management tier also has some awareness of the length of time the document must be retained, and knows where all copies are located.

A Simple Plan

No vendor today can provide unified rules across application and storage tiers. Meanwhile, the pressure to integrate ECM with other IT components remains. For now, integration remains a project, not an install option. So, the most basic rule of IT applies to any ECM project: start with a simple plan, and see where you can go from there.

Since integration is inevitable, a first project focusing on a successful integration between ECM and other components (e.g., WCM and identity management—is usually smarter than trying to meet everyone’s functional requirements in the first phase. ECM should demonstrate its ability to work in a Service-Oriented Architecture (SOA) from the start. SOA is a strategy, not a particular technology, but the strategy won’t work if the technology doesn’t support it. An ECM application’s ability to integrate with IT infrastructure is the first test. Functionality matters, to the extent users and IT staff can start with simpler functionality. At the end of a compliance project, employees will be adding something new to their daily routine: categorizing every piece of content they create. As with any unfamiliar feature or process, it’s better to start with basics—particularly if users can see value for themselves in using versioning, auditing, categorization, and other ECM features.

Meanwhile, the IT staff can focus on making the new ECM system run smoothly, before integrating the DM system with ERP/CRM applications, or adding a workflow component. If the ECM application can’t start with what Gartner calls “basic content services,” then you may be looking at the wrong application. SOA has the added advantage of keeping the IT staff focused on the right things. Ultimately, CM is just another service for users; CM systems are just another set of moving parts in the SOA-guided IT infrastructure. You can prioritize content, process, and system integration challenges and measure the success of your efforts to address them more easily. ROI also may be easier to calculate; hanging CM on the SOA framework makes it easier to understand the value of what the CM system does.

Conclusion

The Triumph of Social History

Integration may not have received the attention it deserved in the early years of ECM applications, but will be a major requirement—if not the requirement—of ECM in the foreseeable future. This should be good news for IT departments. Social history, the chronicle of life in the IT trenches, will trump political history.

About Xythos

Xythos Software is the leading developer of basic content management software solutions for the enterprise. Xythos products include the WebFile content management platform and our family of applications for essential document and file management. Xythos’ WebDAV-compliant solutions are licensed to over two million users at commercial, education and government organizations around the world. Whether they are used as stand-alone applications or integrated components, Xythos product solutions are rapidly becoming the platform-independent choice for customers seeking easy to use and cost-saving alternatives to traditional enterprise document management products. To learn more about Xythos visit www.xythos.com or call 1-888 4XYTHOS.