

Basic Content Services:

*Overcoming the Limitations of Email and Avoiding
the High Costs of Enterprise Content Management*



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Executive Summary

This white paper will explore the recently defined Basic Content Services market, its market drivers, and how it differs from traditional Enterprise Content Management (ECM) applications. In recent years, the limitations of email and other desktop tools for sharing and managing content have been exposed by the proliferation of department servers and file shares, the loss of valuable data, decreased worker productivity and even costly lawsuits. As a result, organizations are now seeking more effective and less costly methods to manage content, simplify internal and external collaboration and better prepare themselves for an era of increased information regulation.

Turning first to established Enterprise Content Management (ECM) solutions, organizations found that the cost to license, deploy and maintain these systems on an enterprise-wide basis was quite overwhelming. Often, the complex functionality these systems provided was greater than what most knowledge workers needed—creating steep learning curves even to address relatively simple collaborative work processes. As a result, a market opportunity was created for software vendors to provide simpler, basic content service solutions that could be more easily deployed enterprise-wide.

Though less ambitious in its feature set than typical ECM systems, Basic Content Service (BCS) applications are intended for a much broader audience of users within the distributed enterprise. These applications are generally horizontal content management applications which include a set of comprehensive library services—available through a web browser or even common desktop applications. While BCS applications don't offer the industry-specific embedded functionality for a process such as drug development compliance, they are well-suited to a broad set of common collaborative business processes and can be readily modified or integrated with other enterprise applications to meet specific requirements. The primary appeal of BCS applications is that they can usually be purchased and deployed for a fraction of the cost of traditional ECM systems and require considerably less time for users to learn.

This white paper will explore where and why BCS solutions are gaining popularity as enterprise-wide content management solutions across a variety of organizational settings. It will also look closely at different examples of actual BCS deployments—from stand-alone web applications, to digital repositories and BCS integrations within enterprise portal environments.

Ultimately, this report should help readers better define their own organization's requirements for managing content and help them to see where a BCS implementation may be a practical solution to their enterprise-wide content management requirements.

Driving Forces Behind Content Services for the Extended Enterprise

Basic Content Services has only recently been recognized as a distinct application category, apart from the Enterprise Content Management market. In the last year, industry analysts and experts have rapidly coalesced around the BCS concept as a variety of behavioral, economic and regulatory forces have begun to change the way organizations manage information. Previously, content management was typically limited to departments within organizations which had specialized information management needs. The solutions they chose to meet these needs often did not have to be used by other members of the organization. Now, organizations are realizing the benefits of managing and regulating their content across the entire enterprise to minimize work duplication, easily transfer and reuse knowledge and support the establishment of organizational best practices.

An increase in workforce mobility and task complexity, resulting in higher degrees of employee and partner interdependence, has also contributed to the demand for BCS solutions. Organizations have been seeking out tools that can support collaborative needs inside and outside of their own data networks, making content security a primary concern in the solution selection process. Pharmaceutical companies, for example, need to collect clinical trial data from contract study operators; University faculty need to share information with remote faculty and external researchers; sales organizations need to exchange confidential pricing information and contracts with customers; engineering companies need to share plant information with external technicians; and government agencies must distribute and review all kinds of documents with companies in regulated industries. In fact, according to researchers at META, by 2007, nearly every strategic ECM implementation will enable at least partial access to non-employees, including contractors, partners and clients.¹

While regulatory and security concerns have focused interest on content management, productivity improvement remains a persistent driver for organizations to streamline the way employees store, access, locate and retrieve their work content. According to Forrester's latest research about worldwide content management, the need to increase productivity, unify access to information, and deliver a more integrated infrastructure are the major adoption drivers of content management and other content technologies over the near term.²

With the proliferation of web sites and intranets, companies are struggling with the challenge of providing easy access to enterprise content stored within a growing variety of applications and locations—departmental intranets, team file shares and workgroups, individual hard drives and random partner web sites. In most organizations, this has resulted in too many repositories, too diverse a set of skills needed to maintain those applications, and inconsistency in security, backup, and other safeguards for important business content.

¹ Jeffery Mann, META Delta, "External Content Collaboration" February 2, 2005

² Joshua Duhl, Susan Feldman, Forrester Research, "Worldwide Content Management Software 2005-2009 Forecast: That She Grows!"

IT leadership realizes that without improving access to content and standardizing the methods they employ to manage content, they risk increased costs, reduced competitive advantage and potentially serious legal liability exposure. As a result, the need to comprehensively manage enterprise content is driving demand for a solution capable of meeting the needs of all knowledge workers—a solution that is easy-to-use, easy to customize and integrate into existing applications, and priced for widespread deployment.

Increased Regulation Contributes to Demand for Basic Content Services

Increased government and industry regulatory requirements are continuing to drive demand for enterprise wide content management solutions. A May 2005 survey by AIIM, the international authority on Enterprise Content Management, highlighted that compliance was the fastest growing factor cited by respondents for their interest in enterprise content management solutions. In the U.S., where the Sarbanes-Oxley Act has introduced a host of compliance demands on public companies, the percentage of managers who cited compliance and risk-driven concerns as their most significant business driver, swelled from 26% to 43%.³ The fear of legal liability associated with compliance requirements is also a critical issue forcing organizations to adopt improved content management practices. In combination, these two factors nearly equal the rank of cost-driven concerns influencing interest in ECM solutions.

What is the most significant business driver behind your current interests in enterprise content management technologies?

	2004	2005
Cost-Driven Concerns	56%	45%
Improve efficiency	32%	26%
Reduce costs	17%	11%
Increase profits, better performance	7%	8%
Customer-Driven Concerns	29%	31%
Better customer service	16%	15%
Faster turnaround, improved response	7%	8%
Leadership, competitive advantage	6%	8%
Risk-Driven Concerns	15%	24%
Compliance	11%	19%
Risk management/business continuity	4%	5%

Figure 1: Survey from May 2005 Survey by AIIM International

Why Traditional ECM Isn't Really for the Enterprise

With all these factors contributing to demand for enterprise-wide content management solutions, why isn't traditional ECM fitting the bill? Contrary to their categorical description, traditional ECM applications are not well suited to enterprise-wide deployments. Traditional ECM applications continue to cost several hundred dollars per user to license and often require additional customization and integration which can exceed the total license costs by a factor of two or more, according to industry analysts. ECM applications are often verticalized, providing capabilities to manage documents and

³ "Payback Time: The Practical Application of ECM Technologies," AIIM - The ECM Association, 2005

records related to specific business processes; they are also often customized for specific roles within a workflow or process. While this functionality helps maintain standard content management procedures, not everyone in the enterprise contributes to the corporate web site, handles drug development testing data, or reviews legal contracts, rendering the bulk of ECM functionality inapplicable to the common knowledge worker. This has become the ECM paradox. As ECM applications have grown in scope and capability to address industry and role-specific requirements, they have become overwhelming and cumbersome to use for everyday content collaboration needs.

Most knowledge workers simply want to be able to find the content which they need to do their jobs and periodically collaborate with co-workers. They need a basic set of tools that permits them to securely share documents and files, track changes and find the latest version of a document. The dedicated client software of traditional ECM systems wasn't built for this purpose. BCS solutions have a web-based interface that can provide traditional document management functions, and offer considerable support cost savings by delivering content management via a standard browser. BCS applications are also designed to be easily integrated together with enterprise web application servers, allowing document management functionality to be delivered as a service throughout an organization

A historic inhibitor for the adoption of traditional ECM systems for enterprise-wide deployment is cost. Beyond the higher software licensing costs, traditional ECM product suites are time-consuming to deploy, often requiring substantial customization and consulting work. Gartner research finds that organizations typically spend two to three times the cost of software licenses on professional services to implement a traditional ECM application.⁴ Even when an ECM system has been successfully deployed, user adoption is not guaranteed. Employees are generally disinclined to change the way they work, so introducing complex new processes to manage and share content are unlikely to be well accepted.

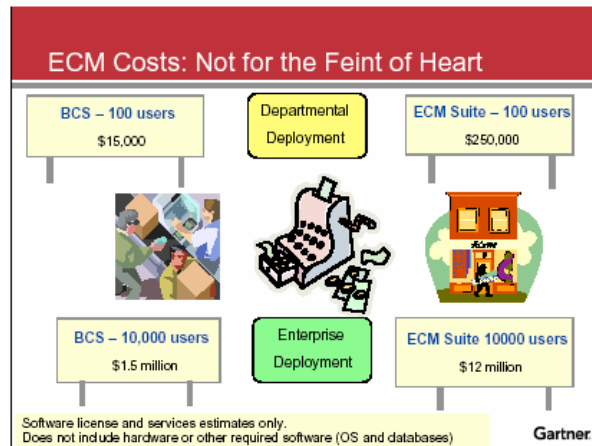


Figure 2: BCS vs. ECM Cost Slide from the Gartner 2005 Symposium

⁴ Gartner Research, "Content Management for the Whole Company", June 24, 2005

Ease of system integration is another important reason why organizations are exploring BCS for their enterprise content management needs. With the need to expand content management across departments, it has become imperative to have a solution that will work across heterogeneous system environments.

A 2004 IDC survey found that, on average, there are 24 repositories in a company. Large companies average more than 42 repositories and have multiple content management systems. The increased cost and complexity related to managing so many content repositories is both an operational and competitive challenge for these businesses. While the operational costs are reasonably obvious, the costs related to work duplication and the absence of content visibility can be much greater. As a result, organizations are seeking solutions to improve content access, discovery and collaboration through a distributed content management infrastructure that goes beyond today's existing ECM systems. Basic Content Services can provide that foundation for improved enterprise-wide content accessibility.

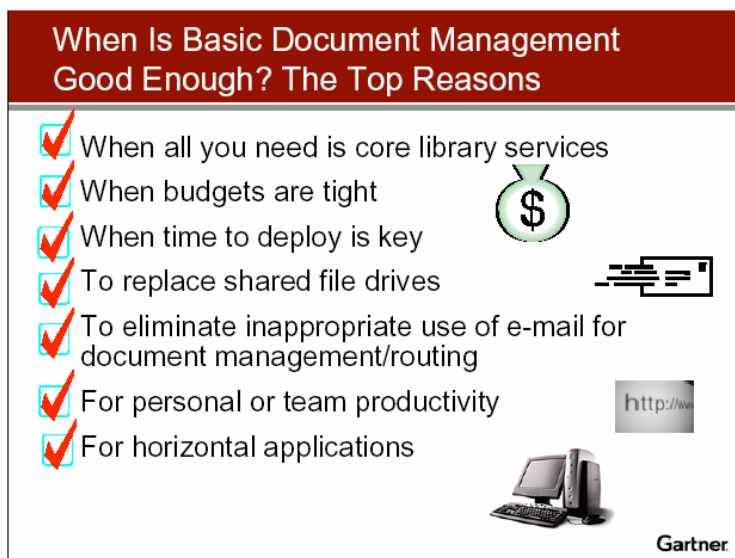


Figure 2: "When BCS Is Good Enough" slide from the Gartner 2004 Symposium

As illustrated in the figure above, Basic Content Services is the right choice when an organization needs core library services, when budgets are tight and when the time to deploy is a priority. According to Gartner, by 2007, viable Basic Content Service solutions will become mainstream with a 70% probability.⁵

Basic Content Services as a Complement to ECM

As much as the previous discussion is centered around how traditional ECM applications are not an ideal fit for the majority of the enterprise, they will nonetheless continue to suit many specialized needs and processes that BCS applications will not be able to address. Pharmaceutical companies will always require specialized processes to manage data compliance and research integrity and insurance companies will always

⁵ Gartner Research, Content Management for the Whole Company, June 24, 2005

have unique requirements for processing quote approvals. These needs most likely will continue to be handled by traditional ECM vendors. BCS applications will not overcome that need, but will more likely serve as a complement to those applications.

BCS applications can even make ECM applications more likely to succeed as they introduce a broader number of employees to common content and document management concepts practices. In fact, improved user familiarity combined with improved inter-repository content and metadata exchange should increase the overall adoption of both technologies for the foreseeable future. Gartner projects that by 2008, 75 percent of Global 2000 companies will have two fully integrated, but very different, content management implementations (0.8 probability).⁶

What Makes Up a BCS Solution?

There are six main elements which help to define a Basic Content Services solution, including:

- **Low cost:** BCS solutions have a significantly lower licensing cost per user than traditional ECM solutions, making them much more affordable to deploy across large organizations.
- **Core library services:** Though BCS solutions have a more narrow scope of functionality than traditional ECM applications, they generally offer the majority of content management functionality that most employees need, including core library services like: document version control, file check-in/check-out, workflow, comments and subscriptions. ECM applications do have more specialized and complex workflows, but a simple routing and approving is what knowledge workers need most of the time.
- **Content security and compliance:** BCS solutions can typically be plugged in to existing enterprise security and authentication technology standards. Ideally, they should also offer basic document classification and records management features so that content can continue to be managed within a common applications environment.
- **Scalable for the enterprise:** Since BCS solutions are intended for the entire enterprise, scalability is of utmost importance. Scalability must be available through a single, large repository or as groups of federated repositories with a common set of metadata and services.⁷
- **Ease of deployment and use:** BCS solutions require minimal consulting and training services to configure and deploy because they are generally web-based applications. In addition, ongoing support and maintenance is considerably less than what traditional ECM systems require.
- **Integrates across heterogeneous environments:** Since BCS solutions are intended for enterprise-wide deployments, they typically need to interact with multiple, heterogeneous systems, ranging from department to department and even subsidiary to subsidiary.

⁶ Gartner Research, "Content Management for the Whole Company", June 24, 2005

⁷ Gartner Research, "Content Management for the Whole Company", June 24, 2005

You Get What You Pay For

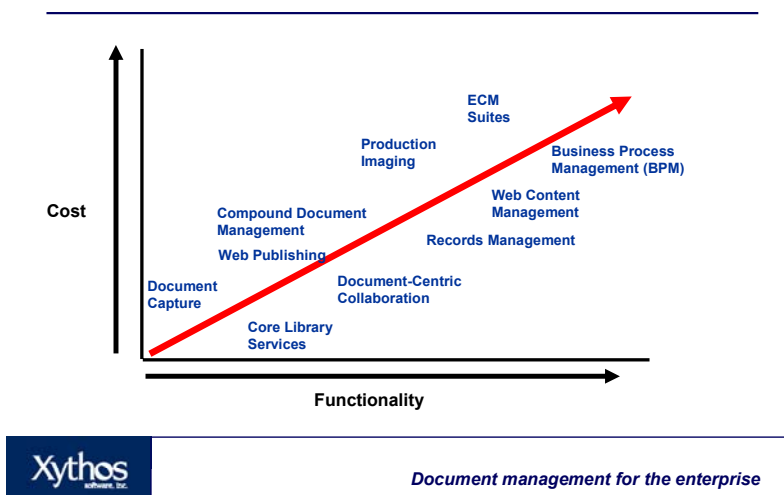


Figure 3: This graph illustrates the increasing cost associated with increasing functionality of different content management systems.

As illustrated in the figure above, the greater the functionality associated with a content management system, the greater the cost is. Most knowledge workers are only interested in the functionality near the y axis of the graph—core library services, light workflow and document-centric collaboration. ECM suites on the other hand offer digital asset management, rule-based structured processes, web content management and complex records management.

Not addressed in Figure 3 are open source applications. Though there has been much buzz about open source as of late, it is not yet considered a viable option for an enterprise-wide content management solution because of the considerable customization and support it requires coupled with a lack large-scale deployment examples for prospective customers to reference.

Benefits of an Open Standards-Based and Modular Approach to BCS

Content is more valuable when it is accessed in context. For many users, accessing content in context means accessing it through a third-party application; therefore, the ability to integrate a content management system with third-party applications becomes a necessity. An open standards-based, service-oriented architecture allows customers to integrate seamlessly with other standards-based applications and architectures, only requiring a generic skill set that can easily be replaced in the case of employee attrition.

BCS deployments can take many shapes and forms. Sometimes they are deployed within portal environments as the portal's own document management system; other times they are deployed as stand-alone applications. The following actual BCS customer examples are intended to illustrate various methods of service introduction within distributed enterprise-wide environments.

Northeastern On Demand: Storing and Retrieving a University's Intellectual Property Through a Portal

Northeastern University is a student-centered, practice-oriented national research university with a mobile and distributed global campus community of over 50,000 students, faculty, and staff. As the leading co-op school in the country, several thousand of the University's students are dispersed around the world at varied workstations and time zones.

Anticipating that demand for anytime, anyplace access to real-time data and collaboration would become more integral to the campus community, the Northeastern Information Services team launched the Northeastern On Demand initiative, which allowed their campus community to access their files and applications through the university's existing portal based on a user's login, creating a web-based virtual file management environment for the entire campus. Now, most everything that a student, faculty member or Northeastern staff member can access on campus, they can access via Northeastern On Demand, no matter where they are located or what platform their PC is running on. Northeastern On Demand provides the applications users need to access, create and modify data as well as a secure way to share their work with others, no matter where they are located. Whether working collaboratively on a class project, a research initiative, or a work assignment for a co-op employer, students and faculty can productively connect, regardless of location. Northeastern On Demand also centralizes data backup and restoration, ensuring that students and faculty's work will never be lost.

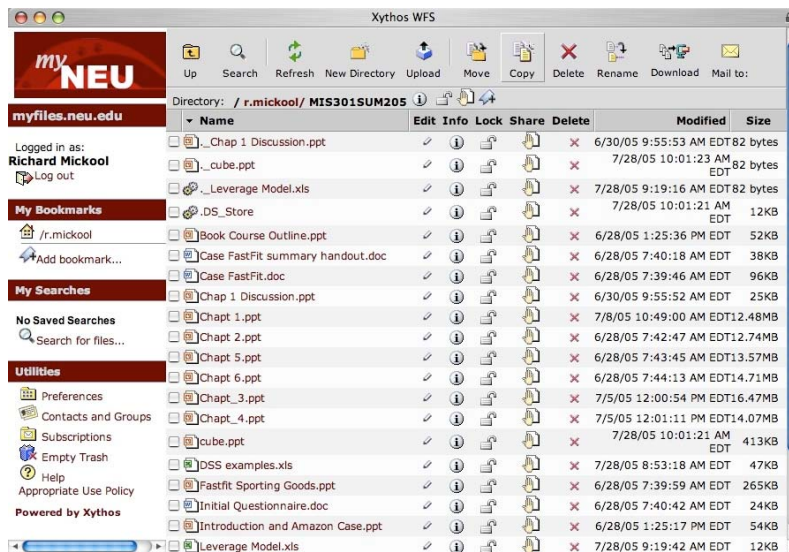


Figure 4: Screen shot of Xythos-powered myFiles within the myNEU portal.



General Dynamics: Collaborating with the DoD Community Through A Web-Enabled BCS Application

Within the Department of Defense (DoD) community, there are a number of resources available for individuals and groups that need to share information—resources ranging from the Air Force Portal to the Air Force Research Laboratory's' (AFRL) Enterprise Business System. These systems, however, were internally focused and did not easily accommodate safe information sharing or collaboration with the external development community.

As a result, there was a need to provide a real-time and secure information-sharing and collaboration solution to the DoD-wide research, development, test and evaluation community. The community consists of Air Force, Army and Navy personnel, Sandia National Labs, Lawrence Livermore National Labs, General Dynamics, Lockheed Martin, Raytheon, Booz Allen Hamilton, SAIC, SRI International, MIR, Cal Tech and New York University—and many others. In 1995 and 1996, as an outgrowth of the effort to provide collaborative resources to a DARPA software research effort, the Virtual Distributed Lab (VDL) project was initiated under the auspices of the Office of the Secretary of Defense.

With this charter, the VDL looked for and deployed a web-based document or file management system that would support upper-end WebDAV protocols, provide version control, ensure sharing within and outside of the community, but would also enable personnel to control who had access to what information at what time. Today, researchers at the Automated Target and Recognition Division of AFRL use the solution on a daily basis for document and file sharing. Prior to using the solution, they relied on FTP and email file attachments for document collaboration, but there were concerns about the security of the information they were sharing using these methods. Now, that concern has been mitigated. The solution enables sensitive information to be shared securely, through firewalls, while also establishing security bridges to communicate outside the organization.

The VDL project continues to serve an expanding list of projects. As more programs and sites are established, more users will be able to take advantage of this capability. Having the system available in real time, and being able to upload and download files easily makes information sharing easier for users both inside and outside of AFRL. A group of individuals conducting evaluations of software algorithms, for example, is one of the largest groups now using the web-based document management solution to safely share their information.



Conclusion

Basic Content Services applications provide core library services functions once available only in high-end ECM systems at a significantly lower cost, helping to address an organization's content and document management requirements on an enterprise-wide basis. With BCS, organizations have the flexibility to deliver unstructured data management within the applications they already own and use, reducing implementation and support costs. If the majority of your organization's employees simply need an easier way to collaborate while you are seeking a better way to manage and protect your enterprise content, then BCS technology may be an ideal solution. BCS can be a cost-effective first step for organizations that don't yet have an ECM strategy and are simply trying to overcome the deficiencies related to email based collaboration. It can also serve as a complement to existing ECM systems within organizations which appreciate the need to provide varying levels of content management functionality across their enterprise. In either case, BCS can help organizations better respond to demands for improved business efficiency and become better prepared for increased content regulation and compliance requirements.

Xythos Software is one of the leading Basic Content Services vendors recognized by technology industry analysts. Its applications are deployed at hundreds of enterprise customer locations around the world, serving the varying content management needs of academic, commercial and government organizations. Several of the enterprise software industry's largest developers including Oracle, SAP and SAS Institute also depend upon Xythos technology to power their own web applications which are installed within many of the world's largest and most distributed organizations. To learn more about Xythos and Basic Content Services please visit: www.xythos.com.