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Content Repository Synchronization

By Mary Laplante, Vice President and Lead Analyst
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The challenge: managing content in multi-CMS environments

Deploying multiple content management systems (CMS) is now the enterprise norm, no longer the exception. Regardless of how businesses end up with multiple systems, the reality is that stomping them out like spot fires has become a lost cause, especially as Microsoft SharePoint, open source systems, and cloud-based CMS services gain traction as viable options for enterprise buyers. Today, business strategies for content management are less about imposing and implementing a single repository, and more about effectively managing heterogeneous CMS environments.

Where there are multiple content repositories, there are most likely document and content management challenges that arise from the need to share documents and content across those systems. This is the great irony for companies that embrace the reality of multi-repository enterprise content management (ECM). Business and IT professionals responsible for managing ECM platforms now face challenges such as:

- Making the same documents available to multiple business applications, each with their own processes and workflows.
- Enabling document-based collaboration in a cloud CMS environment while storing critical information in an on-premise archive to meet regulatory requirements.
- Working with supply chain partners and suppliers who use the same documents to drive their own business processes, duplicating and managing those documents in their own repositories.
- Managing local SharePoint repositories that spring up in regional organizations because it's too costly and time-consuming to integrate with the mega-ECM system at corporate headquarters.

How are updates and changes to documents coordinated across repositories easily and cost-effectively? How can enterprises deploy a mix of cloud-based and on-premise solutions and ensure that content is available within multiple business processes, regardless of where they are executed? How can content be reliably distributed between easy-to-use front-end systems and back-end systems that meet rigorous enterprise IT requirements?





The solution: content repository synchronization

Enterprise content integration (ECI) tools and technologies address the challenges associated with managing content in multiple content repositories. With ECI, companies can manage content in one system and use it within others connected to it. Common ECI solutions include:

- Automatically transferring documents from one system to another, packaging the content itself with permissions and metadata mappings.
- Directly interfacing two systems with a bidirectional connector, using approaches including proprietary APIs , web services, and the emerging CMIS (Content Management Interoperability Services) standard put forth by OASIS.
- Developing a single point of entry by implementing middleware that connects multiple ECM systems with a single front-end user interface. This approach is commonly referred to as federation.

These solutions are primarily designed for environments in which a single document instance is made accessible to multiple business and content management applications. Developers construct gateways for accessing, transporting, returning, and checking the document back into its repository of record. In a growing number of cases, however, companies want to be able to work on multiple instances of a document in two repositories, often concurrently. *Synchronization* is an advanced feature of document transfer that presents a compelling ECI solution for organizations adopting a multi-CMS strategy.

Most business users are familiar with the basic concept of synchronization because they use multiple computing devices: a laptop and a smartphone, a desktop system and a laptop, a laptop and a centralized system at corporate headquarters. Users work with the same information on those devices – thus the need to keep the documents and data up to date and accessible. With reliable, real-time synchronization, they have confidence that they are always working with the right information and that changes made in one location are reflected in the other after the devices are compared and updated.

These same principles apply to information stored in multiple content and document management systems. Repository synchronization is enabled by software that compares relevant parts of two document storehouses and ensures that they are perfectly duplicated, including content, metadata, and permissions. Synchronization enables organizations to develop business applications based on an integration model allowing distributed documents rather than requiring a single document instance.



Business scenarios for repository synchronization

Synchronizing two enterprise CMS stovepipes

Banking • Regulatory control balanced by ease-of-access

The banking industry is subject to rigorous adherence to regulatory requirements governing interactions with customers, other financial institutions, and federal agencies. High-end ECM systems are a good match for environments characterized by the need to control documents and information according to complex business rules. However, these very “lock-down” features can be burdensome when everyday users need to access and update documents as part of routine processes for customer service. For many banking institutions, the answer is easy-to-use front-end systems and heavy-duty ECM back-end systems.

A major US banking institution fosters the deployment of multiple distributed SharePoint systems. Users work solely in their native SharePoint systems, with regulatory-critical documents automatically archived in an IBM FileNet system. A synchronization solution makes it possible to ensure worker productivity and satisfaction, meet regulatory requirements, and control application costs by accommodating users who prefer the SharePoint environment rather than the more advanced IBM platform.

Synchronizing ECM systems across organizational boundaries

Pharmaceuticals • Very complex document management in distributed information environments

New drug applications (NDAs) comprise thousands of pages of documentation, integrating data and content from a vast array of disparate systems and sources. Document management complexities include the sheer volume of information, many participants in the drug development supply chain, the long life cycle of new drug development and approval, strict compliance with regulatory requirements, document access and permission controls, and last-mile NDA assembly of all the correct, current versions of submission components, organized according to Federal Drug Administration guidelines.

A global pharmaceutical company establishes a document management architecture for NDAs built around a centralized EMC Documentum system as a tightly-controlled repository of record. The architecture accommodates distributed document management by enabling partners, researchers, and suppliers to use their systems of choice and work with documents locally – as long as they synchronize their repositories regularly with the Documentum system of record. A synchronization solution makes it possible to maintain a comprehensive audit trail across all systems, speed time to market for the drug, and lower the barriers to collaboration among partners, suppliers, and researchers.



Synchronizing cloud and on-premise CMS

Consumer packaged goods • Project collaboration with speed and confidence

Eliminating barriers to document-centric collaboration is one of the primary drivers for the rapid market acceptance of cloud-based CMS offerings. Teams collaborate on activities and projects by sharing documents – business plans, marketing collateral, slide presentations, and so on. The common method of sharing project artifacts electronically is email attachments. This approach can quickly spiral out of control, impacting team productivity as users play the version guessing game to determine who has the right or latest version of a critical document. Companies are turning to shared platforms provided as a service, accessible via the Internet, as a cost-effective, rapidly-deployable means of delivering robust CMS capabilities within and across organizations.

A consumer packaged goods (CPG) manufacturer is preparing a global marketing campaign to support a new product launch. The team has adopted a cloud CMS solution that enables collaboration among corporate marketing managers, ad agency staff, creative consultants, and regional marketers who oversee localization of the campaign for specific countries. These contributors work in their content system of choice, including specialized tools for applications like video production. A synchronization solution makes it possible to share documents and content in near real-time by replicating local working environments with the cloud CMS, eliminating the confusion, productivity drain, and lag time (or *access latency*) that occurs when relying on email for document collaboration.

Repository synchronization: value and opportunity

Designed for organizations that recognize value in distributing the same content in multiple repositories, synchronization is likely to experience brisk adoption as companies embrace multi-CMS operating environments. It accommodates the way that organizations work today, choosing agility over complexity. It's a lighter-weight approach to the fundamental need to share information within collaborative environments. It supports the notion that companies increasingly operate as business ecosystems, focusing on their own core competencies while leveraging those of other organizations. Perhaps the most compelling reason to consider synchronization is that it presents opportunity for innovation while delivering immediate benefits. Companies are often constrained by the technical environment when developing business solutions. Synchronization lets executives and managers make decisions based on what will deliver the greatest benefit to customers and users – rather than compromise solution impact due to constraints within the environment.

- ✓ *Take advantage of new content technologies and applications as they come on the market, delivering immediate value to users, customers, and partners.*
- ✓ *Rapidly develop and deploy new business solutions by minimizing the effort required to access the content assets stored in new or newly-integrated repositories.*
- ✓ *Bridge content gaps between assets stored in systems on premise and in the cloud, eliminating concerns about security and documents "missing" in one or the other storehouse.*
- ✓ *Ensure continued ROI in existing solutions for document, web content, digital asset, and image management by using applications that are fine-tuned for those specific types of content assets, while making the assets useful in other systems for multiple purposes.*