

EMBRACE, EXTEND, AND ADVANCE

EMC's information intelligence strategy for leveraging
Microsoft SharePoint in the enterprise information infrastructure

Abstract

This white paper explains EMC's information intelligence strategy as it applies to Microsoft SharePoint. It discusses the key differences between SharePoint and the EMC[®] intelligent information management platform and their potential business impact.

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Executive summary

The ubiquity of Microsoft SharePoint has become a cliché. Organizations that don't already use SharePoint are strongly considering it. As a collaboration tool and basic content management solution, SharePoint has a lot to recommend it. Users love SharePoint; time to proficiency is short.

Nevertheless, CIOs and information infrastructure architects—the “big picture” thinkers in the enterprise IT ecosystem—have to consider more than ease of use as they accept and reject IT building blocks and try to create an infrastructure that meets a variety of objectives. An enterprise IT infrastructure must consider security, compliance, business process integrity, collaboration, line-of-business system integration, archiving, cloud technologies, and more.

SharePoint certainly has a role to play, but what is it? Is SharePoint a tool or is it a platform? These are fundamental questions that every organization must grapple with.

The competitive challenge: capitalizing on the value of information

The demands of information management—and the pace with which they're evolving—threaten to outstrip the capabilities of many IT organizations. In the face of these demands, the need to optimize infrastructure and to effectively align existing and new technologies has increased exponentially. In fact, the line between business optimization and infrastructure optimization has blurred. The lack of either compromises competitive strength. As if this were not pressure enough, smaller budgets and shorter ROI requirements leave very little margin for error.

Microsoft SharePoint has become a fixture—some would say a “quick fix”—for many organizations trying to cope in such a challenging environment. But SharePoint does not create a long-term strategic path that enables organizations to capitalize on the value of their information while meeting increasingly strict information governance and compliance requirements.

Microsoft SharePoint: assessing the downside of success

SharePoint is one of the fastest-selling Microsoft products of all time.¹ It's been around for less than a decade and the 2010 release was only the fourth. So, by any measure, Microsoft SharePoint's success has been off the charts. According to AIIM, two-thirds of its membership use SharePoint.² Nor is it only analysts and industry groups that confirm SharePoint's rapid acceptance. SharePoint solutions specialist

¹ Miles, Doug. "SharePoint—strategies and experiences." AIIM Industry Watch (2010): 5.

² Ibid.

Lightning Tools surveyed 837 companies about their use of SharePoint. Seventy-five percent used SharePoint and, of those, 91 percent planned to increase usage in 2011.³

SharePoint's viral spread throughout organizations is not hard to understand. It's easy to deploy and use, nicely supports ad-hoc collaboration, and is well integrated with Microsoft Office. In addition, the bundling of Microsoft SharePoint and Microsoft Office makes SharePoint seem to be a low-cost, entry-level solution. But as AIIM goes on to point out in its 2010 Industry Watch study, "SharePoint—strategies and experiences," the popularity of SharePoint has not been without its complications. For organizations with established enterprise content management (ECM), records management (RM), and business process management (BPM) systems, it has pushed interoperability and information governance to the forefront of key information management issues.⁴

Without doubt, Microsoft SharePoint has gaps: things it can't do well without help and things it can't do at all. In its 2010 market intelligence report, AIIM found that 67 percent of respondents needed customization or third-party products to make SharePoint suitable for their needs.⁵ Coupled with the limitations of SharePoint's architecture, rapid adoption also places significant operational pressure on enterprise IT. Easy to deploy does not mean easy to manage. Managing large farms of SharePoint servers is a costly headache that simply worsens as SharePoint deployments scale to meet growth.

Perhaps the most long-term issue that arises with widespread use of SharePoint is the surge of new technologies that are also gaining traction in the enterprise—technologies that are not Microsoft. Think Google, Apple, Oracle, IBM, open source in general and Linux in particular, and so forth. The irony of SharePoint's broad and impressive adoption is that it comes at a time when Microsoft's general hegemony is cracking. It's not a Windows-only world anymore.

The bar has risen dramatically in so far as what an information management platform must be able to do. To keep up with the demands of today's global organization, the platform must be high performance, adaptable, scalable, open yet secure, and compliant. Its horizon must stretch beyond Microsoft and, certainly, beyond SharePoint.

Needed: an intelligent information management platform

At EMC, we believe that an intelligent information management platform must:

- Support client or device heterogeneity
- Provide structure for knowledge worker tasks
- Deliver unified information governance and visibility

3 "Companies set to increase SharePoint Usage in 2011." Your Story March 18, 2011: 1. Web. 18 Apr 2011. <http://www.your-story.org/companies-set-to-increase-sharepoint-usage-in-2011-235146/>.

4 Op. Cit. p5

5 Op. Cit. p6

- Lower operational cost and complexity

Such a platform is the basis for our Microsoft SharePoint strategy: embrace, extend, and advance. EMC has embraced SharePoint's role in the organization so that we can extend its capabilities to meet the requirements of a comprehensive information platform. Then we offer advanced information management capabilities that go well beyond the functional scope of SharePoint.

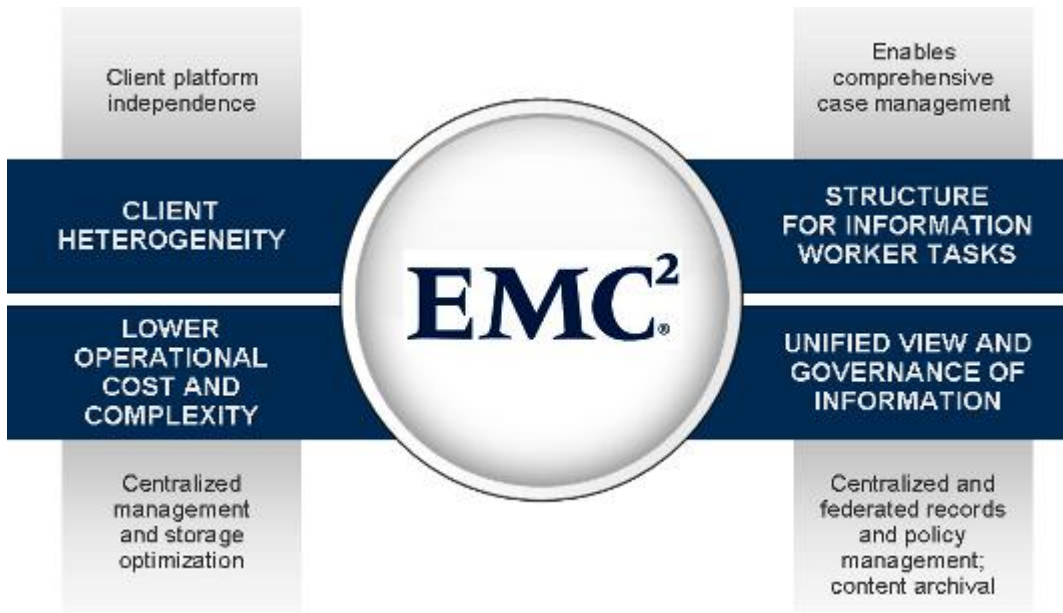


Figure 1. A strategic, intelligent platform for information management

Supporting client or device heterogeneity

From desktop environments that feature different operating systems to various browsers and mobile devices, client or device technology should never be a barrier to accessing platform capabilities.

In this area, Microsoft has taken a page from early industrialist Henry Ford, who once said, "Any customer can have a car painted any color that he wants so long as it is black." Information created by Microsoft applications can be accessed by other Microsoft applications running on a Windows desktop or a mobile device that uses the Windows Mobile 7 operating system. Browsers can only go so far in bridging this gap. And, in the mobile arena, Microsoft has not invested in expanding access to any of the emerging operating systems such as iOS or Android that are powering many mobile devices.

The EMC platform supports multiple standards, allowing access by a wide variety of current devices and making it easy to accommodate new devices as they arrive. This type of standards-based flexibility extends to the desktop as well. It's part of our platform's architectural DNA.

Providing structure for knowledge worker tasks

Although knowledge workers do engage in ad-hoc tasks, most of their activities involve repeatable processes that require a set of common capabilities. Providing these capabilities in the context of a process structure helps knowledge workers boost productivity and reduce errors.

For knowledge workers, Microsoft SharePoint focuses on ad-hoc collaboration. It provides simple “accept or reject” workflows, but SharePoint cannot participate in advanced process management or form the core of a case-based application. SharePoint workflows have other limitations as well. It’s easy for Microsoft developers to build workflows that leverage Microsoft content. But it’s much more difficult and sometimes impossible for a SharePoint workflow to accommodate information that does not originate in the SharePoint environment. This inability stems from the underlying Microsoft SQL Server infrastructure that supports workflow.

The EMC platform includes an entire business process management (BPM) suite, which includes process design, modeling, analysis, and optimization; business activity monitoring; and reporting. The suite enables business analysts who understand the intricacies of a particular process to design and change processes without IT intervention. EMC business processes can accommodate virtually any type of content and integrate easily with the workflows of other enterprise applications or standalone line-of-business systems, including SharePoint. This feature is critically important because day-to-day business in the global enterprise requires a series of information handoffs between systems such as enterprise resource planning, customer relationship management, business intelligence, supply chain management, and financial accounting and control. EMC process flows can also manage complex transactional activities that include manual and automated tasks.

Delivering unified information governance and visibility

The greater the volume of information, the more varied the file types, and the more systems on which they reside, the more important unified information governance and visibility become. Unified information governance uses centralized policies to manage retention, disposition, and long-term preservation, and enable enterprise-wide eDiscovery.

SharePoint provides governance and visibility for SharePoint information, but it cannot use federation to apply policies across other systems and repositories. Also, policy enforcement is not automated. Adherence is up to the individual; policies can be overlooked or deliberately ignored. Likewise, in terms of archiving, Microsoft falls short. Microsoft provides for archiving email via Exchange, but there is no SharePoint archiving or Microsoft file system archiving for that matter. Nor, in the Microsoft world, is there a way to do a consolidated search across all information repositories for eDiscovery purposes.

The EMC platform is architected to connect with, manipulate, and manage information within and outside its own repository. And federation is a foundation technology of this architecture. SharePoint is simply one of many potential

repositories with which EMC® Documentum® can engage. Through federation, Documentum allows administrators to specify policies and map those policies to content in any repository. In fact, it can standardize and automate policies across entire line-of-business systems. EMC has similar capabilities in archiving and eDiscovery.

Lowering operational cost and complexity

Rising content volume means growing cost and complexity unless an information management platform has the tools to continuously consolidate resources and efficiently allocate them to meet demands.

The architecture of Microsoft SharePoint constrains its ability to scale without incurring additional hardware and license costs, which in turn boosts operational expenses. SharePoint scales by adding more SQL Server databases; it's the only way to address the limits Microsoft SQL Server places on the size of content, site collection, and other essential databases.

More repositories mean more information silos and more system management complexity. SharePoint use grows so rapidly in a viral way that information accumulates and goes stale quickly—often degrading system performance, increasing backup windows, increasing management complexity. SharePoint stores everything in Microsoft SQL Server databases, and SQL Server requires costly, rapid access, high-availability storage hardware. With SharePoint there is no tiered storage or hierarchical storage management.

EMC can easily satisfy the needs of large-scale, geographically dispersed, heterogeneous, and highly compliant deployments. EMC provides a completely scalable content infrastructure that can handle the high transaction volumes of business process management applications—or the massive number of objects encountered in applications managing XML components.

The object-oriented architecture of the EMC repository enables it to handle any type of content in virtually unlimited capacity—after all, it was designed to avoid the issues that surround unstructured content in databases. Currently, EMC customers are running repositories with billions of objects that account for hundreds of terabytes of data. Moreover, an EMC repository works seamlessly within a tiered storage environment that leverages content deduplication.

Bridging the gaps: EMC solutions address SharePoint limitations

Within the context of an intelligent information management platform, EMC offers five solutions that integrate seamlessly with SharePoint and extend its capabilities.

EMC Captiva for Microsoft SharePoint

EMC Captiva® for Microsoft SharePoint is an intelligent enterprise capture solution that automatically captures data from many disparate sources including paper

documents, faxes, emails, and business systems and delivers the content to SharePoint. It is a flexible, end-to-end solution that can:

- Accommodate high-volume, centralized batch operations capable of scanning thousands of documents an hour. Centralized capture processing standardizes common business operations and enables all enterprise content to be consistently managed.
- Leverage distributed capture using multi-function peripherals and ad-hoc scanning from a single desktop scanner to extend capture throughout and beyond the enterprise
- Intelligently classify a variety of document types to limit manual document sorting and scanning preparation
- Automatically extract and validate information from documents—eliminating expensive manual data entry—and deliver it to SharePoint-based business processes
- Support SharePoint content management services and improve information access

The seamless integration of EMC Captiva intelligent enterprise capture with Microsoft SharePoint provides a cohesive capture-to-store platform, while transforming SharePoint from a siloed solution to one that can add value throughout the transactional lifecycle of a business process.

EMC Documentum Repository Services for Microsoft SharePoint

The SharePoint SQL Server database not only stores metadata but content as well. But as SharePoint content grows, it's a much more efficient use of SQL Server resources to move the content out of SQL Server and limit its role to metadata storage only. Storing metadata in SQL Server ensures that SharePoint retains ownership of the content, which is especially important if there are workflows or business processes attached to SharePoint content.

EMC Documentum Repository Services for Microsoft SharePoint redirects document content to a Documentum repository where it can be managed with robust content services, while corresponding metadata remains in the SQL database. Moreover, Repository Services operates behind the scenes—completely transparent to the SharePoint user. The SharePoint interface that users find so comfortable remains unchanged and their view of content appears as though it resides natively in SharePoint. More conventional solutions often tamper with the way SharePoint works, frequently breaking Office integrations, workflows, full-text indexing, custom applications, and so forth. But through the unique design of Repository Services, custom applications and all SharePoint functions continue to work, which means no acceptance issues for the SharePoint community inside an organization.

Documentum Repository Services for SharePoint enables organizations to:

- Aggregate SharePoint content in repositories of record
- Centrally manage that content and apply common security and retention policies
- Leverage advanced ECM features such as business process management

- Employ deduplication and hierarchical storage management

EMC My Documentum for Microsoft SharePoint

Many knowledge workers use Microsoft SharePoint for team-based content development. But these same workers often need to participate in critical enterprise business processes that are not accessible via the SharePoint interface and require learning another client. With the unrelenting need for efficiency and productivity, this additional training is something organizations would prefer to minimize if not eliminate.

Moreover, long-term storage of SharePoint content can be prohibitively expensive since everything—files and metadata—resides on SQL servers, which are typically deployed on high-end, rapid access machines. For a global organization, across a timeframe of years, that is a very costly proposition. There are better, cheaper ways to handle large volumes of content as they age and are needed less and less frequently.

All of these Microsoft SharePoint “caveats” reveal a common situation for many large organizations—including a large number of EMC Documentum customers. Most have already invested significantly in their information infrastructures in terms of content management, archiving, and compliance. These infrastructures now include SharePoint. So how does an enterprise leverage the value of SharePoint, increase IT efficiency, and address the broad concerns of information governance, risk mitigation, and compliance?

Documentum customers have been very clear about how: make Microsoft SharePoint and Documentum “work together.” Most often, two use cases for this desired cooperation emerge. One is the ability to take SharePoint content and place it in Documentum, using Documentum as the repository of record. For that, EMC has developed EMC Documentum Repository Services for Microsoft SharePoint, described [above](#).

The second is as a SharePoint “window” into a Documentum repository, leveraging SharePoint as a Documentum client and providing users with some of the essential content services available within Documentum. EMC My Documentum for Microsoft SharePoint addresses the second use case. My Documentum for Microsoft SharePoint is a set of Web Parts that are added to SharePoint sites and connect directly to Documentum Content Server. The Web Parts emulate the SharePoint user experience within the Documentum environment.

My Documentum for Microsoft SharePoint enables knowledge workers to participate in enterprise-wide business processes and gain access to content stored in Documentum, without leaving the comfort and familiarity of the SharePoint interface. Documents such as contracts, standard operating procedures, and other business-critical content can be stored and managed in Documentum while SharePoint provides the means for universal access and collaborative exchange.

EMC SourceOne for Microsoft SharePoint

Today many IT projects are driven by information governance and the risk and compliance considerations it addresses. Yet the aged and outdated content often stored in Microsoft SharePoint is rarely archived, considered for long-term preservation, or managed under compliance, and even more rarely attached to any existing system that governs content. That means a vast unmanaged wilderness of SharePoint data exists detached from the data center and subject to no information governance whatsoever. Even SharePoint users feel that managing this content is a problem.⁶ This glut of SharePoint information also degrades the performance of the production servers that host the application.

Good information governance and smart IT resource allocation demand a solution that enables an organization to fully support the use of Microsoft SharePoint while:

- Moving active SharePoint content from the SQL Server environment to external, lower-cost, tiered storage
- Reducing backup windows
- Archiving inactive content and governing it according to consistent corporate retention and disposition policies and industry regulations
- Preserving a transparent end-user experience while enabling easy access to archived content

EMC SourceOne™ for Microsoft SharePoint meets all these objectives, beginning with archiving—a foundational technology for information governance.

EMC SourceOne eDiscovery – Kazeon

All organizations need to find and manage information for litigation, regulatory compliance, and internal investigations. Today, most business communication and activity take place electronically. Consequently, the volume of electronically stored information (ESI) is growing exponentially.

EMC SourceOne eDiscovery – Kazeon automates the identification, collection, preservation, processing, analysis, review, and policy-based management of unstructured information. It can work simultaneously across multiple data sources and repositories including Microsoft SharePoint. EMC SourceOne eDiscovery – Kazeon enables legal and IT teams to respond rapidly and efficiently to today's information governance demands.

Moving beyond SharePoint: advanced content management

Advanced content management encompasses a variety of technologies, such as digital asset management, information rights management, and integration with

⁶ IDC 2009/ Microsoft Office and SharePoint Traction: An Updated Look at Customer Adoption and Future Plans (IDC #220237, October 2009)

transactional applications that feature complex workflow routing. Three additional examples are discussed next.

Virtual document technology

The EMC platform enables the use of virtual documents—a compound document made up of different but related information objects. Each object retains its discrete identity even while it functions as part of the larger virtual document. Virtual documents track changes to the whole and any of its parts, which means no matter how many people interact with the document, they are always using up-to-date information.

Virtual documents can be aggregated in virtual folders that leverage the same capabilities. Individual documents and document components can have different security settings, retention and archiving policies, and workflows. One document can even simultaneously participate in multiple workflows. But the relationship of all the parts to the whole—virtual document or virtual folder—is retained.

With this technology, for example, a criminal justice agency could create a virtual case file that contains all relevant case documents. Users can access a virtual case file as a single unit or work with any of its documents individually. In turn, each document in a virtual case file can be a virtual document on its own.

A virtual document can be part of multiple virtual case files simultaneously. Any change to a virtual document creates a new version—the original remains unchanged. For documents that are used repeatedly within a process, such as a land permit, a virtual document template can predefine placeholders for boilerplate content that is required for compliance or other purposes. At any time, a virtual case file can be “locked down” to prevent further changes.

Customer communications management

Customers have come to expect high-quality, relevant, personalized and customized communications, delivered quickly via their preferred channels. The EMC platform offers a customer communications management system that can use variables and business rules to automate the inclusion of certain types of structured and unstructured information in documents. Personalization adds information based on individual customer data. It can be as simple as adding a first and last name but can also encompass customer account details or charts and graphs generated from that data. Customization enables documents to include content, such as jurisdiction-specific legal language or targeted marketing messages that are only applicable under certain circumstances and match attributes associated with a group of customers.

The heart of the system is its document generation engine, which performs three tasks: content assembly, composition and formatting, and distribution to multiple channels. Its composition and formatting capabilities support a broad set of electronic and print output formats, including PDF, HTML, AFP, PostScript, PCL, and mobile messaging. It is equally capable of meeting the needs of high-volume batch

production or individual realtime requests—and integrates tightly with an organization’s web infrastructure.

In-process collaboration

For knowledge workers such as loan officers who work in LOB systems, SharePoint provides no means for them to collaborate within their structured environment. They have to leave their system to collaborate in SharePoint, and they’re unable to capture those interactions as part of the decision-making process that is documented within the LOB system. EMC believes that “in-band” or in-process collaboration is of more value to knowledge workers. So the collaboration our platform offers is contextual, accessible directly from the operational or LOB system in which work is executed. In-band collaboration is part of the platform’s comprehensive case management capabilities, which, using prebuilt templates and components, can be optimized to deliver dynamic, case-based applications that can address the specific requirements of any line of business.

Conclusion

Our embrace, extend, and advance strategy for Microsoft SharePoint suits the needs of the global enterprise. There's no doubt that Microsoft SharePoint has an important role to play in the enterprise information infrastructure and the strategy that guides it. For particular tasks, within a limited environment, it helps knowledge workers do their jobs. It's an ideal ad-hoc collaboration tool; features a friendly, easy-to-use interface; and requires very little training to reach basic proficiency. The reach of Microsoft SharePoint capabilities in relation to EMC is illustrated in the following figure.



IF YOU NEED TO...	THEN...	USE
Provide Ad-hoc Collaboration to Knowledge Workers	Make SharePoint available to departments within the enterprise	
Manage and Govern SharePoint	Apply retention policies, archive SharePoint content, and enable eDiscovery	 + EMC²
Enable Choice Computing	Leverage EMC's choice-based client-technology	EMC²
Enable Granular Control of Complex Content Management Needs	Use advanced content management which includes capabilities like High Volume Capture, Virtual Documents, and Customer Communications	EMC²
Automate Content-centric Mission-critical Processes	Leverage Collaborative Case Management which is Information + Process + Collaboration + Governance	EMC²

Figure 2. The EMC platform extends and goes beyond the capabilities of SharePoint

Nevertheless, a tool is not a platform. EMC provides a complete information management platform that meets business needs, compliance demands, and user requirements. For SharePoint, it has multiple, seamless, and proven integration points, which enable organizations to leverage SharePoint's strengths without being hobbled or exposed to undue risk by its weaknesses. Moreover, the EMC platform offers advanced content management features, supported by an architecture that can adapt easily to changing demands.

For more information, please visit EMC online at www.emc.com/sharepoint.