



SharePoint: the backbone of your information architecture

SharePoint (microsoft.com/sharepoint) buyers expect intuitive navigation, contextual search and easy administration out of the box—but such benefits depend on how content is structured, labeled and categorized, and they require a nuanced understanding of how different audiences will navigate and search for information.

The information architecture (IA) behind a SharePoint deployment has lasting consequences for the user experience and for Web site management. Information and knowledge management (I&KM) professionals should use their SharePoint implementations as an opportunity to set solid information architecture in place that turns today's information overload into tomorrow's valuable information assets.

The upshot?

Information workers will finally be able to find the critical information they need to do their jobs.

For the past 10 years, information architects have worked through how to organize and present information on corporate intranets. Common best practices and design guidelines have emerged, which include prioritizing directory lookups, news, and financial and human resource (HR) information on the home page, as well as offering task-driven or process-oriented navigation—such as how to orient a new employee or how to move offices—in addition to functional navigation.

Organizing and controlling the information on an intranet has historically fallen to a small team of stakeholders who update the site map, scope the search engine and design the navigation. That manual approach does not scale well to large enterprises with diverse needs.

Many enterprises unveil SharePoint to facilitate developing their intranets—better employee communication and shared access to team information. But unlike a simple intranet or collaboration solution, SharePoint also includes portal, Web content management and business intelligence capabilities. A project plan focusing on quick deployment of SharePoint workspaces may overlook critical information classification tasks necessary to make SharePoint effective as an enterprise intranet and knowledge management vehicle.

In particular, SharePoint has some distinctive elements that affect an enterprise's information architecture. For one, SharePoint content is stored in a SQL Server database, not in a hierarchical file server. SharePoint sites are managed in one or more "site collections." By default, the content in each Office SharePoint Server 2007 Web application lives in

a single site collection and is stored together in the same database. Enterprises typically divide their content into multiple site collections due to performance, storage and management concerns. A single site collection cannot be stored in multiple databases. Thus, the absence of a tree-like site structure defies traditional navigation of content from root to leaf.

Also, site collections can be thought of as secure containers that hold content of a similar stripe. A site collection administrator has full access to everything in the collection. Administrators can manage security, create elements such as libraries and calendars, and organize content how they see fit. That distributed model means that as SharePoint sites grow virally, IT and the business may struggle to balance control and chaos. As a result, large enterprises must decide what they should make mandatory and consistent across sites, and what they can delegate to project-, team- or department-level administrators.

The bottom line is that SharePoint is more than just a portal server. Its wide coverage of information management tools requires a dedicated, cross-functional approach to governance. Given that those capabilities are integrated, I&KM pros have an

opportunity to manage content with greater rigor and with more user participation than has been possible before.

Sharepoint IA decisions affect key capabilities, not just content findability

The primary information architecture mechanism for MOSS 2007 is the site collection framework. Microsoft describes site collections as native containers of Office SharePoint Server 2007 sites and "the unit of ownership, quota and security management."

Basically, site collections are the linchpin of SharePoint information architecture. The way information is structured and stored affects its governance, security enforcement, disposition, accessibility and more.

Site collections affect operations like usage tracking, backup/restore abilities, storage quotas and security boundaries. A site collection's Web parts, master pages and layouts, workflows, content types and templates control the common "look and feel" and functionality of its subsites. And, SharePoint's navigation or site browsing structure, as well as search scopes, keywords and search "best bets," are set within site collection boundaries. Site collections offer extensive

opportunity to manage metadata at multiple layers.

Add time for information architecture tasks to your project plan

It's common to organize the sites by department structure and then department function (e.g., Purchasing>Contract negotiation) because existing security groups are often modeled with that hierarchy and it's familiar to users. But information architects should make the most of their intuition about human behavior and skills in interface design, content analysis and technical know-how to challenge that status quo as needed. Some companies create site collections based on product names, client names or project names to offset the tradeoffs of hosting each department's content in a separate site collection.

Site collections are just one piece of SharePoint information architecture. After determining how to structure SharePoint, I&KM pros must decide how to distribute universal information to multiple roles and groups, how to harmonize local and global metadata properties, and how to implement search.

There are two ways to get started on that. The first is to ask your users. Determine the boundaries of your user base: Does it include clients, partners, vendors, the whole enterprise or a limited subset of knowledge workers? Do geographic or functional boundaries matter? Interview a sample of users to understand what content they need and how they access it today.

The other is to analyze your content. Audit existing content stores to understand where high-value content lies and how it is organized. What content will be migrated to SharePoint, and how will you integrate what is not? How much content is duplicated? Is it templated and carefully managed throughout its life cycle? The answers to these questions will inform your decisions around content types, information management policy and metadata fields.

A rigorous approach to information architecture in the design phase is critical to facilitating flexible information delivery and access. SharePoint administrators translate the output of the design stage (e.g., paper prototypes and wireframes) into URL namespaces via "managed paths." Depending on circumstances, they might allow a single site collection under a specific path or allow users to create multiple top-level sites under a specific path.

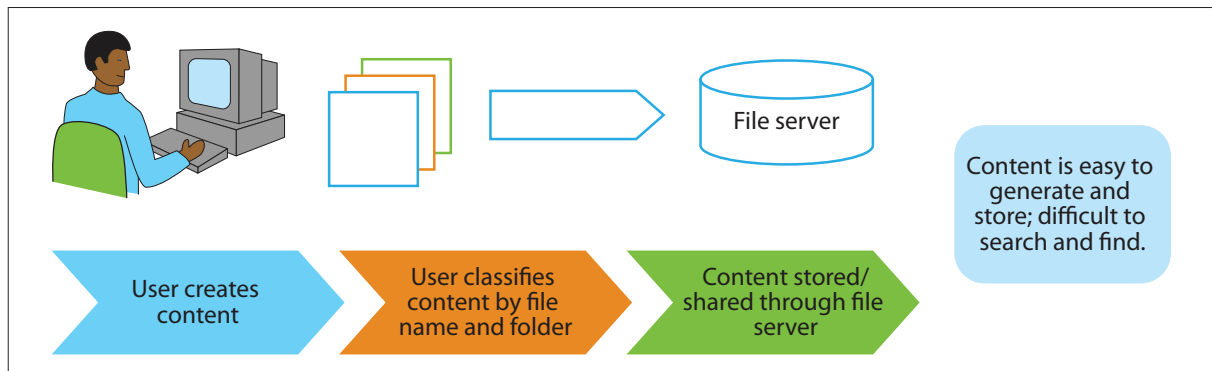


Figure 1. Users can easily create, store and share content on a file server, classifying by file name and folders. However, it is difficult to search and find content organized in this way.

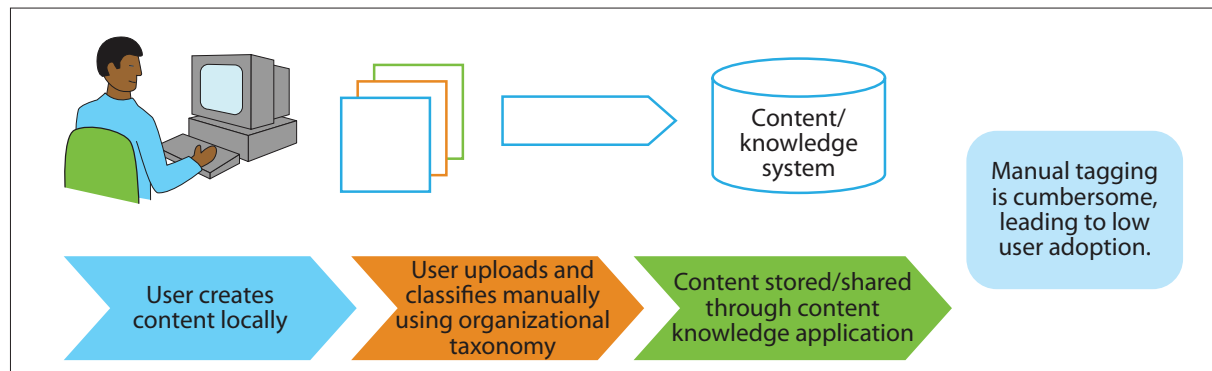


Figure 2. A user creates the content locally, then must manually upload and classify the content in a content or knowledge management system. Because manual tagging is cumbersome, user adoption is low.

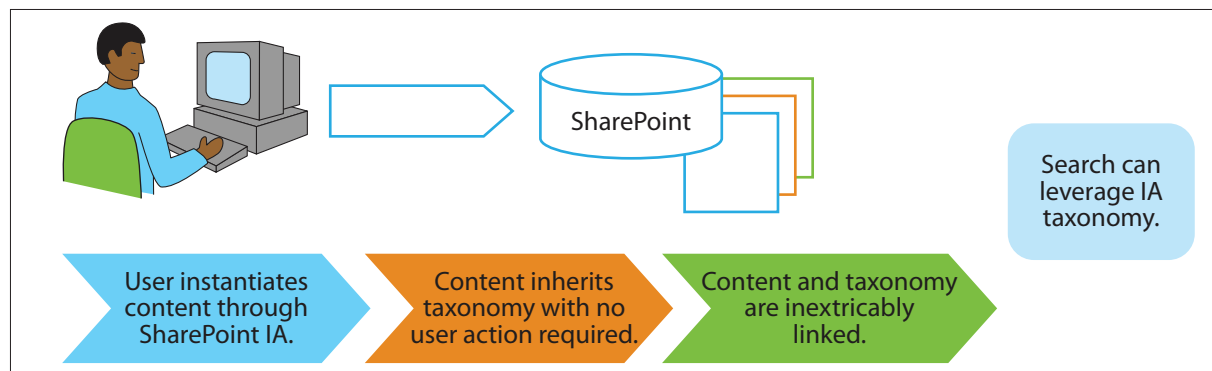


Figure 3. A user instantiates content through the SharePoint information architecture, and the content is automatically put in the appropriate place in the taxonomy with no extra effort from the user. The content and taxonomy are therefore inextricably linked, which means the search features can take advantage of the IA taxonomy.

Other mechanisms for contextual information access and delivery include audience targeting and search configuration. Audience targeting enables I&KM pros to define a subset of users by certain common criteria, such as a shared project or interest in a topic. Administrators can hide or show Web parts or target any item in a SharePoint list—like a news item—to defined audiences. As for search configuration, MOSS 2007 search can look across site collections, crawl shared drives and Web sites outside of SharePoint, map co-workers by "social distance" and retrieve data in line-of-business applications.

Further, search administrators can pick "authoritative pages" and

assign best bets to popular search terms to optimize relevance. And, remember audience targeting and advanced search need clean, coherent metadata to run properly. Without significant commitment to taxonomy oversight, those capabilities will not work.

Rigorous IA is the silver bullet for business content

While a rigorous approach to information architecture benefits a structured portal architecture, the benefits can also be extended to user-generated business content. Just as users struggle to find information in a portal setting, they also struggle to find relevant business content. Spreadsheets, presenta-

tions, documents and a host of other content are generated and thrown into a sea of hard drives, file servers and e-mail folders, more often than not, never to be seen again.

The aggregate cost of lost content can be tremendous. Applying a structured taxonomy to business data has long been one of the keys to tapping into its value. Yet the burden metadata tagging puts on users has led to disappointing adoption because most are accustomed to very lightweight storage tools like file servers.

While users embrace simple file servers, finding information after the fact presents a challenge because file

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servers only store two pieces of descriptive metadata: file name and folder label. (See Figure 1.) Frustrated by the inability to find information on file servers, organizations invested in content and knowledge management systems. Those systems provided the ability for extended application of metadata to content. However, the user experience suffered. (See Figure 2 on page 9.)

Automating the application of metadata when business content is created, rather than asking users to manually apply metadata after the fact, may be the silver bullet. By leveraging rigorous information architecture principles, users can create SharePoint sites directly in an existing portal architecture. For example, a user starts developing finance-related content by starting a workspace from within the Finance section of SharePoint. (See Figure 3 on page 9.) The custom site can adhere to best-practice workflow and approvals, and it can inherit metadata related to finance or the specific author. Thus, users interact with the system much like a file system without additional metadata input into the workspace.

When content and people using SharePoint are classified in multiple ways, there is unlimited potential for users to find dynamic connections between content and people that were not preconceived by content creators. For example, teams in different regions may generate sales

collateral for the same product. If that content is tagged with controlled metadata values, then a new teammate can find all existing sales-related content and expertise regardless of regional boundaries. The database structure behind SharePoint offers a hint of a future world less burdened by file formats and content storage.

Make the most of an information architecture blank slate

Many organizations are looking at SharePoint as a foundation for better management of organizational unstructured data. SharePoint has

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technical capacity to organize data in compelling and usable ways. The key to success is to create a strategy that allows users to quickly access and create information that is broadly reusable within your organization. The strategy will begin with an intelligent information architecture that is reflected in your site collection plan.

- ◆ Extend the benefits to user-generated business content. The same logic that applies to finding information in a portal environment can

be extended to business content. Make your portal and information architecture a jumping off point for creating business workspaces that drive best practices and inherit key metadata.

- ◆ Plot the life cycle of diverse content types. Some SharePoint content is ephemeral and ad hoc; some is long-lived and essential to key business transactions. Investigate the tradeoffs of using SharePoint to manage high-value content from its creation to disposition. In particular, assess the impact on existing records management, risk and compliance, and storage procedures.

partner network to augment its out-of-the-box functionality. Some enterprises buy additional tools like Autonomy's (autonomy.com) IDOL, FAST ESP (fastsearch.com, now a Microsoft subsidiary), Dow Jones' (dowjones.com) Synaptica, Interse's (interse.com) iBox, or SchemaLogic's (schemalogic.com) Enterprise Suite to compensate for SharePoint's shortcomings in search, autoclassification and taxonomy management.

SharePoint is part of an emerging class of information management tools from diverse vendors that are structured to treat content in a way similar to how data is treated in a database. That architecture allows fundamentally more structure for managing content that is currently largely unmanaged. In the future, as content moves through the enterprise, semantic meaning will be added, like an envelope with many postmarks.

However, keep in mind that getting there will be anything but easy. Just because the tools exist doesn't mean the structure will build itself. Careful planning is required, and plans will need to adapt as new lessons are learned. Don't take lightly the opportunity a blank slate offers. ■

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someone in another agency can actually bring that capability into their application without having to rewrite the architecture. That type of development lowers the cost and gets new capabilities online quickly. So vendors should be putting their capabilities out there in a way that could be easily incorporated into something else."

CACI's DHS work has grown in scope and approach, tripling in dollar terms. KM-related work has been about 17 percent, and is expected to grow to as much as 30 percent.

Learning process

Knowledge management is applied to DHS efforts in another way. As more and more contracting and consulting firms apply KM internally to deliver their own products and services to the government, they include clients in the learning and innovation process.

Bill Kaplan is chief knowledge officer with Acquisition Solutions

(acquisitionsolutions.com), which advises and implements procurement systems in DHS agencies. Kaplan's job is to make sure his firm's knowledge is applied regardless of the service they are providing to DHS agencies. He uses familiar "fast learning" practices before, during and after projects, such as peer assist and action reviews. Often when Acquisition Solutions completes a consulting engagement, it will include the client in learning-after exercises. "We do that so that we would better be able to collectively work with and help that organization again," Kaplan says.

Better days

"What has really improved is a strong understanding that there are opportunities for better communication and information sharing, and some of them aren't traditional," Fischer says. "The hard part is making the bureaucratic structure support that. But I think DHS would like to be faster and lighter and more agile

- ◆ Actively curate content. SharePoint is not a hands-off, self-service system. Enterprises that intend to start off slowly with straightforward collaborative information sharing often end up with anarchy if elements like storage quotas and search scopes are not vigorously monitored by a central team. Assign appropriate resources to managing SharePoint sites and workspaces.
- ◆ Consider add-ons to achieve your goals. Microsoft has embraced a

Vendors and integrators included in article

AT&T	(att.com)
Nortel.....	(nortel.com)
Verity (now part of Autonomy).....	(autonomy.com)
Groove Networks (now part of Microsoft)	(microsoft.com)
Convera (later part of FAST, a Microsoft subsidiary)	(convera.com)
Microsoft	(microsoft.com)
Booz Allen Hamilton (now part of the Carlyle Group)	(boozallen.com)
CACI International	(caci.com)

in the water, and it is fighting a lot of institutional inertia that has built up in only a few years."

DHS KM specialists, vendors and academic observers are all expecting better days at DHS from a new administration. As one said anonymously, "You're dealing with a techie president who promises more transparency, more sharing and a lot of stimulus money. I think we are on the forefront and things are going to change."

Even great cities comprise individual structures built more along avenues of opportunity than according to a master development plan. There is a plan, of course. The creation of the agency itself is a command to share. ■

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