

Bringing Structure to the Unstructured

Total Knowledge Management

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Winning in the competitive global marketplace requires agility in order to leverage content dispersed across the enterprise, enhance service delivery, improve efficiency and reduce risk. Managing enterprise content within an organization and using it to its full potential is critical to success. This means managing both “structured” and “unstructured” content, business processes, line-of-business solutions, all while maintaining the lowest total cost of ownership (TCO).

The ability to systematically capture, create, manage, access, review, distribute, publish, store and preserve all business content—from ERP/CRM systems, databases, e-mails, documents, file systems and external information systems—and leverage this information to its full potential represents the concept of *Total Knowledge Management*.

We refer to total knowledge as having complete insight gained through 100% utilization of “organizational information assets”—both structured and unstructured business content across an enterprise.

What is Driving Total Knowledge Management?

Today, fierce competition is forcing companies to be smarter—to leverage all enterprise content assets, uncover valuable information hidden in multiple systems and from structured and unstructured sources.

In the past, reporting on and analyzing structured information was only utilized to understand the business environment, customers, suppliers and other key business views. Tactical and strategic decisions were made based on structured information found in relational databases, legacy data stores and various reporting systems. Structured information only represents 20% of a company’s enterprise information assets. The remaining 80% of valuable information is in uncover form dispersed across the enterprise—in e-mail, document management systems, file systems, instant messaging systems, records management systems, knowledge management systems

and other stored documents. This 80% of unstructured information is often overlooked as a key information source for tactical and strategic decision making. Search engines and classification technologies have been the tools of choice for accessing unstructured information, but their related metadata is not used the same way as structured resources.

Many organizations choose to manage each stage of the content lifecycle independently, with disparate processes, systems, repositories and technologies. Today, with directives to increase efficiencies while simultaneously improve accountability, an integrated system for the management of the entire content lifecycle is crucial.

At the most basic level, one of the current business drivers in information management is to improve organizational efficiency and reduce costs. The next step in the progression is to increase business value, including that which knowledge management yields from an organization’s information stores. Lastly, once these goals are achieved, organizations move to increase their focus on managing risk with elements such as records management initiatives. This includes managing content assets to keep what is important or mandatory for legal, compliance, historical and knowledge management needs, and retiring or disposing of information no longer useful or relevant as its value has expired.

Organizations need to leverage technology to meet business continuity and corporate governance requirements, for making business content traceable secure and auditable, at the same time they invest in aligning business processes and content to optimize performance and reduce risk exposure.

Today, many organizations are managing each stage of the content lifecycle independently, with disparate processes, systems, repositories and technologies. This results in the following issues:

- ◆ Incomplete, inaccurate and limited information;
- ◆ Time wasted locating the right information;
- ◆ Poor collaboration between groups;

- ◆ Difficulty getting fast access to the full picture;
- ◆ Maintenance of disparate systems;
- ◆ Difficulty keeping systems consistent;
- ◆ Difficulty delivering the right information to the right people;
- ◆ Poor asset management—information is not used to its full potential; and
- ◆ Weak compliance—compliance with regulatory rules is difficult to ensure.

Making Total Knowledge Management a Strategic Advantage

Content assets are the foundation upon which corporations build new business opportunities and competitive advantage—and upon which governments build accountability practices and ways to better serve their constituents. Leveraging the business value of content while simultaneously protecting that content with an applied records management strategy is not a new concept; however, the conventional means of addressing these tandem needs is changing.

Today, total knowledge management is driven by the need for organizations to have a unified access and view to all business content across an enterprise. Business content needs to be linked, referenced and integrated to get a complete picture. This brings context to all content being accessed, searched, reported on, collaborated on and analyzed.

The Total Knowledge Management Architecture

A total knowledge management architecture is a blueprint that provides the essential functionality to manage information and knowledge through its lifecycle, from inception to destruction, while enabling organizations to use assets to their full potential and maximize their return on investment.

Getting at the mountains of raw data generated by most modern organizations from a variety of different hardware platforms, systems and applications is a difficult task. Organizations that want to gain a key competitive advantage need to thoroughly implement a comprehensive solution that will help them manage their content asset lifecycle. This means that decision makers are able to efficiently and securely get access to any structured and unstructured information they require at the time they need it.

A single interface allows users to access, search, report, collaborate, analyze, track and audit against both structured and unstructured enterprise content. To ensure a thorough lifecycle management of this asset, organizations need to implement a

comprehensive solution that helps them managing those multiple stages.

- ◆ **Business process management and workflow** touches the entire enterprise content lifecycle. The first aspect of the total knowledge management solution is to implement a business process management (BPM) element. BPM ensures automated and controlled process implementation, integration of various enterprise content components, capturing of the different events of the enterprise content lifecycle and streamlined maintenance.
- ◆ **Data management** is the second aspect of this comprehensive solution. Organizations need to distill, consolidate, organize and classify huge amounts of data and dynamically transform it into accurate, consistent and timely information. During this process, this vast amount of structured data and unstructured data is enriched and gradually converted into a smaller amount of meaningful content. This corresponds to the data management aspect of this comprehensive solution. This data management aspect encompasses document management, data integration, knowledge management, collaboration, record management and reporting.
- ◆ **Knowledge management** and information retrieval technologies are critical to managing unstructured as well as structured information. It is imperative to capture best practices, expertise and information. Proper tools enable knowledge workers to find information that is relevant and accurate for better decision making.
- ◆ **Metadata management** is the final element of the strategy. During different

stages of the content lifecycle, a great deal of metadata (information about information in its simplest form) is created. This metadata brings additional meaning to the information, and turns information into “content in context”. Therefore, this metadata needs to be captured, managed, reused and deployed to get the full meaning of underlying information. Metadata management provides for metadata exchange, data lineage, impact analysis, data linkage, content documentation and, perhaps most importantly, supports and streamlines regulatory compliance efforts. Metadata is very important in search and classification where it plays a role in determining the relevancy of information and helps to narrow a search (i.e. faceted search). Metadata is also used in the creation of non-subject taxonomies. Unstructured information often has metadata within the document that needs to be identified and extracted in order to be used as well as associated metadata linked to it in other repositories (CRM, document management, etc.).

These aspects form a comprehensive “total knowledge solution” and are essential to ensure accurate and timely access to enterprise content.

Where Do You Start?

Building a total knowledge management infrastructure is not as simple as implementing a set of technologies that instantaneously allow a company to leverage all their information assets. Creating the necessary capabilities to meet a company’s needs requires a combination of people, process and technology and must be performed in line with the company’s overall

strategies, goals and objectives. The quickest way to failure is to try and implement new technologies into an existing business process. This typically results in inefficiencies that cause users delays in accomplishing their jobs. Having a total knowledge view of the business should be viewed as a series of business processes and user responsibilities that when followed will enable the organization to meet their responsibilities.

Hummingbird Enterprise is designed around the principle that enterprise content management functionality must be transparently accessible from a wide range of user interfaces, the Web top, the desktop, e-mail clients, mobile devices and third party portal frameworks.

- ◆ Reusable templates that support line-of-business enterprise content management solutions such as contract management, correspondence management and compliance;
- ◆ Process-centric workflow that persists across all the components within Hummingbird Enterprise;
- ◆ An integrated environment for storing and managing all types of business content, including documents, records, images and digital assets, e-mail, Web content, instant messaging threads and structured reports;
- ◆ Bridging of structured and unstructured business content;
- ◆ Comprehensive e-mail management capabilities including rules-based e-mail classification; and
- ◆ Extensibility and interoperability between Hummingbird Enterprise and third-party applications.

The ultimate goal of the total knowledge strategy is to enable an organization to have one single version of the truth; unified access to all enterprise content; better compliance with regulatory rules; cost and productivity losses reduction; and optimum usage of content assets. ■

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Enterprise Content Management (ECM), knowledge management, and business intelligence. His knowledge areas range from data transformation and replication, data mining, and business analytics to information search and retrieval technologies, portals, document and records management, and team collaboration, and he has been published in major industry trade press, journals, and text books.

Hummingbird Ltd. is a leading global provider of enterprise software solutions, employing over 1,450 people in 40 offices worldwide. Hummingbird Enterprise™ 2004 is a state-of-the-art integrated enterprise content management platform that enables organizations to securely access and manage business information such as documents, records, e-mail or financial data. Please visit: www.hummingbird.com.



Relationship between Structured and Unstructured Business Content