



February 18, 2002

How to Get Your Company in the Know

By [Henry Baltazar](#)

Knowledge management systems have the potential to become the most important means of information dissemination to hit the enterprise since e-mail, but product weaknesses and thorny political issues remain major barriers to successful deployments.

In this installment of IT Agenda, *eWeek Labs* describes the current state of KM and discusses how IT managers can overcome the myriad challenges to harnessing an organization's collective brainpower.

One of the most important things to remember is that KM is not a product you install (although vendors think it is). KM is a process that doesn't begin with IT and doesn't end with IT; IT is merely the plumbing.

KM solutions are tightly integrated combinations of software, policies and procedures that work together to help users access data needed to perform jobs more efficiently and effectively.

A major characteristic shaping the KM market today is that even mature, established KM packages can still successfully manage only free-form, text-oriented information, such as e-mail messages, word processor documents and Web pages. Key business information stored in other formats—including spreadsheets, databases, training videos and voice mail messages—remains largely inaccessible to KM packages.

According to Dave Buczek, director of learning services for Sapient Corp., in Cambridge, Mass., a consultancy with experience in KM implementation, "KM solutions in the past dealt well with structured data, but a shift has occurred where there is more collaboration involved. This has led to the creation of unstructured information—in the form of instant messages, Webcasts, etc.—which needs to be searchable and usable."

Products such as Convera Corp.'s RetrievalWare—which can index media such as video presentations and scanned images, in addition to standard documents—will become more important as multimedia content expands throughout the enterprise.

Old Problems Remain

A KM problem *eWeek* technology Editor Peter Coffee pointed out [in a column in 1998](#) is still with us today. As a product sector, KM is more often a cobbling together of what's in the cupboard rather than a product or group of products offering new ways of managing information based on technology research.

We hope to see systems that not only catalog, index and retrieve strings of words but also provide ways for an organization to store data on how it operates, to analyze that knowledge and to refine it to develop into better ways of working.

This space may become very different as technology research pays off. Developments in linguistic analysis, natural language parsing, personalization, machine learning, autonomous software agents and classification systems have the potential to overhaul the KM industry and significantly raise return-on-IT-investment rates.

KM Architecture

Today's typical KM solutions consist of four core elements: a portal-based interface, a document management system, a search engine and collaboration tools. The key to a successful KM implementation is tight integration of these

elements.

A Web-based portal is the primary way employees interact with a KM system. The customizability, power to aggregate different types of linked information and interactivity of a KM portal are factors in its success. When possible, vendors are attempting to repurpose existing technologies to strengthen their KM packages. An excellent example of this is the recent merging of IBM's WebSphere Portal Server with Lotus Software's K-Station Knowledge Management system. This combination allows customers to get WebSphere's developer-friendly portal framework along with K-Station's strong collaboration capabilities and rich interface. K-Station comes with several pre-built "portlets" that allow users to access calendars, contacts, e-mail and a wide variety of information sources from the portal.

Likewise, Microsoft Corp.'s SharePoint Portal Server ships with a basic portal, along with tools for creating custom components to integrate with in-house applications.

A portal must also provide a simple means for users to check in and check out KM system documents. This revision control ensures that users have the latest information and that they don't overwrite one another's changes.

Most document management products allow one person to have write access to a file, while everyone else has just read access (while the document is checked out). It is extremely difficult to design a system where multiple users can write to a single document.

When documents are imported into a document manager, KM software keeps track of which users create documents and enforces file- and folder-level security policies to ensure that unauthorized users cannot search for or check out documents they don't have rights to access. Current KM systems usually use file server file access permissions to define permissions.

KM systems should go further than just aggregating and indexing information, however. A trend in KM is to also provide document routing and process workflow capabilities, so that business managers can track the status of tasks.

Although powerful process- management-based workflow systems are available, including SAP AG's WebFlow, these products don't always result in a great return on investment because it is difficult to accurately document all the business process steps within an enterprise.

Information searches are the central task of a KM system.

Search Success

While the document import process might seem basic from a user's perspective, KM software is at the same time analyzing a document to find key words. Based on what the KM solution finds, the document is positioned within an automatically generated search-tree taxonomy.

The search engines found in most major KM solutions, including SharePoint Portal Server, take the taxonomy information gathered during the document import phase and use it to make responses to user searches more intelligent and useful.

Search engines and the technology behind them have developed quickly during the last few years, thanks to the Internet boom, and we expect to see many interesting developments in this area in the near future.

For example, natural language search technologies, from companies including iPhrase Technologies Inc., will allow users to initiate searches more easily. However, these technologies still leave much room for improvement.

Collaboration Coming

One of the most important elements of any knowledge management system is collaboration, an area growing in prominence with technologies such as instant messaging, videoconferencing and discussion forums.

Collaboration tools allow geographically dispersed users to work together on projects in real time. For collaboration tools to function well within a KM environment, vendors need to make it easy for users to contact the person who has

the desired information.

Some KM solutions integrate with their collaboration peers. Lotus' K-Station, for example, integrates with Lotus' Sametime Server. This allows users to contact document authors via e-mail or IM with the click of a mouse.

Human Challenges for KM

As with all IT systems that deeply affect how organizations work, a supportive culture plays a big role in successful KM rollouts.

According to Tom Bartley, vice president of strategy at Elite Information Systems, a KM vendor that customizes SharePoint Portal Server for law offices and professional services, "The biggest obstacle to implementing a KM solution is company culture, not technology."

Unlike a network infrastructure or server rollout, a KM implementation will not work without user input.

"To have a successful KM implementation, you must have employee input during the implementation process," said Bartley, in Los Angeles. "Employees need to be convinced that the KM system will make their jobs easier. Without a groundswell of desire to use the system, a KM system will fail."

Put simply, a KM solution is only as good as the information in it. With layoffs sweeping the nation, many employees may reject the idea of injecting their critical knowledge into a KM solution.

The best way to get workers to accept a KM solution is to allow them to set the guidelines for the implementation and to give them the ability to control their data.

By getting workers involved before implementation, IT managers can better determine which KM feature sets they should be shopping for. Furthermore, giving power to managers and users gives them a sense of ownership—they will likely feel that contributing to the KM solution is a benefit to them, not just something they are forced to do.

Another way in which some companies entice their employees to contribute to a KM system is to create an incentive program. The danger of doing this, however, is that employees will only contribute to get something, and that the KM system will not be regularly populated.

Managers can avoid this by considering a deposit into the KM system part of any business process. Sapient's Buczek, for example, said a few of the companies he works with build in time at the end of every project for managers to create a wrap-up document and publish it to the KM system.

eWeek Labs Senior Analyst Henry Baltazar has performed extensive testing of products that effect enterprise knowledge management, including Lotus' Domino platform and K-Station and Microsoft's SharePoint and Exchange Servers, and has written about the human challenges that both drive and hinder KM.

Copyright (c) 2001 Ziff Davis Media Inc. All Rights Reserved.