

Portals for Knowledge Management

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INTRODUCTION: KNOWLEDGE

Knowledge is often defined to be meaningful information. Knowledge is derived from information. What makes the difference between data and information is their *organisation*, and what makes the difference between information and knowledge is their *interpretation* (Bhatt, 2001). It is defined as a dynamic human process of justifying personal belief towards the truth (Nonaka & Takeuchi, 1995). Knowledge can also be defined as *know-why*, *know-how*, and *know-who*, or an intangible economic resource from which future resources will be derived (Rennie, 1999). Knowledge is built from data, which is first processed into information (i.e., relevant associations and patterns). Information becomes knowledge when it enters the system and when it is validated (collectively or individually) as a relevant and useful piece of knowledge to implement in the system (Carrillo, Anumba, & Kanara, 2000). There are three types of knowledge within any organization, individual, group, and enterprise, and that knowledge can be generally classified along the lines of being explicit, embedded, and tacit. Explicit knowledge is knowledge represented in documents, books, e-mail, and databases. Embedded knowledge is organizational knowledge found in business processes, products, and services. Tacit knowledge is undocumented knowledge that is captured during business processes by knowledge workers.

KNOWLEDGE MANAGEMENT

Knowledge management (KM) is one of the organizational information technology initiatives for business today. The challenges associated with implementing knowledge management systems extend far beyond the capabilities of most information technology. The overall challenge faced by many organizations today is identifying where strategic knowledge (intellectual capital) resides, and how to leverage and manage it across the enterprise, group and/or individual.

Knowledge management refers to the process for creating, codifying, and disseminating knowledge for a wide range of knowledge intensive tasks. (Harris, Fleming, Hunterk, Rosser, & Cushman, 1998). These tasks can be decision support, computer-assisted learning, research (e.g., hypothesis testing)

or research support. There are various methodologies that support the systematic introduction of KM solutions into an organisation. The majority of KM initiatives today usually revolve around identifying/discovering, classifying, and indexing explicit knowledge in information systems, such as an enterprise document management system, and/or business content management system (Hummingbird, 2001). In many cases KM systems also include access to structured information found in databases.

Knowledge management systems (KMS) are tools to effect the management of knowledge (Davenport, DeLong, & Beeres, 1998) including document repositories, expertise databases, discussion lists, and context-specific retrieval systems incorporating collaborative filtering technologies. Most KMS are based upon some construction of information-enabled communications, coordination, and collaboration capabilities. They provide the critical link between the information and technology resource inputs and organised performance, and are critically dependent upon active participation and involvement of knowledge workers to transform this input into organisational performance (Malhotra & Galletta, 2003).

In a business environment, knowledge management has many aspects, from low-level day-to-day business process control to high-level executive decision making.

A knowledge management system should be able to collect relevant knowledge, store knowledge in a sharable enterprise memory, communicate the knowledge with parties, and maintain consistencies. In all these activities, a portal can play an important role within an enterprise, that is, as an information carrier to shift information around the organization.

KNOWLEDGE MANAGEMENT PORTAL

An obvious goal of the Web site today is dynamically acquiring content and making it available. A portal is a group of services provided through the Web to a set of users. Portals originated from the question of how we could deliver the right information to users. It allows the integration of many functions within a single interface. The services provided in a portal also vary widely with the purpose of it. Typically,

services are personalization, member registration, e-mail and discussion boards, search engine, organization and indexing of content, from internal and/or external sources. The items that are typically included in the portals consist of business intelligence, content and document management, enterprise resource planning systems, data warehouses, data-management applications, search and retrieval of information. The ultimate portal provides the Holy Grail for organizational knowledge, true data aggregation and information integration coupled with knowledge worker collaboration (Roberts-Witt, 1999). A portal is the next evolutionary step in the use of Web browsers.

There are different forms of portals, ranging from simple to complex. Beginning with the simplest form of a portal, defined as “an information gateway that often includes a search engine plus additional organization and content,” to more sophisticated forms of portals (McCallum, Nigam, Rennie, & Seymore, 2000). Sophisticated examples include Yahoo and Alta Vista, (examples of horizontal portals) or high-level university campus portals, such as described in Eisler (2000) as examples of vertical portals. To use a portal, a user has to register in it and provide a name and password each time he/she uses it. This allows the system to personalize the services and contents to the specific user. The portal constitutes a single point of entry and a single logon to the services provided.

Modern business environments are complex and expensive, which has motivated many companies to invest in enterprise portals as a mechanism by which they can manage their information in a cohesive and structured fashion. Portals offer many advantages over other software applications. They provide a single point of access for employees, partners, and customers to various types of (structured and unstructured) information, making an important contribution to enabling enterprise knowledge management.

Enterprise information portals are bringing together the worlds of business intelligence and knowledge management into a new, centralized desktop environment; the knowledge portal.

The knowledge portal plays a key role in empowering the virtual enterprise and employees by providing a personalized single point of access to all relevant information, enabling better, faster decision making. They are beginning to help organizations capture and leverage their intellectual assets by facilitating assembly of communities of interest, best practice, and expert systems within a single, intuitive, Web-based user interface.

Knowledge portals make an important contribution to enabling enterprise knowledge management by providing users with a consolidated, personalized user interface that allows efficient access to various types of (structured and unstructured) information.

Knowledge management functionalities include (Hummingbird, 2001):

- Search/discovery and navigation to information from a knowledge map.
- Taxonomy, relevant indexing, and classification of information sources.
- Knowledge network, user interface to communities of interest/expert systems.
- Personalization and presentation of relevant information to the desktop.
- Dynamic delivery of information to the desktop via intelligent agents.
- Enterprise application integration.

Benefits of Portals

A survey by the Delphi Group in 1999 found the following reasons given by responders for having a portal:

- Sharing information and work methods, this seems to speak directly to the knowledge management notion of making tacit knowledge explicit.
- Business process support, or workflow, indicating that companies see a huge upside to exchanging electronic files rather than moving hard copy from desk to desk in the business process.
- Customer service, mirroring the growing business interest in managing customer relationships.

Intranet portals also provide business intelligence and collaborative tools. They promise to create significant and sustainable competitive advantages for early adopters.

Limitations of Knowledge Management Portals

Building communities of interest and/or promoting best practices within an organization is more easily said than done. Major barriers to successful implementation are primarily cultural, not information technology driven. Organizational barriers to knowledge management portals include:

- Senior management culture and support: “Where is the return on investment?”
- Identifying the knowledge base: “Who really knows about this?”
- Buy in from knowledge workers and employees: “What’s in it for me?”
- Management and distribution of relevant and accurate content: “Does this really work?”

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