

What is Knowledge Management?

Knowledge management brings to mind many things to many people. But in a business setting, a practical definition prevails. The basic definition of knowledge management is discussed, as well as those concepts critical to its effective deployment. This section examines:

- » the effect of knowledge management;
- » how knowledge management is different from information management;
- » types of knowledge;
- » the knowledge chain and its role in measuring the success of knowledge practices; and
- » the basic knowledge management applications.

“A little knowledge that acts is worth more than much knowledge that is idle.”

Kahlil Gibran, The Prophet

Defining knowledge management is not a simple issue. It is not a technology, although technology should be exploited as an enabler. It is not a directive, although strategic leadership is imperative to successful knowledge management. It is not a business strategy, although one aligned with the tenets of knowledge management must exist. It requires a culture that promotes faith in collectively sharing and thinking. But, culture alone will not render a vital knowledge management practice. It is perhaps the lack of a singular definition that has delayed the more wide-scale deployment of knowledge management.

Put succinctly:

Knowledge management is the leveraging of collective wisdom to increase responsiveness and innovation.

It is important that you discern from this definition three critical points. This definition implies that three criteria must be met before information can be considered knowledge.

- » Knowledge is connected. It exists in a collection (collective wisdom) of multiple experiences and perspectives.
- » Knowledge management is a catalyst. It is an action - leveraging. Knowledge is always relevant to environmental conditions, and stimulates action in response to these conditions. Information that does not precipitate action of some kind is not knowledge. In the words of Peter Drucker, “Knowledge for the most part exists only in application.”
- » Knowledge is applicable in unencountered environments. Information becomes knowledge when it is used to address novel situations for which no direct precedent exists. Information that is merely “plugged in” to a previously encountered model is not knowledge and lacks innovation.

It is important, therefore, to draw a clear line of distinction between information management and knowledge management. Both are important to an organization’s success, but each addresses different needs

and requires different approaches. Information management consists of predetermined responses to anticipated stimuli. Knowledge management consists of innovative responses to new opportunities and challenges. In business, planned responses to controlled stimuli can be, and have been, automated through traditional IT approaches. Knowledge-based solutions, however, focus on the application of innovative new responses in a volatile work environment, as illustrated in Fig. 2.1. Knowledge must be internalized; it co-exists with intelligence and experience and emanates at the points where decisions are made. For this reason, the primary repository for knowledge is people's heads (at least until we agree that machines have intelligence). Electronic and paper-based "knowledge repositories," then, are merely intermediate storage points for information en route between people's heads.

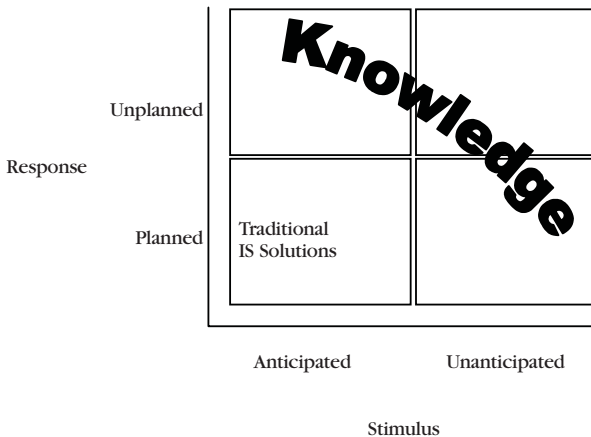


Fig. 2.1 The focus of knowledge-based solutions in a dynamic work environment.

But there is more needed to develop a complete understanding of knowledge and knowledge management than these basic premises. Understanding knowledge management begins with two basic characteristics: knowledge complexity and knowledge applications. The

former refers to the physical manifestations and depth of knowledge available, the latter to approaches to connecting knowledge to people and processes. Each is discussed below.

THE COMPLEXITY OF KNOWLEDGE: FROM EXPLICIT TO TACIT

All knowledge can be classified according to its complexity on a continuum from explicit to tacit. Michael Polanyi identified the distinction between these two types of knowledge in 1966 (Polanyi, M., *The Tacit Dimension*, Routledge & Kegan Paul, 1966).

Explicit knowledge is knowledge that is articulated in formal language and easily transmitted among individuals both synchronously and asynchronously. Tacit knowledge, on the other hand, is personal knowledge embedded in individual experience and involving such intangible factors as personal belief, perspective, instinct, and values.

Explicit knowledge is referred to as information in the context of our discussion. The challenge of explicit knowledge is one of handling the sheer volume of information that is available. On the other hand, while tacit knowledge potentially can represent great value to the organization, it is, by its very nature, far more difficult to capture and diffuse. The challenges represented by each type of knowledge at a very high level are the same - to build a bridge between seekers and providers of knowledge. But from a practical level the challenges are very different. Explicit knowledge can be adequately transferred with the help of electronic tools. On the other hand, the most efficient way to convey tacit knowledge throughout the organization is face to face. Practices such as apprenticeships, mentoring and communities of practice prove effective.

For decades, organizations have focused their information technology investments on explicit knowledge, rather than tacit knowledge (see Chapter 4 for more details on technology approaches to handling Explicit knowledge). There are three reasons for this: first, explicit knowledge is often conveyed as a standard part of most transaction-based information systems; second, explicit knowledge is much easier to convey and capture than tacit knowledge; and, third, we have an inherent mistrust of anything that cannot be conveyed objectively and quantified (i.e. tacit knowledge). The primary challenge when facing

explicit knowledge is to manage its volume, ensure its relevance and quality, and make it easily accessible – in a phrase, handling infoglut.

There is no doubt that tacit knowledge plays a pivotal role in distinguishing companies and poising them for success. For this reason, an ability to expand the level of tacit knowledge throughout an organization through its proactive sharing is regarded as one of the core objectives of knowledge management. It also happens to be one of the most challenging. For tacit knowledge, the challenge is to formulate the knowledge into communicable form. But, tacit knowledge defies being systematically cataloged and made available in an asynchronous manner; by its very definition, it is forever changing, growing and being reshaped by the owners' latest experiences. Tacit knowledge should be approached with greater scrutiny and a determination made as to what degree or depth the knowledge can be captured or tracked.

From tacit to implicit

In some cases, knowledge believed to be tacit is only so labeled because no one has ever taken the time or energy to codify the knowledge. Users may be too quick to reply, "It's just too difficult to explain; it defies explanation." This is a real problem and one not easily resolved. You must determine if bodies of uncoded knowledge can be captured and made explicit. However, it is critical to first be sure that a culture that promotes and supports knowledge sharing is in place, or users may recoil by hoarding even more of what they know (see more on establishing and measuring culture via a knowledge audit in Chapter 10). In any case, it is imperative that you appreciate that perfect management of tacit knowledge is not possible. Do not get preoccupied with getting it perfect, because you could miss out on great success without ever achieving 100 percent accuracy.

Certain knowledge can be harvested from its owner and codified in such a way as to make it more readily sharable. Using such a process you can create a third type of knowledge in the organization: implicit knowledge. The value and leveragability of implicit knowledge is vast. However, an organization must take several strategic steps in order to position it adequately. First, the sources and nature of the implicit bodies of knowledge must be identified and quantified (this is where a knowledge audit proves useful – see Chapter 10). Getting to implicit

knowledge mandates taking a second look at all so-called tacit knowledge resources to determine whether that knowledge could be codified if it were subjected to some type of mining and translation process. Then, it requires implementing that mining/translation process. Often, much of the work done in businesses is not in the deep tacit realm. Rather, it is a logical, methodical thinking process that simply is not recognized as such, even by the thinker.

Implicit knowledge management employs tools, techniques and methodologies that capture these previously elusive processes and make them more generally available to the organization. Thus, the thought processes used by your best thinkers become a leveragable asset for the organization. Again, I must stress that not all tacit knowledge can be transfigured into implicit knowledge. There will always be bodies of know-how and experience that remain tacit.

Also tacit knowledge is not an effective way to achieve alignment between personal and organizational values (storytelling and mentoring are better ways to achieve value alignment). Finally, there are some intellectual assets too novel for capture and transfer. The goal of implicit knowledge management is to determine how much of the tacit knowledge in your organization defies any form of codification, and to mine that which does not.

GRAPEVINES, COMMUNITIES OF PRACTICES AND THE INFORMAL KNOWLEDGE NETWORK

Where knowledge legitimately exists in tacit bodies, knowledge-based strategies should not focus on collecting and disseminating information, but rather on creating a mechanism for practitioners to easily identify and reach out to other practitioners. Such mechanisms, like communities of practice, have special characteristics. They emerge of their own accord: they collaborate directly, use one another as sounding boards, and teach one another. They are built on a bond of obvious *trust* - a key word for any knowledge management solution.

Communities of this sort are difficult to construct and easy to destroy but, in my experience, almost always exist in every organization, both formally and informally. Where present, it behooves you to recognize them and encourage them, support them. They are among the most important structures of any organization where thinking matters, but

they almost inevitably undermine its formal structures and strictures if improperly managed. Remember that knowledge is connected. For information to be transformed into knowledge you must recognize, support and administer the connections and, most importantly, the people, who are the ultimate owners of all knowledge. (In Chapter 4 the technology approach to personal profiling is explained, an approach to tracking and defining what individuals seem to exhibit interest in, or knowledge about. These profiles are used to intermedate knowledge seekers with knowledge providers, establishing online communities.)

As stated in Chapter 1, organizational strength does not come from knowledge of the past per se; rather, it comes from the ability to regenerate knowledge of the organization, its processes and its markets - to take timely innovative action on an ongoing basis. This is where knowledge management clearly differentiates itself from other approaches to governing expertise such as reengineering (for more detail on the differences between knowledge management and reengineering and TQM, see Chapter 3). Knowledge management assumes a constant vigilance of change, and encourages constant modification - innovation - at a rate that at least keeps pace with changing market dynamics.

Make no mistake, knowledge management emphasizes the re-use of previous experiences and practices, but its focus is on mapping these to the changing landscape of the market. If that sounds simple, then try answering the following question: What is your organization's core competency? If you answered with a product name, you are shackled by the past. The chances are, if you answered in this manner, you are referring to a most successful product. Success forms the most restrictive shackles. Your competency must outlive product success. Products should exist at the vortex of the whirlpool - constantly changing. Your core competencies should live at the outer limits of the whirlpool.

Knowledge management suggests that an organization makes a subtle yet profound shift - from relying on its "experience" (or knowledge of the past) to relying on its "competencies" (or resourcefulness to handle the future). Knowledge of the past is only valuable inasmuch as it provides a perspective on the future. Competency, on the other hand, equips the organization to respond to as yet unknown forces for change.

THE KNOWLEDGE CHAIN

Fundamental to the practical definition of knowledge management is the concept of the knowledge chain. The knowledge chain was first recognized by Koulopoulos, Toms and Spinello in doing research for their book *Corporate Instinct*. There are four links in the knowledge chain that determine the uniqueness and longevity of any organization. These four links are:

- » internal awareness;
- » internal responsiveness;
- » external responsiveness; and
- » external awareness.

The knowledge chain (K-chain) is a series of interactions that constitute an organization's cycle of innovation. Knowledge management creates permeability between the four cells of the K-chain and accelerates the speed of innovation. The four stages of the knowledge chain define the flow of knowledge through an enterprise, as shown in Fig. 2.2. The ability to quickly traverse through the four cells of the knowledge chain is the essence of the benefit of knowledge management.

Internal awareness

In its simplest terms, internal awareness is the ability of an organization to quickly assess its inventory of skills and core competency. It is the awareness of past history in terms of talent, know-how, interaction, process performance, and communities of practice. Strong emphasis on functional organization structures, which often permeate traditional companies, inhibits the development of internal awareness. Organizations with a rigid functional structure most often define their core competency as their products and services, not their skills. Strong internal awareness is built on an ongoing challenge of what is done and a focus on what is possible. This is what Peter Drucker refers to as "organizational abandonment."

Internal responsiveness

Internal responsiveness is the ability to exploit internal awareness. An organization may be well aware of its strengths and market demand,

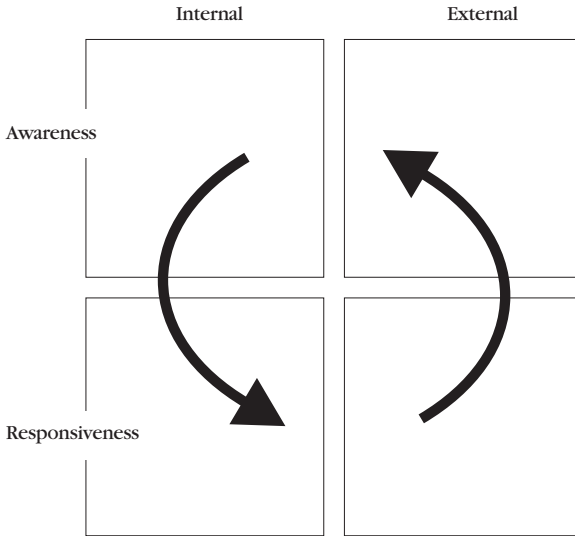


Fig. 2.2 Movement through the four cells of the knowledge chain.

but if it is not able to adequately effect change within itself quickly enough to meet market requirements, its competencies are virtually moot. In a study conducted by Delphi Group of 350 respondents, 30 percent indicated that they had greater external awareness than internal responsiveness. In other words, these organizations felt that “we are better at understanding the market than we are at rallying and coordinating our own resources in response.” No wonder 50 percent of respondents to the same survey indicated that a good idea had more chance of resulting in a new startup or ending up at a competitor before their own organization acted on it.

Internal responsiveness considers how quickly competencies can be translated into actions to bring a product to market or respond to a customer need. There’s no point in responding quickly, though, if it’s too late. Reengineering, for example, is often little more than overcompensation for a company’s inability to respond to a series of

small market shifts over an extended period of time (see Chapter 3 for more detail on the differences between reengineering and knowledge management). It must be stressed that successful KM is the coordinated ability to exercise internal responsiveness based on what is known via continuous awareness (both external and internal) and perception through all levels and functional areas.

External responsiveness

Simply put, external responsiveness is the ability to best meet the requirements of the market. When all is said and done, an organization's ability to better satisfy this cell in the knowledge chain than its competitors will determine its success or failure. External responsiveness is measured by the ability to effectively respond to opportunities and threats outside of the organization in a timely manner. This is the essence of competitive advantage – a level of responsiveness to environmental conditions that is significantly faster than that of its competitors.

External awareness

External awareness is the mirror image of internal awareness. It is the organization's ability to understand how the market perceives the value associated with its products and services, to understand who are its customers, what those customers want, who are their competitors, competencies of competitors, market trends, competitive actions, government regulations, and any other relevant market forces that exist outside the organization itself. When coupled with internal awareness, external awareness may lead to entirely new markets.

External awareness is one of the cornerstones of the Internet, where new business models are sprouting up at an unprecedented pace. The velocity of the Internet provides an incredible opportunity to act upon the market's reaction to new products. However, new models for capturing market responses are just as critical. For example, Amazon.com's ability to capture buying trends of many book buyers and then use these to suggest books with similar themes and authors is the very essence of external awareness coupled with external responsiveness. A body of knowledge (customer buying habits) is productized and offered as a value-add, differentiating the online bookstore from its brick and mortar counterpart.

External awareness is more than just a function of extensive focus groups and market research. These provide testimony to what the market needs today, or yesterday, rather than what it will need in the future. In the worst case it provides only the answers that the market thinks you want to hear. The “classic” example is that of New Coke, which, despite heavy market analysis, proved the ultimate folly of most focus groups. As markets move at an ever-faster pace, traditional market research is reaching the end of its useful life cycle.

The knowledge chain of an organization is often a mix of positive and negative attributes. Table 2.1 depicts the four cells of the knowledge chain within an organization that is not knowledge driven; this is, therefore, a typical profile of a poorly positioned enterprise.

Table 2.1 Status of the knowledge chain within an organisation that is not knowledge driven.

	Internal	External
Awareness	Poor internal awareness is indicated by extensive use of organization charts, management by edict, lack of knowledge sharing, and static policies and procedures. Focus is on product lines and process awareness and intimacy with core competencies and experiences learned.	Protracted customer feedback loops result from belabored market research and a reliance on product branding. Few opportunities are given to react directly and dynamically with customers and prospects. Customers are looked at in terms of sales volume only. There is little effort to “predict” the market.
Responsiveness	New ideas are stifled by reliance on how things “should get done,” a hierarchical command and control structure, and extensive departmental organization.	Slow distribution channels result in standardized products, long durations between innovation cycles, and extensive emphasis on internal rate of return.

In organizations that are knowledge driven, all four cells are permeable, allowing the immediate transfer of knowledge between the cells. Table 2.2 illustrates the four cells of the knowledge chain within an organization that leverages knowledge; this is, then, a typical profile of an exemplary, well-positioned enterprise.

Table 2.2 Status of the knowledge chain within an organisation that leverages knowledge.

	Internal	External
Awareness	Always <i>collectively</i> aware of its strengths and weaknesses across structural silos and functional boundaries. Experiences are openly communicated; focus is on competencies and talents, not products.	Constantly removing filters between the market and its innovative capacity to form partnerships with prospects and customers. Forward-thinking organizations even form partnerships with would-be competitors (see the discussion on vortals in Chapter 5).
Responsiveness	Able to instantly organize skills based on an unfiltered assessment of the internal awareness of its resources and external market demands/opportunities.	Meet the market on its own terms - even when the market cannot articulate these and a clear return is not present. Focus is on customer service, as opposed to pricing, and productizing knowledge as a value-add to the customer.

In summary, success is not gained by excelling in any one of these quadrants, but by proficiency in each and, more importantly, measured by the speed with which knowledge flows through these four links (see Chapter 6 for a discussion on return on time).

As stated before, this flow of knowledge across the links is about the connections that exist between bodies of knowledge, actions taken and knowledge known, and knowledge seekers and knowledge providers. These connections are best understood by viewing them in terms of the four basic applications of knowledge management.

KNOWLEDGE MANAGEMENT APPLICATIONS

The four key applications of knowledge management are based on a model that regards knowledge management's primary role as the sharing of knowledge throughout the organization in a way that each individual or group understands the knowledge with sufficient depth and in sufficient context as to apply it effectively in decision making and innovation.

These four applications of knowledge management are:

- » intermediation;
- » externalization;
- » internalization; and
- » cognition.

These applications are affected across all bodies of knowledge, ranging from the explicit to the tacit. Each application has a particular focus, but is in turn best realized through integration with the other applications. In Chapter 4 the technologies available to address each of the knowledge applications are overviewed. But first, it is important to understand the applications themselves and their role in a knowledge environment.

Intermediation

Intermediation is the connection between knowledge and people. Intermediation refers to the brokerage function of bringing together those who seek a certain piece of knowledge with those who are able to provide that piece of knowledge. It is a fundamental step in internal and external responsiveness. Its role is to "match" a knowledge seeker with the optimal personal source(s) of knowledge for that seeker. Two types of intermediation are common, asynchronous and synchronous.

Asynchronous intermediation occurs when externalization and internalization do not occur simultaneously. In this case, an external knowledge repository stores the knowledge while it is in transit. Knowledge is captured in the knowledge base, often before a specific need for that knowledge elsewhere in the organization has arisen. When a knowledge seeker requires that knowledge, the knowledge base can be searched and the relevant knowledge extracted. This approach is typically best suited to explicit knowledge.

Synchronous intermediation occurs when externalization and internalization occur simultaneously. Knowledge is not stored while being transferred. Knowledge provider and knowledge seeker engage in direct communication. The challenge is to match knowledge providers with knowledge seekers intuitively and in a timely manner. This approach is far more common in tacit knowledge transfer.

Externalization

Externalization is the connection of knowledge to knowledge. It refers to the process of capturing knowledge in an external repository and organizing the knowledge according to some classification framework or ontology. A map or structure of the knowledge collection is provided as a facilitator to knowledge discovery. It is focused on bringing order to internal and external awareness.

Far too many organizations focus their efforts on how to get knowledge out of their knowledge management systems and too few, if any, focus on getting knowledge into the system. A knowledge management system, like an ecosystem, cannot be constantly depleted of its resource without constant replenishment. There are two fundamental components to externalization: the capture and storage of the knowledge in a suitable repository, and the classification or organization of the knowledge.

Capture and storage can take the form of a database, a document, or a videotape. The repository for this knowledge should be appropriate for the kind of knowledge being dealt with. For example, highly numerate data may best be stored in a structured database, while visual knowledge may best be captured using videotape.

Classification or organization of the knowledge is the more difficult of the two functions. It relies on the knowledge possessed by the

knowledge provider to shape the classification of the information into the most usable form. The aim here is to make the knowledge digestible to the knowledge seeker in the most efficient way possible. (For more information, see the discussion on portals in Chapter 4 and the discussion on the dilemma of organization in Chapter 10.)

Internalization

Internalization is the connection of knowledge to query. It is the extraction of knowledge from an externalized repository, and filtering it to provide personal relevance to the knowledge seeker. Closely tied to an externalized knowledge base, internalization reshapes the knowledge base specifically to address the focal point of the query issuer.

Cognition

Cognition is the linking of knowledge to process. It is the process of making or mapping decisions based on available knowledge. Cognition is the application of knowledge that has been exchanged through the preceding three functions. It is a highly proactive form of internal and external responsiveness. In its simplest form, cognition is achieved by applying experience to determine the most suitable outcome to an unprecedented event, opportunity or challenge.

KEY LEARNING POINTS

- » Knowledge management is more about action than being.
- » Knowledge management deals with the unanticipated stimuli and creative unplanned reactions.
- » Knowledge types:
 - » explicit;
 - » tacit; and
 - » implicit.
- » The knowledge chain - a means by which to rate your organization's:
 - » internal awareness;
 - » external awareness;

- » internal responsiveness; and
- » external responsiveness.
- » The basic applications of knowledge management are:
 - » intermediation - brokering knowledge owner to knowledge seeker;
 - » externalization - capturing and categorizing knowledge;
 - » internalization - retrieving knowledge in a personal manner; and
 - » cognition - applying knowledge to the business process.