

Business Processes and Knowledge Management



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INTRODUCTION

Knowledge has been a subject of interest and enquiry for thousands of years, since at least the time of the ancient Greeks, and no doubt even before that. “What is knowledge” continues to be an important topic of discussion in philosophy.

More recently, interest in *managing* knowledge has grown in step with the perception that increasingly we live in a knowledge-based economy. Drucker (1969) is usually credited with being the first to popularize the knowledge-based economy concept by linking the importance of knowledge with rapid technological change. Karl Wiig coined the term knowledge management (hereafter KM) for a NATO seminar in 1986, and its popularity took off, following the publication of Nonaka and Takeuchi’s book “*The knowledge creating company*” (Nonaka & Takeuchi, 1995). Knowledge creation is in fact just one of many activities involved in KM. Others include identifying, acquiring, sharing, retaining, refining, and using knowledge. Heisig (2009) compared 160 different KM frameworks: no fewer than 117 of them included a list of activities. Global interest in KM, both academic and practical, has continued to increase throughout the last two decades, but as these numbers indicate, consensus on the theory underpinning KM remains some way off.

In this article, first the different types of knowledge are outlined, then comes a discussion of various routes by which knowledge management has been implemented, advocating a business process-based route, which enables people, processes and technology to fit together for effective KM. Some examples of the business processes route in use are then given. Finally there is a look towards the future.

BACKGROUND

Types of Knowledge: Tacit and Explicit

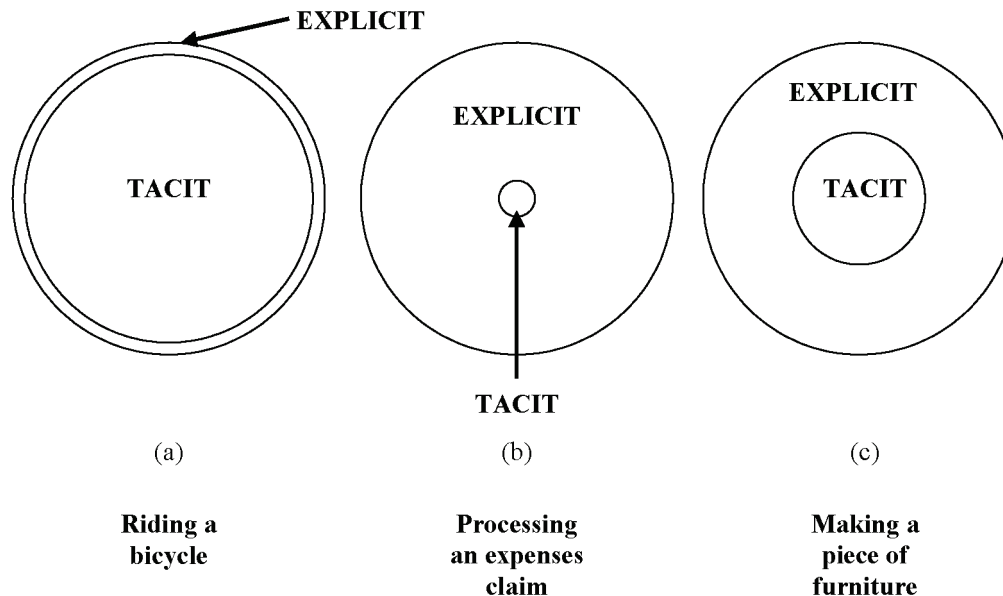
Nonaka and Takeuchi’s book (1995) popularized the concepts of tacit and explicit knowledge, as well as KM more generally. They based their thinking on that of Michael Polanyi (1966), expressed most memorably in his phrase “we know more than we can tell.”

It is important to realize that tacit and explicit knowledge are not mutually exclusive concepts. Rather, any piece of knowledge has both tacit and explicit elements, as shown in Figure 1. The size of the inner circle represents the proportion of tacit knowledge: the tacit core at the heart of the knowledge that we “cannot tell.” Figure 1(a) shows a case where the knowledge is almost entirely tacit, as in riding a bicycle. Figure 1(b) shows mainly explicit knowledge, where the tacit core is very small, for example how to process a claim for travel expenses in an organization. Figure 1(c) shows an intermediate case, such as making a piece of furniture, where substantial amounts of both tacit and explicit knowledge are involved.

KM Strategies

Hansen, Nohria and Tierney (1999) identified that there are two fundamental KM strategies, codification and personalization. Codification concentrates more on explicit knowledge (typically relying very heavily on information technology), personalization more on tacit knowledge (stressing interactions between people). They advocate that an emphasis on one fundamental KM strategy but also including an element of the other, in an 80-20 proportion, is likely to be the most successful.

Figure 1. The relationship between tacit and explicit knowledge



ROUTES TO IMPLEMENTING KM

Managers have to translate the goals of any strategic initiative into practical, implementable reality. Even with a clear KM strategy, many organizations find it difficult to implement knowledge management systems successfully. Identifying *who* should be involved in knowledge management, *what* knowledge is being managed, and *why* it is being managed can be problematic. The routes organizations have attempted to follow can be put into five generic categories.

Knowledge World Route

The practical focus in Nonaka and Takeuchi (1995) was very much on knowledge creation. As a result, organizations attempting to follow their principles for other aspects of KM, such as sharing or retaining knowledge, found it difficult to make a specific connection from abstract ideas about knowledge to what the organization actually does, or could do, or should do. Often only the "why" was considered, not the "who" or even the "what."

Functional Route

This organizes the implementation around the existing organizational structure. The most commonly found

structural elements intended to facilitate learning and knowledge sharing in organizations are departmental groupings based on functions. These have clear advantages in terms of what might be termed professional development and allegiance. Davenport and Prusak (1998) report examples of successful knowledge transfer between groups of surgeons, and groups of tunneling engineers, amongst others. However, this functional route also has the disadvantage that it encourages the compartmentalization of knowledge. Indeed, professional divisions can actively prevent sharing of knowledge. It has, for example, taken decades for hospital doctors in the UK National Health Service to allow other professionals such as pharmacists and physiotherapists to participate in decision-making about treatment of individual patients on an equal footing. More broadly, modern Western medical science has come to separate "diet" and "medication," at least until the very recent past, in a way that Chinese medicine, for example, never has done. The "functional silos" mentality that tends to result from running an organization in this manner was recognized by authors such as Hammer (1990) when KM was in its infancy. However, they are still commonly encountered, as pointed out by Liebowitz (2008) and Edwards (2011).

This route is only effective when KM can be bounded within a single function. Where the greatest KM issue in the organization is broader, for example

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