# Integrating Knowledge Management and Business Processes

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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. A business process-based route, which enables people, processes and technology to fit together, is growing in popularity as the best way to deliver effective KM that is integrated into what the organization does. 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.

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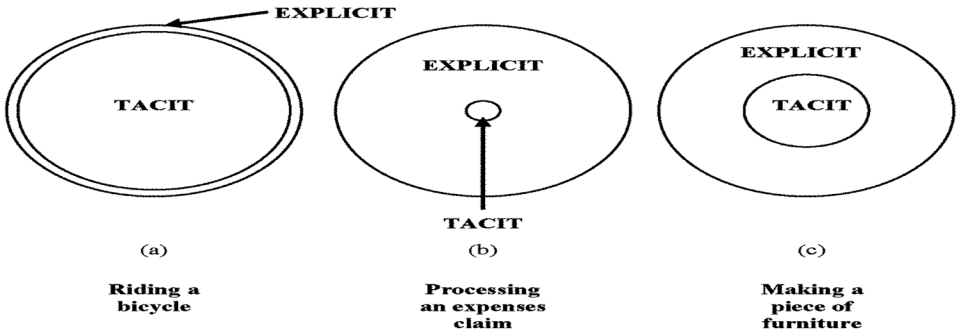
*Figure 1. The relationship between tacit and explicit knowledge*




## 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.

## 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, especially to integrate KM into the organization properly. Identifying *who* should be involved in knowledge management, *what* knowledge is being managed, and *why* is it being managed can each 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 integrate abstract ideas about knowledge into 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 for integration in terms of what might be called 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, so that integration may be only within that function, not the whole organization. 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