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 is usually credited as being the first to popularize the knowledge-based economy concept, for example, by linking the importance of knowledge with rapid technological change in Drucker (1969). 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 sharing, retaining, refining, and using knowledge. There are many such lists of activities (Holsapple & Joshi, 2000; Probst, Raub, & Romhardt, 1999; Skyrme, 1999; Wiig, De Hoog, & Van der Spek, 1997). Both academic and practical interest in KM has continued to increase throughout the last decade.

In this article, first the different types of knowledge are outlined, then comes a discussion of various routes by which knowledge management can be implemented, advocating a process-based route. An explanation follows of how people, processes and technology need to fit together, and some examples of this route in use are 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, however, most 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.

The Role of KM Systems

KM systems represent a deliberate, conscious attempt to manage knowledge, usually in an organization. Hansen, Nohria, and Tierney (1999) identified that there are two fundamental KM strategies, codification and personalization. Codification concentrates more on explicit knowledge (often relying very heavily on information technology), personalization more on tacit knowledge. Again, it is important to realize that these are not mutually exclusive, and that a strategy combining elements of both is likely to be the most successful.

ROUTES TO IMPLEMENTING KM

Many organizations have found it difficult to implement knowledge management systems successfully. Identifying “who”, “what”, and “why” – who is involved in knowledge manage-