INTRODUCTION

A Knowledge Management Approach

Any attempt to develop IT applications to manage information processes in a knowledge work setting will inevitably encounter the work of Ikujiro Nonaka (1991) on the importance of knowledge management in organizations. Almost all work can nowadays be loosely defined as knowledge work, since even ditch digging, for example, may involve the use of a GPS positioning device. Unwittingly establishing a doctrine of knowledge management, Nonaka took Polanyi’s (1958, 1966) old definition of tacit knowledge as the starting point in his theory, and went on to describe the relationship between implicit and explicit (communicable) knowledge, and their importance within an organization.

A key conclusion in the work published by Nonaka and Takeuchi in 1995 was that tacit knowledge is important in the creation of new knowledge in organizations. As is commonly the case when new management theories are formulated, Nonaka and Takeuchi focused attention explicitly on a phenomenon that has always existed implicitly, but whose description or significance has not previously been encapsulated in such a way. The phenomenon to which Nonaka and Takeuchi drew attention was specifically the finding that knowledge used in an organization is divided into explicit and implicit knowledge, and that these are interlinked.

BACKGROUND

The Creation of New Knowledge

In their model, the creation of new knowledge is based on the conversion and circulation of explicit and tacit knowledge between the individual and the organization. Individuals share their internalized tacit knowledge by giving it a precise form of expression. This is then creatively combined with existing knowledge, and the newly learnt knowledge is internalized within the organization in the form of new practices. This model attempts to demonstrate, in simple terms, how, by repeating the chain of events described, a continuous spiral-like process emerges that enables the creation of new knowledge and innovations. For such a creative process to function well, it is necessary to have a suitable operating environment, of a kind originally described by Nonaka using the concept Ba, coined by philosopher Kitaro Nishida.

Nonaka and Takeuchi present an appetizing example of the harnessing of tacit knowledge for product development purposes, when they reveal a slice of the story behind an automatic home bread-making machine. In the 1980s, the Japanese Matsushita company wanted to develop a new product that would allow households to make top-quality bread themselves, easily and conveniently. The company experienced setbacks, however, in its development of the machine, and these were only overcome when a product development engineer investigated matters further with a master baker (a process that the theory terms socialization). In doing so, the engineer finally realized what was necessary to achieve the desired results: the dough had to be kneaded in a certain way, and this was a technique difficult to explain in words.

Commenting on the popularity of his theory, Nonaka has remarked that the more people talk about knowledge management, the more the concept is misunderstood. On a visit to Finland in 2000, he further declared that knowledge management is not a business management theory at all, not something that can be fashionable one day and forgotten the next, when a new trend comes along (Taloussanomat November 11, 2000). Instead of providing a new theoretical basis, he says knowledge management should be seen more as a new approach to organizations.

Information Richness Theory

The information richness theory of Daft and Lengel (1986) has traditionally formed the basis for studies of the interrelationship between information and the use of IT. The theory defines information richness as the capacity of information to change the recipient’s understanding within a certain timeframe. According to the theory, the best channel for conveying the richest information is face-to-face communication. After this, the richness of the information exchanged declines in stages, from phone conversations and personal (e.g., letters) and then nonpersonal written documentation, to the most information-poor stage, namely documents containing numeric information. Although this division was created before the era of the Internet, multimedia, and