



## **Chapter 3**

# **Process Improvement and Knowledge Communication**

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### **ORGANIZATIONAL KNOWLEDGE AND COMPETITIVENESS**

Knowledge, whether stored in the brain or in computer databases, is necessary for the processing of information. Information processing, in turn, has been identified as the main reason why organizations exist<sup>1</sup> (Galbraith, 1973). That is, purposeful organization of people, capital, and other resources is necessary so information processing can be done efficiently and effectively. Information processing, in turn, is seen as a fundamental step in the generation and delivery of products and services by organizations to their customers.

Given the prominent role that information processing seems to play in organizational processes, and the assumption that information processing relies heavily on knowledge, the frequent claims that the collective knowledge held by organizations is the single most important factor defining their competitiveness do not seem unreasonable. The amount of relevant shared knowledge among individuals in process teams has been linked to the efficiency and effectiveness of such teams (Boland and Tenkasi, 1995; Nelson and Coopridge, 1996; Nosek and McNeese, 1997). Shared team knowledge has been equated to higher flexibility of organizational processes, as it can reduce the need for bureaucratic and automated procedures to mechanize and standardize procedures (Davidow and Malone, 1992). That is, more shared knowledge among team members may reduce the need for workflow control and automation.

But, what is organizational knowledge, and how is it related to team knowledge? Knowledge exists in organizations in a dispersed way, and is predominantly held by the individuals who perform process activities. A new concept that tries to expand the locus of knowledge, from the individual towards the group, is the concept of *team* knowledge (Katzenbach and Smith, 1993). Team knowledge is defined as the collective knowledge possessed by groups of individuals involved in the execution of organizational processes, regardless of process scope. Such processes can be as diverse as the processes of *home loan approval* and *hamburger preparation*.

An even higher level concept has been created to refer to the collective knowledge of an organization, namely *organizational* knowledge or “knowledge of the firm” (Kogut and Zander, 1992), which can be defined as the combined knowledge of the various process teams that make up an organization. Part of this collective knowledge can also be stored in data storage devices, often as components of computer-based systems (Strassman, 1996).

## THE NEED FOR KNOWLEDGE SHARING

Due to its associative nature, the continuous build up and intensive use of knowledge is a necessity in a complex society. Here, the term “complexity” implies a large number of associations or interdependencies, whether we look at society from an environmental, artifact-oriented, sociological, psychological, or any other relevant perspective (Stacey, 1995; Gleick, 1993; Lewin, 1993).

Knowledge creation feeds complexity and vice-versa (Probst and Buchel, 1997), in what could be seen as an open-ended spiral. For example, new discoveries about a terminal disease and its genetic roots can trigger the development of new technologies and drugs for treatment and prevention of the disease. This in turn can lead to the development of new equipment, and, on a different scale, new drug manufacturing companies. New governmental market regulations may follow. New militant groups fighting for their rights may emerge as those who have the genes that cause the disease organize themselves against possible discrimination by insurance companies. New research fields, theories, and academic disciplines may be spawned.

As knowledge becomes more voluminous and complex, so does the need for knowledge specialization by individuals. Through formal and informal education as well as practice, experts in fields as diverse as accounting and medicine absorb and use specialized knowledge that is not held by large sections of the population in general. The market rewards knowledge specialization and expertise through higher paying jobs and social status.

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