

# Chapter XXXIV

## KMmaster® for Collaboration and Knowledge Management

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### ABSTRACT

*Collaboration is a constitutional element of any organization. To conceptualize the organization as an evolving system of interactions means to put the focus on communication. Communication in organizations implies a process of information and knowledge exchange between two or more individuals or social aggregates such as teams, groups, and departments. From the social perspective as the dominant paradigm in recent information and knowledge management studies, the core of electronic collaboration is to support informal communication, communities of practice, and social networks. This chapter provides the theoretical background of informal communication in organizations from a social constructionist view in a first step. In a second step, it presents the KMmaster framework as an example of a Web-based enterprise software to support electronic collaboration and knowledge transfer across intra- and inter-organizational boundaries. The knowledge management platform KMmaster will be illustrated with its editions designed for specific applications (lessons learnt, reporting), processes (innovation management) and industries (life science).*

### INTRODUCTION

During the last decade, knowledge management (KM) has become an independent branch of academic research and a professional discipline on its own. At the same time, it has become of primary importance to industry: investments in knowledge

management activities gained the second highest priority (30 percent) after marketing and sales investments (36 percent), and surprisingly, even higher than research and development (R&D) investments (26 percent), as recently found in a survey by The Economist among 1,000 leading managers (Economist Intelligence Unit, 2007).

Knowledge management professionals point to “knowledge sharing” as the biggest challenge for the future development of knowledge management and “personal networks and communities” as the most important knowledge management concepts in R&D environments (Müller-Prothmann, 2006). This overall picture provides the background of current approaches to support electronic collaboration and knowledge exchange in industrial enterprises and organizations from a social perspective. The KMmaster framework is based on these approaches and has therefore been designed as a knowledge management platform to specifically meet complex workflows of collaboration in large organizations. The development of specialized software editions allows its application in various industrial environments.

## **BACKGROUND**

### **Communication in Organizations**

To examine collaboration in organizations, we can conceptualize the organization as an evolving system of interactions (White, 1992). Thus, we put our focus on communication as the organizational core. In the 1930s, Barnard (1951 (1938)) already noted that communication occupies a central place in organizational theory because “structure, extensiveness, and scope of the organization are almost entirely determined by communication techniques” (p. 91). In their influential paper of 1951, Bavelas and Barrett (1951) concluded that communication “is the essence of organized activity and is the basic process out of which all other functions derive” (p. 368).

For a first definition of communication, we can simply follow Rogers’ (1983) description as the “process in which participants create and share information with one another in order to reach mutual understanding” (p. 5). He continues: “This definition implies that communication is a

process of convergence (or divergence) as two or more individuals exchange information in order to move toward each other (or apart) in the meanings that they ascribe to certain events.”

Maletzke (1963) defines communication as the mediation of meaning between creatures. Watzlawick, Beavin, and Jackson (1967) express the complexity and omnipresence of communication in their prominent first axiom that one cannot not communicate. Based on Fisher (1978), Krone, Jablin, and Putnam (1987) outline four conceptual approaches to human communication of (1) mechanistic, (2) psychological, (3) interpretive-symbolic, and (4) systems-interaction perspectives as a framework for the study of organizational communication. As an adaptation from the study of human communication, these four perspectives provide a suitable theoretical framework for introducing the study of organizational communication with a focus on interpersonal relationships as proposed here. Especially the interpretive-symbolic perspective is useful for the study of individual and organizational knowledge communication as perceived for our purposes. It analyzes organizational communications as consisting of “patterns of coordinated behaviors that have the capacity to create, maintain, and dissolve organizations” (Krone et al., 1987, p. 27). Thus, it “posits by virtue of their ability to communicate, individuals are capable of creating and shaping their own social reality.” Additionally, we can add insights from the systems-interaction perspective. Here, the locus of communication “is patterns of sequential behaviors or the recurrence of contiguous acts and interacts” (p. 31). Unlike the psychological perspective, the focus is not put on the individual but rather on the behaviors that he or she shows in relation to others. Moreover, this perspective emphasizes the dimension of time in that structure and function of relationships gradually evolve.

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