

# Chapter 26

## A Pattern of Reference to Insure Organizational Learning Process: The Semi-Opened Infrastructure Model (SopIM)

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### **ABSTRACT**

*In this paper, referring to the Model for General Knowledge Management within the Enterprise (MGKME), the author emphasizes two of the operating elements of this model, which are essential to insure the organizational learning process that leads to the appropriate use of concepts, methods, and tools of innovative technology: “Ad hoc Infrastructures” and “Organizational Learning Processes”. Nonaka’s SECI models and the Japanese concept of Ba underlie these two elements. The author discusses a case in which the “Semi-opened Infrastructure Model” (SopIM) was implemented to deploy artificial intelligence and knowledge-based systems within a large industrial company.*

### **1. INTRODUCTION**

In the Knowledge Society (Lytras & Sicilia, 2005; Ravi *et al.*, 2010) Enterprises are more and more concerned with Knowledge Management (KM) as a key factor for improving their efficiency and

competitiveness, notably their innovative capabilities. However, very often, KM is considered from a technological viewpoint that induces to consider knowledge as an object independent of individuals. Thus, as observed by Kjaergaard, Kautz, and Nielsen (2008, p. 71) “The practice

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of knowledge management is often reduced to the implementation of new IT-based systems, procedures for documenting and sharing information, and documents themselves though there are examples to the contrary. By focusing on externalization and documentation of knowledge, important organizational aspects, in particular human and social issues, can be overlooked." Those practices disregard the innovative potentialities of KM. In our research group, supposing that Knowledge is not manageable as if it was a data or information, we postulate that KM must address activities that utilize and create knowledge more than knowledge by itself. With regard to this issue, we elaborated a sociotechnical approach of KM within the enterprise, and we synthesized it into an empirical model called Model for General Knowledge Management within the Enterprise (MGKME). Seven elements, classified into two categories, characterize this model. In particular, two of these elements, the "Ad-hoc Infrastructure", and the "Organizational Learning Processes" are essential to insure the learning process that leads people to appropriate and use concepts, methods and tools of KM considered as an innovative technology.

In this article, after setting out our research motivations, method and objectives, we set down three fundamental postulates, we open KM Perspectives, and we briefly describe MGKME emphasizing on the "ad hoc infrastructures", and the "organizational learning processes", which are two elements of the model's operating elements. That leads to introduce the Nonaka's SECI model (Nonaka & Takeuchi, 1995), and the Japanese concept of *Ba* (Nonaka & Konno, 1998). Then, considering the case of Intelligence Artificial and Knowledge-based Systems deployment within a large industrial company, we describe the "Semi-opened Infrastructure Model (SopIM)", which was implemented highlighting the link with Nonaka's SECI model, and the Japanese concept of *Ba*.

## **2. BACKGROUND THEORY AND ASSUMPTIONS**

### **2.1. Research Motivations, Method, and Objectives**

Our research follows a constructivist paradigm (Perret & Séville, 2003) that is deeply rooted in our pragmatic experience in the real field.

As a practitioner having to manage deployment of innovative technologies (such as computer aided design, knowledge based systems, and others) in large companies just when these technologies were conceived into universities and laboratories, I observed that we always needed to elaborate a model with sociotechnical perspectives, which could be used as a pattern of reference for all stakeholders, in order to engender the essential learning process that leads people to appropriate and use these technologies. Notably, I elaborated, the "Semi-opened Infrastructure" model presented in this paper. This model is an empirical model that has been used in each case I handled.

Later on, when becoming Associate Researcher in the domain of KM, we perceived the lack of general model of KM that integrates sociotechnical perspectives. This point of view is often disregarded when considering the technical approach of KM, although hundred of frameworks can be found in the literature (European Committee for Standardization, 2004). That leads us to elaborate MGKME that is briefly presented in Section 3.

Meanwhile, our research on KM makes us discover the Nonaka's SECI model, and the Japanese concept of *Ba*. That is the source of the idea to link these theoretical concepts to our pragmatic experience with the implementation of "Semi-opened Infrastructure" model, and to consolidate it. Thus we reached two objectives at the same time:

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