Chapter XI

Knowledge Management Success Factors and Models

Murray E. Jennex, San Diego State University, USA
Lorne Olfman, Claremont Graduate University, USA

Abstract

This chapter surveys knowledge management (KM) and knowledge management system (KMS) success factors and models. It also provides a framework for assessing KM and KMS success models. The framework uses three criteria: how well the model fits actual KMS success factors, the degree to which the model has a theoretical foundation, and if the model can be used for both types of KMS. The framework then is applied to four KMS success models found in the literature and is determined to be a useful framework for assessing KMS success models.
Knowledge management systems (KMS) are systems designed to manage organizational knowledge. Alavi and Leidner (2001) clarify KMS as IT-based systems developed to support/enhance the processes of knowledge creation, storage/retrieval, transfer, and application. Additionally, KMS support knowledge management through the creation of network-based organizational memory (OM) and support for virtual project teams and organizations and Communities of Practice. A final goal of KMS is to support knowledge/OM creation.

There are several taxonomies of KMS from Zack’s (1999) integrative and interactive KMS to KMS classified based on knowledge life cycle (Alavi & Leidner, 2001), KM spectrum (Hahn & Subramani, 2000), KM Architecture (Borghoff & Pareschi, 1998), and so forth. However, this chapter classifies KMS by the context captured and the users that are targeted, resulting in two approaches to building KMS: the process/task approach and the infrastructure/generic approach. The process/task approach focuses on the use of knowledge/OM by participants in a process, task, or project in order to improve the effectiveness of that process, task, or project. This approach identifies the information and knowledge needs of the process, where they are located, and who needs them. This approach requires KMS to capture minimal context, because users are assumed to understand the milieu of the knowledge that is captured and used.

The infrastructure/generic approach focuses on building a system to capture and distribute knowledge/OM for use throughout the organization. Concern is with capturing context to explain the captured knowledge and the technical details needed to provide good mnemonic functions associated with the identification, retrieval, and use of knowledge/OM. The approach focuses on network capacity, database structure and organization, and knowledge/information classification.

Both approaches may be used to create complete KMS. The process/task approach supports specific work activities, while the infrastructure/generic approach integrates organizational knowledge into a single system that can be leveraged over the total organization instead of just a process or project. Morrison and Weiser (1996) support the dual approach concept by suggesting that an organizationwide KMS be designed to combine an organization’s various task/process-based KMS into a single environment and integrated system.

Once a KMS is implemented, whichever type it is, its success or effectiveness needs to be determined. Turban and Aronson (2001) list three reasons for measuring the success of a knowledge management system (KMS):

- To provide a basis for company valuation
- To stimulate management to focus on what is important
- To justify investments in KM activities

All are good reasons from an organizational perspective. Additionally, from the perspective of KM academics and practitioners, the measurement of KMS effectiveness or success is crucial to understanding how these systems should be built and implemented.
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