

Chapter X

Integrating Knowledge Management Services: Strategy and Infrastructure

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ABSTRACT

Many organizations have established knowledge management initiatives, but most of them have developed instruments bottom-up, often in parallel and without strategic considerations. Many of those instruments involve information and communication technologies (ICT) which therefore are fragmented and cannot be easily reused outside their original intended organizational unit. This chapter proposes a three-layered service infrastructure that composes services from heterogeneous applications into specific knowledge management (KM) services. The infrastructure supports discovery, call, and provision of KM services from activities within business processes. It argues that integration of KM services in organizations requires alignment of the IT infrastructure, particularly its knowledge-oriented part, with the KM portion of business strategy, that is, KM strategy. This alignment can be achieved by introducing a service infrastructure that uses the concept of KM service in order to connect the customer-oriented materialization of strategic decisions on a conceptual level, that is, business processes, with their technical counterpart on the ICT level, that is, software services.

INTRODUCTION

Work in organizations is increasingly information- and knowledge-intensive and the share of knowledge work has risen continuously during the last decades (Wolff, 2005). Since the late 1990s, after a period of high attention to the increase in efficiency of business processes, organizations have been faced with the transformation to knowledge-intensive organizations in order to significantly increase speed of innovation and improve productivity of knowledge work (Drucker, 1994). However, compared to more traditional, predominantly manual, data- or service-oriented work, the unstructured, creative, and expertise-driven knowledge work cannot be designed with standardized business process management approaches and cannot be easily supported by information and communication technologies (ICT), for example, workflows or single application systems. As a result, an enormous number of fragmented knowledge management (KM) measures, procedures, instruments, or tools have been proposed which claim to solve particular knowledge-related problems, but are not connected or integrated. Even though many authors have studied the strategic perspective of KM (April, 2002; Hansen, Nohria, & Tierney, 1999; Ordóñez de Pablos, 2002; Zack, 1999a) and process-oriented KM strategies in particular (Davenport, Jarvenpaa & Beers, 1996; Maier & Remus, 2003), in order to integrate KM initiatives and guide their organization-wide implementation, these considerations still remain on an abstract, strategic level and are not connected with the manifold fragmented KM measures, procedures, instruments, and tools as proposed in the literature and experimented in businesses and organizations.

During recent years, a number of empirical studies found that many businesses and organizations have established numerous initiatives in order to implement KM (Maier, 2004, pp. 359-512). In many initiatives, KM measures and

tools have been bundled as KM instruments to provide specific KM services. KM services cater to the special needs of one or a small number of organizational units, for example, a process, work group, department or subsidiary, factory, or outlet in order to provide a solution to a defined business problem. As opposed to strategic, enterprise-wide KM approaches guided by a knowledge or business strategy, these KM services are designed bottom-up, often in parallel and without considering or even noticing each other.

KM services typically concentrate on one out of four specific KM focus areas identified by Wiig (1999, p. 158). Examples for KM services are (1) management of patents and licenses or KM scorecards in the intellectual asset focus; (2) competence management, communities, and networks of experts in the people focus; (3) lessons learned, good/best practices, and knowledge process re-engineering in the enterprise effectiveness focus; and (4) knowledge portals, semantic content management systems, or skill management systems in the information technology focus. Activities implementing these KM services are often applied in isolation suffering from a lack of integration with other activities. Consequently, the deployment of KM services in organizations might profit substantially from both the integration and the corresponding alignment with strategic goals.

This chapter argues that integration of KM services in organizations requires alignment of the KM portion of business strategy, that is, KM strategy and IT infrastructures, particularly their knowledge-oriented part and customer orientation. This alignment can be achieved by connecting KM services to the customer-oriented materialization of strategic decisions on a conceptual level, that is, business processes, with their technical counterpart on an ICT level, that is, software services.

Integration on the level of business processes means defining which services are required in which core business processes, which services

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