Chapter 2.5
Developing an Effective Knowledge Management System

Stephen McLaughlin
National University of Ireland Maynooth, Ireland

ABSTRACT

Many organizations struggling to capitalise on their knowledge assets tend to let their knowledge management systems emerge from existing IT systems and infrastructure. Within a complex business environment this can cause a mismatch between how knowledge assets are—and should be—managed. In order to help organizations develop dynamic and effective KM systems, organizations need to re-think how knowledge is created and shared around their core business processes. To be more specific, for organizations where inter/intra organizational collaboration is vital to overall end-to-end performance, organizations need to consider the relationship between four key components: knowledge strategy, core process optimisation, core process performance, and knowledge barriers. This chapter will explain why these components are important, the relationship between them, and how they relate to each other in terms of helping to define an effective knowledge management system. The findings presented are based on data collated within, and across, IBM's Integrated Supply Chain.

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INTRODUCTION

Managing knowledge 'capture', 'creation' and 'transfer' is vitally important to successful innovative organizations (Nonaka *et al.*, 1995), indeed knowledge itself is recognised as an important component of value creation and competitive advantage (King *et al.*, 2003). Therefore, the development of a knowledge management system becomes a vital part in the successful management of an organization's knowledge assets (Corso *et al.*, 2006).

However, many organizations tend to develop their knowledge management systems from their existing IT strategy (McDermott, 1999). In essence the knowledge management system becomes an extension or expansion of the existing IT infrastructure (Johannessen *et al.*, 2001). This approach may not necessarily be bad for the organization, and it certainly is not new (Alavi, 2000: Bowman, 2002) but in general a failure to consider how knowledge, in particular tacit knowledge, is created, shared and utilised, as opposed to simply focusing on how explicit knowledge is created, shared, and stored may seriously impact an organizations ability to innovate and build a competitive advantage.

Therefore, in order to improve and encourage innovation an organization must understand how knowledge is created, shared, and utilised across the entire organization. In order to do this organization's must take a proactive approach in developing their knowledge management system, and resist the temptation to simply let it emerge from existing IT systems. Through this proactive approach the organization should focus on developing an organization wide strategy that looks at managing both knowledge assets and information flows and repositories.

So how then does an organization determine the best system for managing knowledge and information across its business? To do this organizations must consider a number of elements:

1. Their knowledge management strategy, not only in terms of technology enablement but also the impact on performance of knowledge sharing / creating practices amongst employees, and how processes are aligned to optimise knowledge creation and transfer.
2. The barriers that may exist to knowledge creation and transfer across the organization.
3. How information and knowledge moves along core business processes and impacts process performance.
4. How core processes are optimised to maximise knowledge creation and transfer along core business processes.

By looking at the inter-connecting relationship between these four aspects of knowledge management the Knowledge Management System Dependency Model (KMSDM) was developed to help organizations better manage their respective knowledge assets.

RESEARCH CONTEXT AND METHODOLOGY

The research methodology follows a critical theory approach in identifying best knowledge transfer practice across complex organizations. The research is exploratory in nature and a case study (Yin, 2002) methodology is used to support this line of inductive theory building. The findings presented are based on data collated within and across IBM's Integrated Supply Chain. For the purpose of the research over 150 individuals working across an IBM core end-to-end business process were surveyed; in this case the supply chain order flow process was used. A semi-structured questionnaire and one-to-one interviews were used to identify the organization's knowledge habits with respect to a core business process. The analysis of the data has been used to understand the different explicit and tacit knowledge sharing habits of the workforce, and the perceived barriers that influence these habits along a core business process. The analysis also identified where along the core process the existing knowledge management approach (codified or personalised) was at odds with employee tacit and explicit knowledge sharing habits. By understanding the different knowledge creation and sharing practices along the core process the authors have been able to develop a picture of the dominant knowledge approaches, not just by business function but more importantly