Chapter 8.11
Incorporating Knowledge Management into E-Commerce Applications

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INTRODUCTION

Knowledge Management (KM) is the process of critically managing knowledge to meet existing needs, identify and exploit existing and acquired knowledge assets and develop new opportunities (Quintas et al, 1997). With the emergence of knowledge-intensive industries, where organisations rely on knowledge of their staff for competitive advantage (Lustri et al., 2007), KM has become key for business success (Mu-jung et al., 2007). KM is now an integral business function (Zhou and Fink, 2003) in both traditional and internet-based businesses (Borges Tiago et al., 2007) to the extent that KM is now viewed essential for profit (Yang, 2008). It is widely acknowledged

today that new technologies, in particular access to the Internet, tend to modify communication between stakeholders in the business world, such as relationships between the organisation and its clients, the internal functioning of the organisation, including enterprise-employee relationships and the relationship of the organisation with partners and suppliers. This integration to improve the functioning of the organisation to create value for all parties involved is referred to as Electronic Commerce (e-commerce, EC) (Turban et al, 2006).

The main challenges facing organisational change and development are threefold. Firstly, knowledge discovery, secondly, corporate collaboration and thirdly, rapid decision making (Curley, 1998). Under the KM umbrella, EC can embrace this challenge, facilitating content creation, development, refinement and delivery,

collaborative work practice within and external to the organisation and business/market/customer intelligence.

This chapter will review how each of the three challenges identified can be incorporated into EC applications. As the internet is now the largest information resource globally many opportunities have been provided changing the way people shop, perform business dealings and communicate with each other. Taking into consideration four perspectives of EC, the chapter will present tools and techniques which should be incorporated into a fully functioning web commerce application.

BACKGROUND

Much confusion exists around the practical implementation of knowledge-orientated programmes, this is especially true from a technological viewpoint. KM seeks to develop a strategy for the capture, use and transfer of knowledge across the organisation, to improve efficiency and increase competitive edge (Demerest, 1997). KM is concerned with embracing a diversity of knowledge sources, cultivating knowledge wherever it resides. Technology can be viewed as both a key contributor and enabler to the field of KM (Davenport and Prusak, 1998). This perspective is related to technological ability in capturing data, information, and knowledge that surpasses human capacity in absorbing and analysing these, in a focused manner (Shenk, 1997). As technological developments become more advanced in application and utilisation, it is emerging those employees who have access to technologies that detect and manage business opportunities, will have the distinct advantage of exploiting market shifts.

While KM technologies may incorporate characteristics of traditional data and information technologies, they also extend these capabilities. Knowledge technologies attempt to push users to think beyond their current boundaries, thus

facilitating organisational activity, promoting continuous improvement and growth through innovation. In today's knowledge-intensive organisations the primary objective of ICT is to lead users to the information they need. This includes creating, gathering, storing, accessing and making available the right information that will result in insight for the organisations' users (Davenport and Prusak, 1998). Thus, the pervasive use of information technology in organisations, qualifies it as a natural medium for information flow (Borghoff and Pareschi, 1999).

A study conducted by Moffett et al, (2002) outlined that 43% of UK companies currently implementing KM are adopting a technology focused approach. Further analysis of this group uncovered a number of key issues regarding technological adoption for KM. Firstly, KM systems should be well maintained, user-focused systems dedicated to communication and information flow within the organisation. A variety of technological tools should be used for knowledge work; these tools support function classifications as outlined by Moffett and McAdam, (2003). Secondly, dedicated roles must be established to promote technological use within the organisation. Employees at all levels should be encouraged to use KM systems for efficient and effective decision making. Reward and recognition must be awarded for their efforts. Thirdly, training must be provided to encourage full organisation of the tools installed. Fourthly, emphasis should be placed on Web-based systems encouraging use to full potential. While many organisations are comfortable to use the World Wide Web (WWW) for information gathering, most are apprehensive to employing the Internet as an electronic commerce device. Even though they comprehend that a well designed, organisation-wide, fully implemented technical infrastructure for KM can improve information processing capabilities they are unsure how to adopt Web technologies to achieve this.

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