

## Chapter 7.12

# Knowledge Capture in E–Services Development: A Prosperous Marriage?

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### **ABSTRACT**

In this paper, the authors examine whether the union of Knowledge Management with e-services development would be successful in performing as a collaborative functioning unit. The focus of this research is examining the potential for using Knowledge Management as a means for improving research and practice in e-services development. The authors analyze a real-life case against the Knowledge Capture model and its associated knowledge loss. The results show that KM theory has definite potential to elevate e-services research and practice, for example, by adding analysis and decision points concerning what knowledge to use and how to collect it. This is particularly relevant

when collecting requirements, information, and desires from potential users of an e-service at the start of a development project.

### **INTRODUCTION**

We have heard it before. Technology *is* developing at rapid speed, and organizations *are* facing great challenges given the increasingly competitive and global world. Although these may be “buzz-sentences”, they are nevertheless true. One of the recent developments is the emergence of electronic services, e-services, and one of its technical implementations in the form of web services and service-oriented architectures. Web Services is a technology for publishing, identifying and calling services in a network of interacting

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computer nodes (Barry, 2003), while SOA can be defined as “*a framework for integrating business processes and supporting IT infrastructure as secure, standardized components (services) that can be reused and combined to address changing business priorities*” (Bieberstein et al., 2005, p. 4). While these two focus on the technical level, this paper will take a higher level perspective and focus on e-services that enable service improvement to customers, citizens, and other organizations. Knowledge is a critical asset in modern organizations, not the least when developing e-services. For example, knowledge about who the users of the e-service are is critical for successfully developing the e-service. Hence, in order to gain and sustain competitive advantage, organizations must manage their knowledge resources, i.e., they need to perform Knowledge Management (KM) work. KM includes both knowledge reuse and knowledge creation (Davenport et al., 1996), and the organization must support and stimulate the knowledge-creating activities of individuals (Nonaka & Takeuchi, 1995). Therefore, the potential marriage of e-services research with Knowledge Management (KM) is highly relevant to investigate.

The aim of this paper is to demonstrate how KM theory and research can be applied in e-services development as a means of improving e-services usability and applicability, with particular emphasis on how and what knowledge is captured from and about the users. We do so by using a model of the knowledge capture process with its identified knowledge loss types, and use a real-life case to illustrate findings on how the e-services development process can be improved. The results show that KM theory has definite potential to elevate e-services research and practice, for example by adding analysis and decision points concerning what knowledge to use and how to collect it. This is particularly relevant when collecting requirements, information, and desires from potential users of an e-service at the start of a development project. The paper is structured as follows: Knowl-

edge Management is introduced and described in Chapter 2, before e-services are explained in Chapter 3. The real-life case (Chapter 4) precedes the analysis of the case against the Knowledge Capture process (Chapter 5), and the paper ends with a discussion in Chapter 6.

## **KNOWLEDGE MANAGEMENT**

Successful Knowledge Management (KM) that contributes to improved organizational effectiveness requires that the appropriate knowledge is provided to those that need it when it is needed (Jennex et al., 2007). One way to do this is to implement Electronic Knowledge Repositories (EKR). EKR is a key form of KM (Kankanhalli et al., 2005), and EKR is also the focus in this paper. EKR make it possible to store and provide the right knowledge to those when they need it, but EKR also prevent knowledge from being lost when a specific employee leaves the organization. However, knowledge sharing through the use of EKRs must be regarded as a means, not an end, to the purposes for sharing knowledge (Carlsson & Kalling, 2006).

### **KM Introduction**

There are different types of KM with regard to how organizations accumulate knowledge, insights, and valuable expertise over time (Wiig, 1994). One type accumulates knowledge outside people in order to disseminate knowledge to support learning (Wiig, 1994); this is the type to which EKR refers. EKR enable both individual and organizational learning, and hence support the other two types of KM identified by Wiig (1994): to accumulate knowledge inside people and to embed knowledge in processes, routines etc. With respect to Binney's (2001) six elements, developing EKR includes both a product and a process perspective. There must be processes associated with the management of the knowledge

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