Chapter XIX

Knowledge Reuse in an Application Service Provider

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ABSTRACT

This qualitative study of support personnel in an Enterprise Systems Application Service Provider assesses and confirms Markus’ Theory of Knowledge Reuse. Following disappointing knowledge capture outcomes during implementation and the consequential inability to reuse that knowledge effectively, enterprise systems applications support managers are recognizing the importance of lifecycle knowledge management as they face the first major upgrade of their clients’ enterprise systems. This study also explores the dominant knowledge reuse types of support personnel. We extend Markus’ typology to include Primary Data Miner to explain management’s dominant knowledge reuse situations.

INTRODUCTION

In her paper, Markus (2001) proposes a Theory of Knowledge Reuse based on published accounts of situations involving the creation and use of written and computer-based records for the preservation, future access and reuse of knowledge. This study tests Markus’ Theory in an organization that provides enterprise systems application service provision (ASP) to five state government agencies in Australia.

Following the spate of Enterprise Systems (ES) implementations prior to the turn of the century, we now find several organizations facing their first major systems
upgrade since deployment. The extent and cost of these major upgrades can match or exceed the initial implementation and ASP management is beginning to appreciate the need to recall their lessons and practices from these initial projects. In effect, they are acknowledging the potential value of reusing the procedural, declarative and rationale knowledge (Zack, 1999) from these earlier implementations, as a means of reducing the financial risk to the enterprise (Marshall et al., 1996).

This study forms part of a research program entitled, “Enterprise Resource Planning (ERP) Lifecycle Knowledge Management” (Gable et al., 1998). A central premise of this work is that an organization’s ES knowledge management / sourcing strategy effects knowledge requirements in later lifecycle phases. Effective ES knowledge management is considered to offer significant commercial and practical benefits throughout the ES lifecycle (Gable et al., 1998). Within this research program, a recent major issue study involving the application service provider and their clients (Chang, 2000a; Chang, 2000b) identified knowledge management as a top ES lifecycle issue. The purpose of our study is to test Markus’ theory within this same context and, in doing so, to inform academe and practitioners on ways to improve knowledge management for support personnel in general and the ES lifecycle in particular.

The research method entails a comprehensive, qualitative study of employees in the ASP help desk and support area using semi-structured interviews with questions based on the theoretical framework presented by Markus. From these interviews, the researchers determine the dominant knowledge reuse situation in each employee’s role.

This chapter has two aims: 1) To assess Markus’ knowledge reuse typology; and 2) To explore the commonality of dominant knowledge reuse types in employee groups.

The results from this research provide confirmation of Markus’ work. To provide an explanation of knowledge reuse by management, we propose an extension to her typology. The study also uncovers several interesting knowledge dynamics of the ASP ES support team. In this chapter, we first describe the Enterprise Systems context. We then outline Markus’ underlying concepts and knowledge reuse typology. Following a description of the case organization and methodology, we discuss the results and applicability of Markus’ theory in this context. Finally, we note some additional interesting findings arising from the study to discuss future trends in lifecycle knowledge management and submit our conclusions.

The Enterprise Systems Context

Davenport (2000) posits that organizations regard an ES project as a one-time exercise and so fail to attend to ES knowledge management issues, such as requesting (contracting for) knowledge transfers from consultants, or adequately maintaining the transferred knowledge. His expectation is that knowledge transfers