Chapter I

Strategies for Managing Project Generated Knowledge: A New Zealand Case Study

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Abstract

If consulting construction companies made more effective use of project-generated knowledge, the financial health of the company would increase. This chapter discusses how wasted, lost, and ineffective use of knowledge leads to inefficiencies and reworking of past problems. The chapter focuses on the development of project-generated knowledge management systems and the benefits that construction companies can reap from such developments. Through a detailed case study, the chapter shows where the main problem areas occur in managing knowledge and proposes possible solutions to these problems. The chapter concludes that it is the people that use and produce the knowledge that are in the best position to help develop such a project-generated knowledge management system, with senior managers and company knowledge managers providing structure, facilitation, and support. With such collaboration and involvement of all staff in a company, failures of such systems will be reduced and the company as a whole will benefit.
Introduction

This chapter examines how a consulting engineering company can manage the knowledge acquired in the course of executing an engineering project with the aim of obtaining maximum future company-wide benefit from that knowledge. In the field of consulting engineering, specialist knowledge is the firm’s primary product, even when manifested as design documentation and other physical, codified forms. There will be real benefits to a firm if it can ensure that important knowledge gained by team members on each project is identified and made available to others in the firm to learn from and use on future projects. The larger and more geographically diverse the firm, the more difficult this process becomes. A review of current practices within the case study company identified shortcomings in the extent and success of project-generated knowledge management. Based on this review, and drawing on current knowledge management literature, a general strategy was proposed for the initial and ongoing development of a management system for project-generated knowledge. Certain specific practices and system elements were identified for further development and implementation as part of the knowledge management system. A key conclusion from this research is that it is the producers and consumers of knowledge who are typically best placed to identify appropriate management methodologies, particularly at the “detail” level, with the central “corporate” role being primarily one of support, education, facilitation, and coordination.

Learning Objectives

After studying this chapter, the reader will:

1. Appreciate the importance of a management system for capturing project-generated knowledge.
2. Understand the typical problems that arise for consulting construction companies managing project-generated knowledge, and how to overcome these problems.
3. Learn some basic principles for developing a knowledge management system for capturing project-generated knowledge.

Background

In any organisation, there is a certain component of the work carried out that can be termed “knowledge work.” Many researchers (Gurteen, 1998; Martin, 2000; Kamara, Anumba, & Carrillo, 2002; Kululanga & McCaffer, 2003; Koch, 2003) have provided discussions and definitions of the terms “knowledge,” “knowledge work,” and “knowledge management.” For an engineering consultancy, “knowledge work” refers to work
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