Chapter 1.16
Knowledge Transfer in Project-Based Organisations:
The Need for a Unique Approach

Anna Wiewiora
Queensland University of Technology, Australia

Bambang Trigunarsyah
Queensland University of Technology, Australia

Glen Murphy
Queensland University of Technology, Australia

ABSTRACT

Effective knowledge transfer between infrastructure projects plays a significant role in organisational success and discovery of new technologies, helping to achieve and maintain competitive advantage and, in effect, sustainable infrastructure development. Knowledge is recognised as an important organisational asset that adds value while being shared. To date, research on knowledge transfer has focused on traditional (functional) types of organisations. However, existing knowledge transfer approaches fail to address the issue of unique characteristics of project-based organisations, and the fact that functional and project-based organisations significantly differ in terms of structure, processes, and characteristics. Therefore, there is a need for a different, separate approach for managing knowledge in the project environment. The aim of this chapter is to highlight this need. An extensive literature review is provided on the areas of project management, knowledge management, and organisational structure; this is further supported by empirical evidence from interviews with project management practitioners. Conducting a 'cross-field' literature review provides a better understanding of the knowledge transfer mechanisms and its application to projects, and of the importance of knowledge transfer across projects. This research is crucial to gaining a better understanding of knowledge transfer in the project environment. It stresses that there are dissimilarities between

DOI: 10.4018/978-1-60960-783-8.ch1.16

project-based organisations and functional organisations in terms of organisational structure, duration of processes, viewpoint of time, response to change, and mobility of people, and that there is a need for a unique strategic approach in order to achieve effective transfer of knowledge. Furthermore, findings presented in this chapter reveal key elements that play an important role in across project knowledge transfer. These elements include: social communication, lessons learned databases, and project management offices.

INTRODUCTION

The World Commission on Environment and Development defines sustainable development as 'ensuring the needs of the present generation without compromising the ability of future generations to meet their own needs' (Vollenbroek, 2002). However, sustainability should be addressed not only for environmental concerns or society's expectations, but because it makes good business sense (Robinson et al., 2006). In order to achieve competitive sustainability, many firms are initiating extensive knowledge management efforts (Gold, Malhotra, & Segars, 2001). According to Sigma Guidelines (in Robinson, Anumba, Carrillo, & Al-Ghassani, 2006) knowledge management is central to the sustainability debate, reflected by the important role of human and social capital for putting sustainability development into practice. Sustainability has become the foundation for strategy formulation in today's fast growing businesses. Individual efforts in research, innovation, monitoring, and assessment can contribute to sustainability. However, the full utility of such independent contributions depends on developing integrated knowledge systems (Cash et al., 2003). Knowledge and knowledge workers are a company's intellectual capital, and are also the key factors in its sustainable development (Carneiro, 2000). However, most of the times, the intellectual capital is not well recognised, remains largely hidden, and is not entirely utilised. Furthermore, knowledge flows in the organisation in a continuous, but unsystematic manner. The lack of specific knowledge management systems inevitably leads to a data bank of enormous magnitude. It is therefore necessary to apply a system that enables the information and knowledge to be properly managed (Carneiro, 2000). Top management should focus their attention on this need because the intellectual capitals of their companies and innovation infrastructure are the real sources of future competitiveness (Leonard-Barton in Carneiro, 2000). The organisation's knowledge and capability is one key to its long-term survival (Kotnour, 1999). Consequently, effective knowledge management ensures sustainable infrastructure development through more effective communication across projects and organisations, building awareness of infrastructure needs of present and future generations.

This chapter emphasises the need for a unique approach in knowledge transfer for project-based organisations (PBOs) to ensure better project management and, consequently, sustainable infrastructure development. To support this argument, this chapter starts with a discussion on the importance of knowledge transfer for PBOs, and the concept of, and current approaches to, knowledge transfer. It continues with a comparison of two different organisational settings–namely, functional and PBO–and presents findings from interviews that elaborate on key elements of knowledge transfer in the project environment. Ultimately, drawing from the literature review and empirical findings, the chapter argues the need for a unique approach to managing knowledge in different organisational settings.

THE IMPORTANCE OF KNOWLEDGE TRANSFER

The second half of the 20th century has seen an evolution in the nature of organisations, from the