Chapter 11
The Alignment of Business Strategy with Agile Software Development within SMEs

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ABSTRACT

The alignment of business strategy and IT strategy has been recognised as a strategic weapon within organisations. Small and medium sized enterprises (SMEs) also recognise a need for new Information Technology and Information Systems (IT/IS) functions to support business strategies, and provide new services to the market. Agile methodologies support the timely and economical development of Web and Internet-based software, the technologies being exploited by organisations seeking to enhance their business performance. Based on multiple-case research, this paper explores the impact of agile software development on the alignment of business strategy with IT strategy in SMEs. Several models of strategic alignment developed for large enterprises were used to examine the SME environment. The findings suggest that agile methods are applied to provide added flexibility for organisations to create or react to new opportunities, to increase responsiveness to customer requirements not possible with traditional software development, and to gain competitive advantage. Personal interest was found to be a factor in adopting agile methodologies, in addition to IT maturity and technical IT sophistication. However, the use of agile methods in response to internal and external uncertainty may change the role of ICT in the firms, and hence impact on the alignment of business and IT/IS strategy.

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INTRODUCTION

In today’s dynamic market environment, many organisations have been driven by rapid change in both technology and the global market to seek a new way of conducting business for survival and growth. The need for organisations to adapt their structures, strategies, and technology to suit the new environment is also becoming more and more critical (Nerur & Mahapatra, 2005).

In particular, SMEs recognise a need for new Information Technology and Information Systems (IT/IS) functions to support business strategies, and provide new services to the market (Papp, 1999). In this study the term SMEs is defined as business establishments having less than 250 employees (EuropeanCommision, 2005). Since the late 1980s, IT/IS has played an increasingly strategic role in changing marketing characteristics (Johnston & Carrico, 1988). ICT (Information and Communications Technologies) has also been highlighted as a strategic weapon in gaining a competitive position in the marketplace for SMEs (Hussin, King, & Cragg, 2002; Ismail & King, 2007). Throp (1998) suggests successful utilisation of ICT (and the implied close alignment of business and IT/IT strategy) can provide sustainable competitive advantage for the organisation, regardless of size. However, Levy, Powell, & Yetton (2003) suggest that the alignment process in SMEs varies from larger organisations. In addition, ICT adoption decisions in SMEs are most frequently made by the owner, who often shows little concern for IT strategic planning.

The objective of the study that underpins this chapter is to explore how agile software development impacts on the alignment of business strategy with IT strategy in both large organisations and SMEs. The aims of this chapter are to focus on the roles that can/should be played by IT/IS in supporting business strategy formulation, particularly for SMEs, and to provide some insight into the role of agile software development in the small business environment.

This chapter is outlined into five sections as follow:

• The first section provides the introduction and background of the research
• The second section presents the existing literature
• The third section presents the cases and describes the research methodology used in this study
• The fourth section reviews the case study analysis and findings
• The last section provides cross-case findings and a conclusion.

BACKGROUND

During the last ten years, the attention on alignment of IT/IS to business strategies has increased, and research in the areas of strategic management and IT/IS management has focused on and contributed to this subject. It has consistently been one of the top concerns in the business strategy and IT literature (Rathnam, Johnsen, & Wen, 2004/2005; Reich & Benbasat, 2000). Strategic alignment in this context refers to the matching of process and outcomes of IT/IS strategy with business strategy (Reich & Benbasat, 2000).

The concept of strategic alignment is widely believed to improve organisational performance. The literature in the area of business and IT/IS alignment abounds with documents and frameworks that examine the need to align IT/IS strategy to business strategy (Chan, Huff, Barclay, & Copeland, 1997; Das, Zahra, & Warkentin, 1991). The benefits of alignment between business strategy and IT strategy have also been recognised, with alignment described as having significant positive impact on business and organisational performance (Bleistein, Cox, Verner, & Phalp, 2006; Chan & Huff, 1993; Henderson & Venkatraman, 1993; Kearns & Lederer, 2000). Avison, Jones et al. (2004) identify additional benefits, including