Chapter 14
Exploring the Systematic Business Model Innovation:
Designing Architecture for a Cloud–Based Collaboration Support Environment

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ABSTRACT

An electronic-based business model (BM) is the new paradigm in business model innovation (BMI). In order to adapt to an ever-changing and extremely volatile Internet environment, an enterprise needs a systematic approach and tools to improve its existing business model or create a new one. This study analyzes the issues and system requirements for collaborative business model innovation relating to (1) BM design, (2) BM innovative system design, and (3) moral and intellectual property. Focusing on level (1) BM design, this study develops a systematic business model innovation approach based on the business model canvas (BMC) with nine building blocks and integrates the innovation radar (IR) with twelve key dimensions. Based on level (2), the study proposes a suitable collaborative BMI environment to enable the planning of a BM innovative design support system through virtual innovation teams (VITs), and to understand the system's functional requirements. Using the designed environment, this study develops the architecture of a BM knowledge support service environment based on cloud technology. To verify the proposed method, a bookstore is used as a case study. This study engages in innovative research in order to design a conceptual and systematic BMI approach.

INTRODUCTION

E-commerce (EC) is an electronic-based business model (BM) that enables an enterprise to access global business opportunities. The EC platform is easing the burden of aspiring entrepreneurs who face capital constraints to be successful. EC is an important driving force offering unprecedented opportunities for global consumption, trade, and economic growth (Kock, 2008). Enterprises that investigate global business opportunities are unanimously optimistic about the future of the EC market and expect it evolve and

expand. Indeed, in the progress toward internationalization, EC is expanding the bandwidth for micro-entrepreneurs and facilitating corporate restructuring. Thus, EC is a new paradigm in how enterprises innovate their business models, and a key element of technological and business method leadership. However, most entrepreneurs engaged in EC are less successful than expected, particularly at building an e-commerce-driven business model innovation.

The present business environment has amplified the need for BMI. In order to respond to this challenging environment, an enterprise requires innovative approaches and tools to reignite growth and for maintaining competitive advantage (Kaplan, 2012). Although experts and consultants can provide guidance to improve BM, creating an innovative and successful BM paradigm is fraught with challenges, especially those associated with BMI and re-engineering. In this regard, BM modeling can help an enterprise to develop customers, a distribution system, and value (Kaplan, 2012). BMI is one of the most important approaches for restructuring an enterprise for evolving into an Internet-based entity. With global businesses become increasingly interconnected, an enterprise needs a systematic approach to accelerate the innovation of its existing BM or develop a new one.

An enterprise must continuously change its BM in order to navigate the highly competitive business environment and to meet consumers' growing needs. Such a BM must be guided by principles that can ensure an enterprise's success; alternatively, an enterprise must evolve new strategies to cope with competition in new markets. The specific reasons an enterprise fails include its inability to adapt to the nature of the economy, organizational complexities, and limited resources. Although emerging technologies bring opportunities (Palo & Tahtinen, 2013), a BM is a key factor that contributes to the success of an enterprise. Afuah (2004) and Brettel et al. (2012) referred to a BM as the source of enterprise competitiveness, particularly with the Internet changing the way of doing business and the movement of a large number of enterprises toward electronics, optimization, and EC-based BM development (Ghaziani & Ventresca, 2005; Jiebing et al., 2013). To survive in a rapidly changing business environment, an enterprise must constantly innovate, overcome the challenges of mastering global trends and establishing core business issues, develop its strengths, and improve its existing BM.

A few studies have explored the issues and methods that relate to improving BM and advancing innovation. Palo and Tahtinen (2013) developed network-based BM using new technology-based services; Hsia et al. (2008) proposed an objective-oriented methodology to elicit customers' EC application requirements. A conceptual architecture for a BM has been developed to help enterprises analyze product service systems. The architecture was designed using elements of the business model canvas (BMC) (Osterwalder & Pigneur, 2010); however, only one case study was used to illustrate the proposed architecture (Barquet et al., 2013). To date, no specific method, technique, or tool is able to support EC-based BM improvement and innovation.

Given the impact of market globalization and variability, even a simple manufacturing-based enterprise faces tremendous competitive pressure. Thus, an enterprise requires a greater degree of innovation and competitiveness to attract customer attention (Leitao et al., 2013). An enterprise must engage in self-analysis to determine consumer requirements, its core strengths, and limitations, real-time changes in the market and consumer behavior to understand the current situation and future technology trends. Further, an enterprise should develop a suitable and unique BM that is continuously adjusted to enable survival in a global network.

In an open innovation environment, an enterprise can generate and sustain its innovative ideas by collaborating with other enterprises or through crowdsourcing (Wang, 2014). Thus, this study investigates potential issues related to an open and collaborative business model innovation environment and

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