

Chapter 36

Creating Business Opportunities Based on Use of Electronic Knowledge Business Models

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INTRODUCTION

The advent of the innovation economy has transformed knowledge into the most valuable corporate asset and a key driver of product and service innovation. Therefore, the determinants of enterprise success have shifted from external factors, such as market and competitive factors, to internal factors, such as dynamic innovation capability, based on enterprise core competences and knowledge. Knowledge-based enterprises can convert intellectual assets (IA) into currency via commercial methods such as sales, licensing, joint ventures, strategic alliances, mergers, new business entities and donations (Skyrme, 2001; Sullivan, 2000; Wang *et al.*, 2009). Trading and sharing of knowledge with other enterprises can be more beneficial than

using knowledge internally. Electronic commerce (e-commerce) supports on-line functions such as transmission, trading and making payments for products and services. Moreover, electronic commerce-based knowledge commerce (k-commerce) denotes real-time marketing and the delivery of existing organizational knowledge via the Internet to enable the legal and rapid transfer of knowledge from owners to consumers.

Given a strategy that exploits the potential of the Internet and knowledge commercialization, almost any enterprise can benefit from k-commerce. This investigation explores the knowledge value chain in the collaborative innovation era, introduces the k-commerce model, and analyzes possible revenue streams and opportunities associated with k-commerce. Additionally, this work examines related issues and infrastructure, including models, methods and technologies for practicing k-commerce.

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BACKGROUND

Globalization alone cannot efficiently maintain global competitiveness, and enterprise competitive advantage and innovative growth can only be realized using new business models that are genuinely and appropriately open and able to support peer production, knowledge sharing, global mobile commerce and collaborative innovation. Enterprises must effectively utilize external knowledge and innovation resources together with internal and external creativity or a market-oriented approach to create value by accelerating new technology and knowledge development (Chesbrough, 2003). For example, applying knowledge trading or exchange among enterprises introduces creativity and new technologies to enterprises, and sharing internal knowledge with business partners can reduce innovation costs and expedite R&D on new knowledge and products. Successful knowledge-based enterprises require the ability to leverage internal and external enterprise intellectual capital and package it into high value-added, knowledge-based products and differentiated services able to swiftly and efficiently solve customer problems (Skyrme, 2001).

Enterprise IA may include knowledge, customer relations, human resources, social relationship network, innovation capabilities, business strategies, decision-making competences, operational network, organizational learning efficiency, team communication mechanism or brand image, all of which can assist with wealth creation. Knowledge-based assets possess the following characteristics (Dominique, 2004): 1) Non-physical, meaning they frequently lack a material format; 2) Uniqueness, meaning they have different values from other assets; 3) Concurrent usability, meaning multiple users can use them at any given time; and 4) Value uncertainty. Once the decision to commercialize certain knowledge assets has been made, the enterprise must be able to swiftly seal the licensing agreement and implement commercialization (Sullivan, 2000). Numerous real world cases demonstrate that knowledge used for

external purposes often generates more benefits and business opportunities than that used internally. However, precautions are necessary when utilizing knowledge to generate benefits to avoid irreparable damages caused by extensive use of corporate knowledge assets. Despite this caveat, some enterprises unfortunately are still unaware of their own knowledge assets or marketability. When equipped with a strategy that combines Internet potential and knowledge commercialization, almost every enterprise can create revenues and opportunities via k-commerce.

The k-commerce environment remains flawed and frequently suffers the following problems: 1) users experience difficulty identifying required knowledge in the face of overwhelming volumes of information and knowledge; 2) methods or media via which knowledge producers and knowledge requesters can find one another are lacking; 3) methods for more accurately evaluating knowledge reliability are lacking; 4) trust between knowledge trading parties is extremely fragile, increasing trading risks and reducing trading motivation; 5) knowledge is constructed significantly differently from previously, with permission of extensive collaboration and unclear knowledge ownership, increasing the difficulty of knowledge trading; 6) low reproduction costs of digital knowledge create challenges in copyright protection; 7) difficulty in pricing knowledge based on knowledge product features, including originality, relevance, uniqueness and size; and 8) various methods of applying and citing knowledge complicate royalty fee calculation (Skyrme, 2001; Kafentzis *et al.*, 2004; Harrison, 2007; Wang & Lin, 2008).

VALUE CHAIN OF KNOWLEDGE IN THE COLLABORATIVE INNOVATIVE ERA

Among various methods that challenge traditional business models and are used to achieve a collaborative economy, Wiki has embraced the

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