Chapter 102
A SOA-Based Framework for Internet-Enabled CRM

Wei-Lun Chang
Tamkang University, Taiwan

INTRODUCTION

Because of changes in the service economy, the service-oriented management (SOM) approach has been adopted widely for contemporary enterprises. Service-oriented management is the operational management of service delivery within a service-oriented architecture[1] (SOA), which provides a differentiated service delivery capability during operation. SOA furnishes a basis for e-service composition and delivery over the Internet and allows e-service companies to design customized e-services and combine them dynamically based on their needs (Ordanini and Pasini, 2008). This concept enables firms to manage and serve customers anytime and anywhere via any device, that is, CRM can be executed without the limitations of location, time, device, and service type.

Customer relationship management (CRM) is a significant issue for today's companies. In par-

ticular, a good CRM strategy may assist firms to earn advanced profits, increase customer perceived value, and acquire new customers. In this study, CRM is transformed from traditional CRM (face-to-face) to Internet-Enabled CRM (over the Internet). This chapter defines Internet-Enabled CRM as conducting CRM by utilizing devices which can deliver e-services through the Internet. The extent of Internet-Enabled CRM includes electronic CRM (E-CRM), mobile CRM (M-CRM), and ubiquitous CRM (U-CRM).

In order to apply U-CRM in practice, the existing technologies such as WiMAX/WiFi (infrastructure) and Internet-based environment (platform and device) are required. The notion is to conduct CRM anytime and anywhere via any devices. However, the challenge that companies have faced is the Internet-based environment. While WiMAX and WiFi have been popular recently, people still have troubles to access the Internet anytime and anywhere. The reason is people are still used to access the Internet at a fixed location; particularly, their homes and offices.

A famous company "NTT DoCoMo" from Japan enables their customers to access Internet-based services via mobile devices. Their report reveals many Japanese users access Internet via mobile devices rather than computers. Hence, companies need to provide more Internet-based services to attract users in accordance with the implementation of these required technologies.

The existing CRM framework is based mostly on the company's perspective; for example, it considers how to acquire customers, retain customers, and create profits from customers. Hence, a holistic framework for both sides is still lacking, especially for e-service industry. In this work, we propose a value cube and a SOA-based framework for Internet-Enabled CRM. The proposed value cube indicates the difference between conventional CRM and Internet-Enabled CRM in terms of business value, customer perceived value, and social value.

We divide the SOA-based framework into two parts—the customer perspective and the e-service provider perspective—and identify several components to represent the hierarchy in the framework based on SOA technology. We aim to identify the significant elements of and the value of Internet-Enabled CRM and to provide a roadmap and practical and managerial implications for future CRM.

The rest of this chapter is organized as follows. Section 2 discusses the value cube of Internet-Enabled CRM. Section 3 devises a SOA-based CRM framework. Section 4 introduces the value of SOA-based CRM by comparing two different concepts. Section 5 illustrates a taxonomy of CRM e-services. Section 6 provides managerial implications, and the concluding remarks are furnished in Section 7.

A VALUE CUBE FOR INTERNET-ENABLED CRM

In the era of wireless technology, three dimensions of value are identified for Internet-enabled CRM: (1) business value, (2) customer perceived value, and (3) social value (see Fig. 1). Business value is generated from companies and is always represented by monetary value (e.g., profits). Firms can easily observe the changes in profit (customer profitability) for a given time period and can modify their CRM strategies accordingly. Customer retention another indicator with which to measure profits. According to the 80/20 rule, 20 percent of customers will generate 80% of a company's profits, so it is important to retain those customers. Internet-enabled CRM provides Internet-based e-services that customers can access anytime and anywhere, and companies can utilize new technologies (e.g., wireless and mobile devices) to help earn profits based on certain e-services, so Internet-enabled CRM is believed to attain high business value.

Customer perceived value is generated by customers and reflected in their willingness to pay. The concept of willingness-to-pay represents how much customers intend to pay for furnished e-services, and different CRM strategies may result in different behaviors of customers. For example, customers will not pay for the e-services which are inappropriate for them, even if they are delivered. Internet-enabled CRM provides opportunities for customers to acquire the most appropriate e-services when they face problems, and the technology helps companies identify customers' information, such as location, personalized preferences, and behaviors. Thus, Internet-enabled CRM can help attain high customer perceived value.

Social value is generated by collective intelligence—the wisdom of crowds—over the Internet. According to certain theories (e.g., Delphi method, brainstorming), group decision-making is superior to individual decision-making. Internet-enabled CRM allows peers to assist each other in solving problems based on wireless technologies (e.g., agent-based approach). Traditional CRM merely allows firms to decide what services to deliver—a one-way delivery concept—but Internet-enabled CRM allows peers from the social network to collaborate to decide what e-services will be fur-

8 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/soa-based-framework-internet-enabled/41264

Related Content

A Context-Based and Policy-Driven Method to Design and Develop Composite Web Services
Zakaria Maamarand Djamal Benslimane (2009). *Electronic Business: Concepts, Methodologies, Tools, and Applications (pp. 373-392).*
www.irma-international.org/chapter/context-based-policy-driven-method/9294

EU SMEs and E-Business Innovation
Anne Wiggins (2009). *Electronic Business: Concepts, Methodologies, Tools, and Applications (pp. 174-184).*
www.irma-international.org/chapter/smes-business-innovation/9282

Adoption of Internet Technology by the Banking Industry in Oman: A Study Informed by the Australian Experience
Salim Al-Hajriand Arthur Tatnall (2009). *Electronic Business: Concepts, Methodologies, Tools, and Applications (pp. 1159-1177).*
www.irma-international.org/chapter/adoption-internet-technology-banking-industry/9342

Aviation Safety and Risk Management During COVID-19
Nusret Erceylanand Gaye Atilla (2022). *Digitalization and the Impacts of COVID-19 on the Aviation Industry (pp. 126-145).*
www.irma-international.org/chapter/aviation-safety-and-risk-management-during-covid-19/301111

E-Business Career Opportunities and Implications for Fresh University Graduates in Pakistan
Anam Iqbal, Muhammad Asrar-ul Haq, Zainab Noorand Misbah Ahmed (2023). *International Journal of E-Business Research (pp. 1-13).*
www.irma-international.org/article/e-business-career-opportunities-and-implications-for-fresh-university-graduates-in-pakistan/323808