Chapter VII

A Framework for Defining E-Business IT Skills Portfolio

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Abstract

When a firm moves from an e-commerce to an e-business enterprise, the technology-driven transformation generates new demand on their IT services and capability. Successful deployment of e-business solutions requires business process change and Internet-based enterprise systems to support inter-enterprise collaboration. These directions challenge firms to re-evaluate their IT skills portfolio. This chapter examines current demand on IT workforce, IT skills portfolio management, changing skill requirements for e-business, and gaps between industry demand and academic preparation. It also addresses trends shaping IT skills for an e-business in terms of architecture, implementation, organizational change, application development, and tools and technology. Based on the review of these issues and trends, a framework is proposed to guide the development of a desired skills portfolio for e-business transformation. The chapter concludes with a research agenda.

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Introduction

The Internet has a profound impact on companies. Widespread adoption of Internet business solutions across industries, in the US as well as in the UK, France, and Germany, attests to the contribution of e-business to the economic growth of these countries (Varian, Litan, Elder & Shutter, 2002). Organizations of all sizes have deployed Internet-based business solutions for lowering operating costs and increasing revenues. Typical e-business solutions include enterprise systems for managing relationships with customers and partners, coordinating supply chains, and supporting organizational business processes. Therefore, e-business differs from e-commerce, which focuses on using the Internet to support business-to-consumer and business-to-business transactions that involves marketing, sales, and post-sale services.

Successful deployment of e-business solutions is predicated on two requirements: business process change and Internet-based enterprise systems. Companies need to redesign and integrate their internal business processes with those affecting customers and business partners in order to achieve productivity gains. Industry leaders, such as Dell and Cisco, have pointed out that productivity gains accelerate only after companies have adjusted their business processes to new technology (Mullaney, Green, Arndt, Hof & Himelstein, 2003). Inter- and intra-enterprise systems enable organizations to exchange information and deliver end-to-end services. However, it is costly and difficult to implement and integrate enterprise systems. Both process redesign and implementation of complex enterprise systems present many challenges for IT professionals.

Information technology plays a pivotal role in delivering integrated services and relationships with customers, business partners, and employees. When companies move towards e-business, they need to acquire and develop new IT technology capacity. During the past two decades, waves of technology advancement have forced organizations to constantly address changing skill demands (Nakayama & Sutcliffe, 2001b). What’s different for e-business now?

Several prominent technology and business trends are redefining a firm’s IT skills portfolio. For example, the increasing pressure for industry-wide collaboration requires organizations to establish an e-business architecture that integrates strategies with application and technology architecture (Kalakota & Robinson, 2001). An understanding of enterprise architecture is necessary for
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