Chapter X

Application of Web Services in the Context of E-Procurement: An SME Foci

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Abstract

This chapter highlights the importance of e-procurement and the barriers affecting its widespread adoption in the context of small and medium enterprises. The chapter takes a technical perspective and critically analyzes the importance of information systems in the procurement domain and the integration challenges faced by SMEs in today’s digitally networked economy. Next, the role of XML-based Web services in solving the integration challenges faced by SMEs is discussed. Subsequently, a procurement transformation framework enabled by Web services which provides a clear methodology of the way in which information systems should be introduced in the procurement domain is discussed. The chapter concludes by a discussion of the measures that must be undertaken by various stakeholders like the government and universities in increasing the awareness levels of SMEs to the latest e-business mechanisms.
Micro, small and medium-sized enterprises (SMEs) play a central role in the world economy. They are a major source of entrepreneurial skills, innovation, and employment. There are an estimated 75 million SMEs worldwide, which represent about 99 percent of all companies (IBM, 1998). Zheng, Caldwell, Harland, Powell, Woerndl, and Xu (2004) find that the “Internet presents many opportunities for SMEs to harness the benefits of Information and Communications Technologies (ICT)” (p. 27-39). E-procurement, which is the utilization of the Internet in enabling and streamlining the entire procurement cycle, has been identified as a very important area of concentration for SMEs (ABI, 2003; OGC, 2005). “Electronic procurement specifically and eCommerce generally will knit supplier and buyer business processes together to deliver seamless transactions” (Cavinato & Kauffman, 2000). Large enterprises have already invested huge amounts of resources in e-procurement and are reaping the benefits of it. E-procurement is being championed by larger enterprises, mainly to save transaction costs and reduce prices. But potentially they also offer opportunities for SMEs to find new business partners and to benefit from closer integration into the value chains of large companies (ABI, 2003).

It is pertinent to study the impact of e-procurement on SMEs owing to many factors:

1. Many large organizations’ supplier base consists of small and medium enterprises (SMEs), and without the full participation of these SMEs, the initiatives of large corporations will not be successful.
2. The application of emerging information technologies (IT) has often proven to be a complex job for SMEs.
3. SMEs are often at a disadvantage in terms of finance, technology, human resource development, and networking (UN-ECE, 1997); in the case of information technologies, the task seems even more daunting, owing to the highly complex evolving process and also the challenge in successfully deciphering a business case for the justification of its investment.
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