



Chapter XII

A Framework for the Selection of ERP Packages for Small to Medium and Large Organizations

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INTRODUCTION

An enterprise resource planning (ERP) system is a software infrastructure embedded with “best practices,” respectively, best ways to do business based on common business practices or academic theory. The aim is to improve the cooperation and interaction between all the organizations’ departments such as the products planning, manufacturing, purchasing, marketing and customer service department. ERP is a fine expression of the inseparability of IT and business. As an enabling technology as well as an effective managerial tool, ERP systems allow companies to integrate at all levels and utilize important ERP applications such as supply chain management (SCM), financials and accounting applications, human resource management (HRM) and customer relationship management (CRM). They represent large, complex, computerized and integrated systems, which can strongly influence long-term business success. ERP systems promise the development and sustainment of competitive advantage in the global marketplace through

enhanced decision support; reduced asset bases and costs; more accurate and timely information; higher flexibility; or increased customer satisfaction (Davenport, 1998, 2000; Poston & Grabski, 2000; Rizzi & Zamboni, 1999). But the far-reaching structural changes following an ERP software implementation can also be disastrous as examples (Scott, 1999) show.

In this chapter we focus on the early stage of evaluating and selecting an ERP system prior to implementation. Only a part of decision making for ERP systems can be handled by a definite or accepted procedure such as standard investment calculations. There are many other intangible decision-making criteria needing to be judged and evaluated by the decision makers. There is no agreed-upon and formal procedure for this important task (Hecht 1997; Laudon & Laudon, 1998). Therefore it seems necessary to investigate decision-making practices to increase the understanding of this complex and important task. We also focus on the decision-making situation faced by small and medium-sized enterprises (SMEs). This is of particular importance because SMEs are more and more experiencing the need for integration, especially for interorganizational integration, and expecting ERP software to fulfill these needs. The availability of relatively inexpensive hardware is fostering this situation (Gable & Stewart, 1999). In general, decision making in SMEs features much greater constraints on the ability to gather information in order to reduce uncertainty about their investment (Cobham, 2000). Considering ERP software decisions with its complex and far-reaching implications, poor decision making by SMEs can result in disastrous situations.

On the other side, ERP vendors are in search for new challenges to generate higher revenues and have turned to the small and medium-sized market segment. In the last years ERP software packages sales flattened. A saturation of the market, as most large organizations have already implemented an ERP solution, decreased the annual ERP market growth (Pierre Audoin Conseil, 1999). By 1998 approximately 40% of companies with annual revenues over US \$1 billion had implemented ERP systems (Caldwell & Stein, 1998). The small and medium-sized market segment is far from being saturated (Pierre Audoin Conseil, 1999). The total European midsize market for IT products and services surpasses \$50 billion per year (Everdingen, Hillegersberg, & Waarts, 2000).

The framework outlined in this chapter and the investigated research hypotheses represent a further step towards understanding the decision-making process for ERP investments and differences made by SMEs and large organizations. The groundwork of the proposed framework is supplied by a general process model for decision making derived from literature, which will be slightly adapted for the special needs of selecting an ERP system. For

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