



Chapter VII

ERP as an Integration Strategy: Issues, Challenges, Benefits, and Risks

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Abstract

Integration has been the dominant technical strategy of Information Technology (IT). Computers were introduced for business use and have evolved through multiple stages, including integration of subroutines, modules, programs and applications. Major developments include database, object-oriented programming and communications technologies (especially the Web and Internet). Although integration continues as a technical strategy, IT integration has become part of the overall business strategy due to considerable organizational dependence on IT. The complexity of IT advances necessitated viewing and managing major IT components differently, which have become known as infrastructures. Since the late 1980s, implementation of enterprise-wide systems has been the primary IT business strategy, although it entails great cost, risks and disruption of operation. This chapter describes the evolution of IT integration strategies and examines enterprise resource planning (ERP) as the most popular IT business strategy. The major theme is IT integration, and we examine the question, "Is IT integration desirable?"

Introduction

Michael Porter (1987) described corporate level strategy as the overall plan for a diversified company. Clearly, IS is a significant part of every modern enterprise and, hence, critical to a successful business strategy. Alignment of IS with the corporation is thought to be critical to firms who seek a competitive advantage (Brown & Magill, 1994). As other chapters illustrate, several specific IS strategies exist. This chapter describes integration as the overall and, arguably the most important, IS strategy. Integration touches every aspect of IS, from programming to monolithic enterprise systems. Hamilton (1999) advocates that integration is the guiding principle for all IS pursuits. We use ERP systems as a lens to describe the integration phenomenon and suggest that ERP systems are one strategy organizations exploit to achieve IS integration. This seems appropriate because, in the IS and management literature, ERP systems have often been cited as a vehicle for organizational change and Business Process Reengineering.

This chapter is organized into seven sections. First is the introduction. Then we briefly describe the background and history of integration and ERP. The focus is on understanding the importance of ERP, its evolution and its benefits. The next discussion describes ERP in terms of whether it is the right choice for IT strategy. Then, we present a different perspective on ERP, where the downsides of ERP are examined. Our intention is not to deny the value of ERP, but to challenge the rationale behind the decision to choose ERP. Following is where we revisit some of the fundamental aspects in the concept of “integration.” We argue that integration is vital to any IT strategy. Then, we discuss the practical issues involved in acquiring IT integration. We look at past, present and future approaches. Finally, we offer some thoughts on the future direction of IT strategy: “What is next after ERP?”

Background and History

Integration is seemingly a universal idea found in numerous disciplines, including the sciences, humanities, engineering and business (Anderson, 1991; Davenport, 1998; Hill, Brinck, Patterson, Rohall, & Wilner, 1993; Pelkmans, 1980; Shanley, Crossan, & Hodgson, 1999). This chapter is concerned with IT integration (Alsene, 1994; Davenport, 2000; Emdor & Segev, 1982; Goodhue, Wybo, & Kirsch, 1992; Kalakota & Whinston, 1993; Markus, 2001; McLeod & Bender, 1982; ; Senn, 1978). References to IT integration are frequently found in the literature, although without explanation (Waring & Wainwright, 2000). Likewise, theories of IT integration are woefully missing.

Integration Concept

An ERP system is virtually a synonym for integration, since ERPs seek to achieve integration of core business processes and operations by way of IS. We focus on

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