# Chapter 11
# Critical Success Factors in Enterprise Resource Planning Implementation

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## ABSTRACT

*Enterprise resource planning (ERP) systems are considered, by many, to be extremely solid, while giving organizations the ability to quickly capture and manage data across diverse sectors. Because the successful employment of an ERP system depends upon skillful implementation, specific factors contributing to successful ERP implementation are essential. What are the critical factors in the implementation of ERP system? How do company administrators and IT professionals perceive the critical successful factors for the effective implementation of the ERP? How are critical successful factors defined? How do IT professionals perceive the influence of critical factors on the effective implementation of ERP in a Phoenix company? In this chapter, the critical successful factors in the implementation of ERP systems will be explored. A single case study was conducted, and the interview data were gathered from 15 IT professionals in a Phoenix, Arizona company. Problems, solutions, recommendations, and future research direction will be presented.*

## INTRODUCTION

Many organizations are using enterprise resource planning (ERP) for enhancing productivity of their organizations. ERP systems are configurable information systems which assimilate diverse sources of information and data driven processes to benefit multiple functional areas within organizations (Kumar & Van Hillegersberg, 2000). ERP software is a central element for effectively managing business processes within organizations to enhance planning, operations, financial operations, for organizational growth

(Lotfy, 2015). Indeed, there are numerous documented benefits for using ERP systems. Tambovcevs (2010) noted that ERP software integrated multiple enterprise functions (e.g., production, research and development, financial resource management, human resource management, and marketing), and management functions (e.g., pre-vision and planning, organizing, decision making, activity coordination and control) from a practical aspect.

Numerous company leaders opted to use ERP programs to maximize their business environment. For example, while using a model called FMEA, a company noticed increased productivity and effectiveness while executing a multilayered project with an ERP system (Dabestani, Badakhshian, & Shirouyehzad 2011). Kaniadakis (2012) postulated that business restructuring was a strong force for the accomplishment of tasks with ERP control. Kim, Park, and Lee (2013) elucidated, corporations worldwide were refocusing their business applications toward ERP systems while distancing themselves from in-house information systems (IS). Although the requirements for ERP systems were frequently altered, the systems appeared to be flexible enough for integration into the business processes required by organizations. The ability to employ ERP systems over a wide range of business environments demonstrated their usefulness to companies.

However, some concerns still linger regarding to the use of ERP systems. ERP systems were supposed to help companies with multilayered applications by incorporating all applications into one centralized location while permitting selective accessibility within functional zones. As ERP systems evolved, the need arose to examine the reasons for the success of these structures. Gupta, Misra, Singh, Kumar, and Kumar (2017) identified critical challenges while implementing cloud based enterprise resource planning (ERP); these include customization, organizational change, long-term costs, business complexity, loss of information technology competencies, legal issues, integration, data extraction, monitoring, migration, security, network dependency, limited functionality, awareness, performance, integrity of provider, perception, and subscription costs. The researchers found that small and medium enterprises, as well as large organizations, differed from each other with regard to most challenges except business complexity, integration, monitoring, security, limited functionality, performance, the integrity of the ERP provider. The most important concern for all of the organizations involved challenges related to Cloud ERP and security (Gupta, Misra, Singh, Kumar, & Kumar, 2017).

Since the success of an ERP system depends upon effective implementation, the critical success factors (CSFs) for ERP implementation have developed into an important topic for exploration. Thus, answers to the following questions should offer some insight. What were the success or failure rates of executing a multilayered system such as an ERP without concerning CSFs? How did failure affect the overall growth of the organization? It appears that these questions are important to consider when implementing an ERP system. To completely assess the potential success or failure of a company-based implementation of an ERP system, the critical success factors (CSFs) need to be emphasized and carefully considered.

Numerous companies within the State of Arizona use different technologies to enhance their performance and management. The most prevalent offerings involve ERP programs employed at different companies; these include Solar Winds, Manage Engine, Oracle, CA Technologies, IBM Tivoli, BMC, and InvGate. Biriescu (2013) noted, the programs offered by the aforementioned companies are Web-based, interactive, and involve innovative management tools to benefit companies. The problem was that the ERP implementation, from the management perspective, within the examined company located in Phoenix, Arizona did not work as expected, and the company did not experience the expected outcomes. Important questions to ask are: what challenges did they have during the implementation of ERP

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