

# Chapter 2.10

## An ERP Adoption Model for Midsize Businesses

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### ABSTRACT

This chapter theorizes the development of a conceptual ERP adoption model, applicable to midsize businesses. The general business factors associated with ERP implementation along with the corresponding organisational benefits are identified. This chapter also highlights the constraints that confront midsize businesses whilst implementing sophisticated applications. The needs for ERP adoption can occur due to an attempt to be more competitive or due to an external pressure from large businesses to adopt an ERP application. The proposed conceptual model uses a strategic approach containing; ERP implementation processes, stages, factors & issues associate with ERP adoption in midsize businesses. This research also focuses on identification of strategies in the organisational, people and technical domains that could be influential for ERP adoption.

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### INTRODUCTION

The importance of midsize businesses has been recognised in recent decades due to their role of creating jobs, enhancement of global economic activity and most importantly higher growth rate, regardless of their size (Rovere, L & Lebre, R (1996); Acs 1990). To increase their production capabilities, they should be vigilant towards adoption of the latest technology (Barad, M & Gien, D. 2001) as use of Information Technology (IT) could result in an increase in innovative activities, resulting in improved productivity and efficiency in business operations (Correa 1994). Therefore, it is appropriate for midsize businesses to utilize their resources and adopt means of automated data transfer both internally and externally (Caillaud 2001). Business applications such as ERP systems could provide a better way to execute business operations in an effective, organised and sophisticated way.

The adoption of ERP applications in a modern day organisation has been described as being one of the most innovative developments associated with the IT sector (Al-Mashari 2002). ERP systems can be viewed as sophisticated business applications that integrate major functions of different departments (Koch 2003) as its modules allow organization to improve the functionality of its business processes (Chung 1999). Hence, ERP software modules have the ability; once implemented, to integrate major activities across the organisational departments using one integrated software solution (Koch 2003). Amoako-Gyampah (2007) suggests that ERP systems are integrated software developed to handle multiple corporate functions, allowing companies to synchronise activities, eliminate multiple data sources with provisioning of accurate and timely information, obtaining better communication among different units to meet expectations and reducing cost required to manage incompatible legacy systems. In effect, this can greatly assist organisations to carry out their operations in more effective and efficient ways and allow the workforce to interact and collaborate in an information-enabled environment.

ERP systems have been developed in the last two decades to replace the common legacy and Material Requirement Planning (MRP) systems that have traditionally been associated with larger enterprises. As the ERP market has evolved and matured, so have the related hardware and infrastructure technology. The cost of ERP solutions have been reduced to the point where it has now become viable for the midsize business sector to consider ERP implementation (Aberdeen 2006). Arguably, the implementation of ERP systems in midsize businesses could be viewed simply from the perspective of applying the success factors already identified for larger businesses to a different set of smaller entities. However, midsize businesses are unlike their larger business counterparts. They have a diverse range of separate adoption issues that need to be considered when it comes to ERP— issues such as limited finance

availability, technology understanding and human resources constraints (Rao 2000).

Assuming the pending shift of ERP adoption to smaller-sized business entities, this chapter examines the relevant literature on ERP implementation as well as highlighting the characteristics of midsize businesses to propose an adoption model for implementing ERP systems in that business sector.

## **BACKGROUND**

### **ERP Systems**

ERP applications were built primarily to integrate different department functions and business processes to form a collaborative view of business operations in a single IT architecture (Klaus, H., Rosemann, M, Gable, G. 2000). Modern day ERP applications are business process centric, evolved to address diverse aspects of corporate business requirements. One aspect of this evolution has been the ability of ERP systems to be a replacement for IT legacy systems that were developed in different functional areas of the business. Another aspect of ERP success has been the importance of such systems to integrate the supply chain so as to facilitate information flows across all business areas—in effect allowing the large corporation to be managed in real time (Turban 2006). The manner in which ERP has applied industry standards to organisational business processes has also been recognised as a significant ERP feature (Keller & Teufel 1998)—allowing a corporation to espouse enterprise wide best practices.

Given the evolving nature of ERP systems, there are different point-of-views on how to explore ERP implementations. One view is to focus on ERP as a product or commodity in terms of software application (Klaus, H., Rosemann, M, Gable, G. 2000) where ERP modules are integrators of all business processes and data under one inclusive umbrella. ERP systems are equipped

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