Chapter V
Enterprise Resource Planning System:
Issues and Implementation

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ABSTRACT

Enterprise Resource Planning (ERP) is the method of trying to unify all processes within an organization into one software system or database. Enterprise Resource Planning Projects should not be entered into lightly. Not only are ERP projects a new software program to learn, but they are a new way of thinking. This chapter provides a brief history of ERP; follows by the advantages and disadvantages of ERP for organizations considering the adoption of ERP. The next section introduces various strategies of ERP implementation with a list of ERP software vendors. ERP is a long-term IT investment. The total cost of ownership is analyzed and discussed with several cases of ERP implementation.

INTRODUCTION

Enterprise Resource Planning (ERP) is the method of trying to unify all processes within an organization into one software system or database. Whether the process is part of manufacturing, financial, human resources, or customer service, ERPs attempt to capture all of the processes within two or more departments with a common software program and/or database (Davenport, 1998). Before the advent of ERP it was very common for organizations to have several different software

programs each designed to support the needs of individual departments. These programs may have been purchased programs or programs designed by the IT staff of the organization. The IT staff would not only have to support the individual programs but also have to design programs and interfaces so that each of the individual programs could communicate with each other if possible.

Since there are multiple programs, it is not uncommon for the customer information to be keyed into multiple different programs. For example, Sales department takes an order and keys the customer information into its system, the Finance department receives a copy of the order and keys the customer information into its system, the Shipping department receives the product and sales paper work and keys the customer's shipping information into its system, etc. The purpose of the ERP System is to have one centralized location where all of the customer's information is stored and accessible to all departments (Linthicum, 1999; Jacobs and Whybark, 2000).

HISTORY OF ERP

ERPs came about as a way to reduce costs within organizations in the early 1990s. Called organization "re-engineering" or "business process redesign", ERPs helped to streamline processes (Davenport, 1993; Davenport, 1998; Hammer and Champy, 1993; Hammer, 1997). The IT staff would no longer need several application specialists on staff to support the multiple software programs running. Organizations would no longer need as many administrative personnel in each department since there would be one common database shared by multiple departments.

When ERP Systems were first developed, IT professionals were anticipating a "one-size fits all" software development that could capture the functions of all departments across the board (White, 2002). The first versions of ERP in the early 1990s tied together logistics and production.

By 1995, software vendors were hearing requests from organizations to have a marketing and sales solution added to the ERP platform. For those customers that already owned ERPs, vendors offered add-on application solutions. For new customers, vendors created total solutions that tied Logistics, Production, Marketing and Sales all into one program. Vendors focused their newer versions on the recommendations of their users. Once organizations implemented ERP software, the vendors were able to take advantage of the "relationship" by imposing mandatory upgrades every twelve to eighteen months. Organizations had no other choice but to comply since it is not economically viable to discontinue use of an existing ERP or switch to a new vendor.

By the time 1999-2000 rolled around, ERP vendors saw a slow down in sales of ERP solutions. This was due, in a large part, to the Y2K scare. Those organizations that were interested in ERP solutions either hurried up to implement prior to 2000 or waited to ensure that the ERP vendors had successfully solved the Y2K problem within their programs. Several organizations also took the money that would have been used for ERP implementation and used it to ensure that their existing systems would survive the stroke of midnight January 1, 2000 and thus their respective ERP projects were delayed a year.

In the early to mid 2000s there has been a decline in sales of ERP solutions as a result of a "saturation" of the market. Due to the cost and complexity of ERP systems, historically only large organizations have been able to afford a total ERP package. The larger organizations also have the personnel resources to devote to the ERP project. In order to combat the declining sales, vendors are now designing ERP solutions catered to small to medium sized organizations with scaled down versions of the total ERP package that is designed for the large organizations. These scaled down versions of the ERP solutions would require less IT support and thus fewer personnel (Koh and Simpson, 2007).

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