Chapter 4

Towards an ERP Life-Cycle Costs Model

José Manuel Esteves
Universitat Politècnica de Catalunya, Spain

João Álvaro Carvalho
Universidade do Minho, Portugal

Aldemar A. Santos
Universidade Federal de Pernambuco, Brasil

Many organizations have adopted ERP systems, but most of them are not aware of the total costs associated with them, and they only consider the costs related with the software acquisition. This article is an exploratory study that sets out to identify other costs related to ERP systems during their life-cycle. Through the different phases of the life-cycle we define and categorize the various costs. The costs were classified as tangible and intangible. We also describe a case study where the costs related to the three initial phases of the life-cycle were analyzed: acquisition, implementation, and usage and maintenance. Finally, some conclusions are drawn and we pose some research questions for further work.

INTRODUCTION

AMR research Inc., a leading enterprise in market analysis, expects that the market for software enterprise resource planning (ERP) will grow at a rate of 37% until 2003 (Caruso, 1998). Forecasts show that the ERP market will rise to...
$66 billions (Hangendorf, 1999), and that ERP will remain one of the biggest in growth with more influence in the software industry, quotes AMR. Nowadays, the ERP products and services industry is one of the most promising.

Through the usage of ERP systems such as SAP, BAAN, Peoplesoft and Oracle, organizations try to integrate the information-flow of the different business areas and, at the same time, improve efficiency and reduce costs. Theoretically, these integrated systems provide large functionality in terms of problem-solving associated with data-flow when they are integrated with different software systems.

Some critiques of ERP systems focus essentially the high costs of ERP projects, the high failure-rates and their complexity, which makes it difficult for users to perceive the advantages and the opportunities of these systems.

ERP systems demand a large investment at the economic, human-resource and organizational levels. This investment is made not only in the initial phase but throughout their life-cycle. Thus, this study is intended to analyze the necessary investment to integrate an ERP system during its life.

The chapter was structured in the following way. First, the ERP life-cycle is defined. Next, the different costs are defined and analyzed for each phase. Then, a case study of a Portuguese company is described, and the costs of the three initial phases where studied. Finally, we present some considerations for future work.

ERP SYSTEMS OVERVIEW

Typically, an ERP system is a software package composed of several modules, such as production, sales, finance and human resources, providing for the horizontal integration of data across an organization and through its business processes. These software packages can be customized to address the specific needs of an organization (Esteves and Pastor, 1999a).

According to Davenport (1998), an ERP system is a generic solution, the design of which reflects a series of conclusions (best practices) about the way organizations work. Thus, and contrary to the proprietary systems developed according to the specific requirements of an organization, the ERP systems are generic in nature. They impose their own logic in respect of strategy, culture and structure of an organization, many times forcing changes in the way of doing business (SAS Institute, 1998).

The idea behind ERP systems is that the software needs to represent the whole of the business process chain. With an ERP system, the financial department can close a paying account as soon as the warehouse clerk confirms the reception of goods. This is done with minimal human intervention and without paper documents flowing through the organization (Slater, 1999).
Related Content

Selecting and Implementing an ERP System at Alimentos Peru
www.igi-global.com/chapter/selecting-implementing-erp-system-alimentos/18460?camid=4v1a

Government Process Reengineering: What we Know and What we Need to Know
www.igi-global.com/chapter/government-process-reengineering/58593?camid=4v1a

Toward a Model of Investigating Non-Decision Making ERP Communities
www.igi-global.com/chapter/toward-model-investigating-non-decision/30335?camid=4v1a
The Multidimensional Business Value of Information Systems Interoperability
Euripidis Loukis, Yannis Charalabidis and Vasiliki Diamantopoulou (2014).
Revolutionizing Enterprise Interoperability through Scientific Foundations (pp. 77-95).
www.igi-global.com/chapter/the-multidimensional-business-value-of-information-systems-interoperability/101105?camid=4v1a