

Chapter 24

Enterprise Resource Planning Systems for Small and Medium-Sized Enterprises

Rogério Atem de Carvalho
Fluminense Federal Institute, Brazil

Björn Johansson
Center for Applied ICT, Copenhagen Business School, Denmark

ABSTRACT

After the implementation peak of ERPs that occurred during the pre- and post-Y2K periods, the high-end ERP market started to saturate and major ERP vendors started to seek for new business opportunities, in special towards Small and Medium-sized Enterprises (SMEs). On the buyer side, demands for becoming more competitive in a globalized market, have been pushing SMEs to adopt ERP too. Additionally, influenced by the free/open source movement, new types of ERP licensing appeared by the beginning of the decade, creating a classification according to the basic licensing model: free/open source ERP (FOS-ERP) and proprietary ERP (P-ERP). Therefore, this paper aims at exploring the merge between SMEs, P-ERP, and FOS-ERP, by analyzing the differences between the two proposals and offering guidance for prospective adopters.

INTRODUCTION

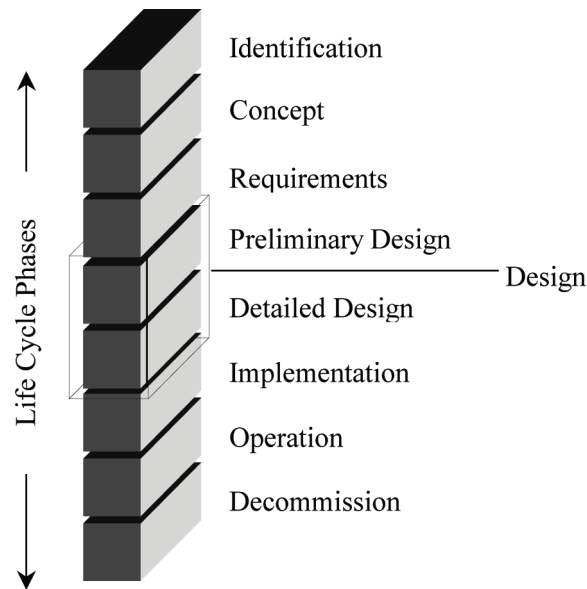
For the last fifteen years the biggest software category in terms of investment has been Enterprise Resource Planning (ERP) systems and nowadays most of the bigger companies, including practically all global-players, have implemented ERP systems in the search for achieving competitive edge in their business areas (Church, 2008; Hendricks, Singhal

and Stratman, 2007). After the implementation peak that occurred during the pre- and post-Y2K periods, the high-end ERP market started to saturate and, according to Kim and Boldyreff (2005), major ERP vendors started to seek for new business opportunities, in special towards small and medium-sized enterprises (SMEs).

On the buyer side, demands for becoming more competitive in a globalized market, have been pushing SMEs to adopt ERP too. However, the

DOI: 10.4018/978-1-60566-731-7.ch024

Figure 1. GERAM lifecycle phases



ERP strategic nature (Caulliraux, Proença and Prado, 2000), and the fact that it cannot be used instantaneously (Dreiling, Klaus, Rosemann and Wyssusek, 2005), makes ERP a different kind of software which implementation requires high quantities of resources and entails high risks. These factors have been raising the interest on ERP versions for SMEs on both the demand and supply side of the market, making a recent market movement towards simplified versions of proprietary ERP (P-ERP) and bringing more attention to free/open source ERP (FOS-ERP). Therefore, it is clear that the merge of P-ERP, FOS-ERPs and SMEs is a topic with many facets and yet to be more explored in both theory and practice.

This chapter aims to explore this merge, firstly by briefly introducing Generalized Enterprise Reference Architecture and Methodology conceptual framework, which in the following section is used to guide the description of the adoption process by SMEs, followed by an detailed analysis of the differences of each proposal, and finally by a basic guidance for prospective adopters.

A FRAMEWORK TO GUIDE ERP ADOPTION

Selecting an ERP for adoption is a complex process, because, besides the size of the task, it is an important enterprise component that impacts the adopter organization in financial and self-knowledge terms. In that aspect, the Generalized Enterprise Reference Architecture and Methodology (GERAM) is a well-known standard that can be used to identify the main phases of an ERP adoption project, helping guiding the comparison of free and proprietary alternatives.

The GERAM framework provides a description of all elements recommended in enterprise engineering and a collection of tools and methods to perform enterprise design and change with success (IFIP – IFAC, 1999), providing a template lifecycle to analyze ERP selection, deployment, and evolution. GERAM defines seven lifecycle phases for any enterprise entity that are pertinent during its life. These phases, presented in Figure 1, can be summarized as follows:

7 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/enterprise-resource-planning-systems-small/37043

Related Content

Disciplined or Agile?: Two Approaches for Handling Requirement Change Management

Danyllo Wagner Albuquerque, Everton Tavares Guimarães, Felipe Barbosa Araújo Ramos, Antonio Alexandre Moura Costa, Alexandre Gomes, Emanuel Dantas, Mirko Perkusichand Hyggo Almeida (2022). *Research Anthology on Agile Software, Software Development, and Testing (pp. 1980-2000)*.

www.irma-international.org/chapter/disciplined-or-agile/294553

A Proficient Approach for Load Balancing in Cloud Computing-Join Minimum Loaded Queue: Join Minimum Loaded Queue

Minakshi Sharma, Rajneesh Kumarand Anurag Jain (2020). *International Journal of Information System Modeling and Design (pp. 12-36)*.

www.irma-international.org/article/a-proficient-approach-for-load-balancing-in-cloud-computing-join-minimum-loaded-queue/250311

Capturing Consumer Preference in System Requirements Through Business Strategy

Constantinos Giannoulis, Eric-Oluf Sveeand Jelena Zdravkovic (2013). *International Journal of Information System Modeling and Design (pp. 1-26)*.

www.irma-international.org/article/capturing-consumer-preference-in-system-requirements-through-business-strategy/103315

Organizational Influence on Security Development in Open-Source Software Projects

Roland Robert Schreiber (2024). *International Journal of Systems and Software Security and Protection (pp. 1-20)*.

www.irma-international.org/article/organizational-influence-on-security-development-in-open-source-software-projects/356659

Automatic Composition System Based on Melodic Outlines and Music Theory

Takayuki Yoshida, Teruhisa Hochinand Hiroki Nomiya (2018). *International Journal of Software Innovation (pp. 73-85)*.

www.irma-international.org/article/automatic-composition-system-based-on-melodic-outlines-and-music-theory/210456