

# Chapter 13

## The Needed Adaptability for ERP Systems

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### ABSTRACT

*The new market trends are forcing companies to constantly reorganize their business processes so that they can react quickly to the new economic challenges. Although not always, enterprise information systems provide an appropriate response to these situations due to several reasons, such as technology failure, lack of adaptable configuration tools or even the financial investment required, which makes it unaffordable to companies. This article presents a functional model for ERP Systems (called FME) that would guarantee a baseline structure to build solutions which would provide a complete configuration and, therefore, a timely reaction to market fluctuations. This model also summarizes some of the most used functionalities of the available ERP Systems.*

### INTRODUCTION

The last decades have been characterized by constant market fluctuations in the global economy stability, causing companies to face a pressing need to restructure their strategic business processes. These changes usually require tactical decisions for quick and accurate responses over companies working processes, heading for short-term adaptation actions to face the new market needs. However, this constant (and ill) adaptation

is often considered a veritable Babel Tower since its maintenance is performed without a completely “thought and organized” process. A simple change in a process may lead to organizational restructuring and, therefore, it requires for changes and new configurations on the existing information systems.

This new trend requires enterprise information systems to be provided with tools for rapid customization (and management) in order to enable an effective and timely response to these needs. In this context, there are several Enterprise Resource Planning (ERP) systems in the market capable of

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providing an answer to these requirements, such as SAP, Microsoft Dynamics, JD Edwards, Priority, PHC Software, Manufactor Software, Primavera Software, and others. However, they present different solutions and framework concepts for the same functions, and none of them presents a complete solution.

This work presents an “adaptive” functional model that could be assumed as the “baseline” for ERPs systems. This model aims primarily to provide the necessary conceptual architecture so that it is possible to build software solutions that guarantee a complete parameterization and configuration, as well as an effective response to organization’s needs.

## **MAJOR PROBLEMS FOUND**

Implementing and managing ERP Systems may be a complex process due to several causes, such as human inadaptability, for instance. According to Lin (2002), about half of ERP implementations fail to meet expectations. Most of them suffered from over-budget, over-time, user dissatisfaction, threatened lawsuit, besides having failed to introduce all planned modules; or the big and horizontal ERP Systems pulling back into beta testing.

The following topics summarize some of the most common features in this business, according to the experience of the authors.

### **Market Awareness**

Software companies develop ERP Systems, taking into consideration the roadmap’s interests on time and cost restrictions, somewhat “forgetting” to study the actual needs of the market. According to Davenport (1998), software houses try to structure the systems in order to reflect best practices (series of assumptions about the way companies operate in general), but it is the vendor, not the customer, that is defining what “best” means. In many cases, the system will enable a company to

operate more efficiently than it did before. In some cases, though, the system’s assumptions will run counter to a company’s best interests.

Most of the time, software companies are aware of the companies’ major difficulties when regarding their software distribution policies (leaving the responsibility of consulting and analyzing the market to smaller companies, named partners, who sometimes aren’t prepared for such a difficult task). According to Bingi (1999), because the ERP market has grown so much and so fast, there has been a shortage of competent consultants. Finding the right people and keeping them through the implementation is a major challenge, since ERP implementation demands multiple skills – functional, technical and interpersonal skills. Although this strategy (high number of partners) might increase software house’s sales, it keeps them away from the companies’ “real need” analysis.

Mandal (2003) has defended that software vendors should apply for an “iterative evolutionary method” to develop enterprise-wide information systems since that would enable system developers and their customers to communicate effectively with each other in order to make the system evolve towards a defined objective. Such a strategy would help them analyze the impact of the software implementation on the organization. Unfortunately, such kinds of strategies (although, sometimes promised) were never “really” taken into consideration.

### **Factors Preventing Decision-Making**

According to Holland (1999), a new ERP platform forms a critical infrastructure in any company for, at least, the next decade. This sentence enhances the importance of a consistent decision of an ERP system for an organization.

However, the implementation of an ERP system is often a complex process in the sense that it requires internal restructuring, both in terms of work procedures and human resources. The growth of Project Management, such as science

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