

Enterprise Resource Planning- Critical Failure Factors (CFFs) And Its Remedies Towards Effective And Efficient Implementation of an Enterprise Resource Planning

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ABSTRACT

An Intelligent use of technology can give competitive advantages to the organization's business processes. This is also true about Enterprise resource planning (ERP) which merges related internal and external management information across the whole organization, such as order processing, finance, manufacturing, accounting, sales, supply chain management and customer relationship management etc. Implementation of a complete ERP solution in an enterprise gives rise to main failure factors, reasons and causes in it. In this paper, we have discussed some of the most important & critical failure factors and the cure associated with it. Our research mainly focused on examining the existing literature regarding ERP implementation problems throughout the implementation phases and reasons of ERP implementation failure. The ERP Life Cycle framework was applied to study the implementation process and the related problems in each segment of ERP implementation.

Key Words: ERP Implementation, Critical ERP Failure Factors, ERP Life cycle and Implementation

INTRODUCTION

The Term ERP is not new to IT and Business environment and a lot of discussion is already available at media, however the main purpose of our paper is to look at some of the critical failure factors (CFFs) of ERP implementation and some possible remedies of it. There are various systems in an enterprise including, systems for manufacturing, marketing, human resource and accounting etc. Enterprise resource planning (ERP) is that system which merges and integrates different functionalities such as planning, scheduling, distribution, manufacturing and finance of an organization into a solitary system called Enterprise Resource System. ERP designed to serve the needs of different department within the enterprise.

ERP is based on a methodology rather than a junk of softwares, even though it does combine several software applications, brought jointly under an integrated interface, served for several different purposes. An ERP system is expected to represent a company's biggest Information Technology investment, so some of the companies desire to implement ERP in an incremental way, rather than all at once. Some ERP vendors offer modular software application together with a cohesive interface for the incremental approach. ERP is persuaded to bring considerable changes to how a company runs a business, regardless of how it is approached. ERP system brings remarkable advantages once properly implemented because all systems in an enterprise are joined together, all departments can share important information more easily.

more automated, and eventually, consumers are better served. For example, an individual in a sales department would be able to access an information system to verify the status of a customer's order that is still in manufacturing. Although this comes at an expense of the training costs i.e. employees must learn new processes rather than only learning how to use new software.



Figure 1. Basic Structure of an ERP Integrated System

BACKGROUND AND LITERATURE REVIEW

(G. Langenwalter 2000 & Wong, H. Scarborough, P.Y. k. Chau and R.M. Davison, 2005) (C. Soh, S.K. Sia and J. Tay-yap 2000) says that there have been lots of reports of unsuccessful ERP implementations within business. Most of the ERP implementations did not accomplish their estimated goals. In other studies, the percentage of ERP implementations that can be classified as “failures” ranges from 30% to 60% or higher, and failures of ERP system implementation scheme have been known to lead to problems as serious as organizational insolvency. Practitioners tend to discuss the impact of the failure of ERP implementation in a relative sense being able to use only part of the ERP system, suffering business loss, dropping market price, losing both market share and competitive advantage due to implementation failure, and so on (NELSON, E. & RAMSTAD, 1999) and (Change, Gable, Smythe and Timbrell, 2000). However, there have been a range of definitions of failure of ERP implementation. Failure has been defined as an implementation that does not achieve a sufficient Return on Investment (ROI) identified in the project approval phase. As ERP implementation failure rates are so high and the resulting impacts are so unfavorable to business, there is a compelling reason for opening the “black box” to examine the factors causing failure. In order to examine the causes of failure in the ERP implementation process, an “ERP System Life Cycle” perspective was adopted, that can help to look at what goes on (e.g., problems experienced and challenges at problem resolution) at each phase of the experience cycle. Previous research has focused on IS implementation for the definition of IS failure (Langenwalter, 2000). However, the majority of studies have unsuccessful to take into account the richness of the ERP failure fact. In this study, we have conducted empirical investigations into ERP failure from the perception of management and information technology.

go wrong” in order for the ERP implementation process to achieve a high level of failure. A list of top vendors of ERP solution provider is also given in the year 2010.

Table 1. Top ERP Vendors

Oracle	18 %
SAP	24 %
Microsoft	11 %
Tier II	11 %
Tier III	36 %

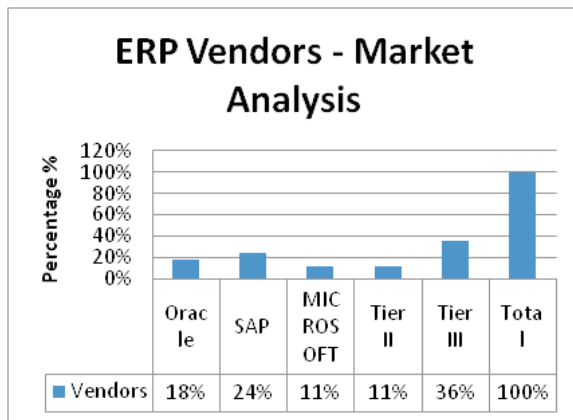
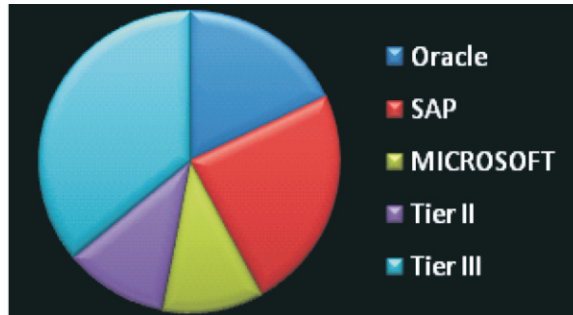


Figure 2. Top ERP Vendors 2010

ERPLife Cycle:

ERP life cycle is much same activity as a project or software develop life cycle with some basic important stages involved are as follows:

- Pre Implementation
- Initiation (Pre Evaluation Screening)
- Project Planning
- Process analysis and design
- Realization (Reengineering)
- Transition approaches (Testing)

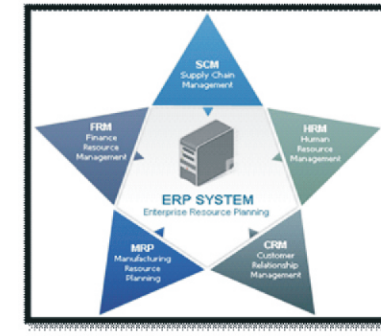


Figure 3. Integrated ERP System

ERP critical failure factors (CFFs):

Our research focused on seven primary reasons concerning ERP failure. By overcoming the following failure factors an enterprise could be much more effective than the respective status quo. There is some common failure factors of the ERP system that is being implemented in different organizations is shown as follows.

Taking ERP casually:

The primary failure factor of an Enterprise Resource Planning (ERP) system is not understanding organization's requirement concerning ERP implementation. Project team members having less expertise with ERP systems are generally unable to provide a proficient level of ERP project planning. Thus taking ERP casually would be a big mistake for most of the organizations. We have to analyze our business activities and ERP. It is compulsory to categorize yourself and map the same with the scope of ERP units. What ERP modules are your company looking at? Mark it down from the capacity list of ERP modules given by ERP vendor.

Selection of ERP package:

There is a considerable amount of carelessness from different business vendors across many multinational organizations regarding selecting a right ERP solution for the enterprise i.e. an ERP software was found to be misfit with the business functionalities. For example the ERP is managing high volume of data inefficiently or rather unable to produce complex scheduling and analysis reports. The first footstep to select an ERP system is to opt for a Project Manager to manage the selection process. In addition to coordinating the internal needs evaluation and vendor assessment process, the selection project manager will serve as the liaison with vendors. The project manager will also create a selection team representing every area of the company (investments, sales, manufacturing, human resources, etc.).

If your company decides to hire an ERP consulting firm to manage the selection project, the role of the domestic project manager will shift toward supervision the organization's work, co-coordinating interviews and meetings with key users and managers, and ensure that each department's needs are effectively addressed.

Top Management Commitments:

Lack of top management's cooperation in the area of commitment to the ERP implementation (such as sufficient financial assistance and human resource management etc) is considered as one of the key reasons of ERP system's failure. An ERP failure can also be caused due to insufficient knowledge transfer to ERP vendors about the business from the top management.

Due to work overload during the implementation process and internal resistant from the management i.e. insufficient commitment to the ERP implementation in an organization, leads to the failure of business processing system.

Inadequate System Requirement Specifications

The lack of extra efforts in terms of gathering data about business processes of an organization can lead to the failure of an ERP system. Hence it is very important that every system specification should not be defined in a rush, rather a sedate approach can reduce the chances of disaster. Changing and chopping of a program instructions are carried after the ERP completion is due to inadequate system requirement specifications by the user or insufficient requirements provided by the user.

If sufficient time is not spent to prepare System requirement Specification, Enterprise Resource system is expected to fail.

I.T. Infrastructure:

Due to poor Information Technology (IT) infrastructure, the ERP can malfunction and thus not fulfilling requirements of the business processes. Providing adequate IT infrastructure is a responsibility of top management of an organization hence an insufficient budget can result in failure of an ERP system.

The database and operating systems, we have already installed and working in an organization and have expertise, thus selecting proper ERP system for our already available IT infrastructure.

Returns on Investment:

Return on Investment is basically the sum of profit of an Investment divided by sum of the expenses, expressed in percentage terms, normally over three years. There is a general perception of business consultants that, we'll get returns on the investment on ERP overnight, but this perception backfires as, implementing an ERP in an organization is a long term investment. As it can provide intangible benefits to the enterprise in longer perspectives. Expectations of the top management from an ERP without considering the complexity and risks associated with the system as a whole leads to unrealistic expectations of users and project team.

Implementation and testing:

One of the primary issues related to the ERP failure is associated with the poor implementation methodology of an ERP system due to over-tight project schedule and insufficient knowledge of how to test the system i.e. it was conducted in a rush. In the beginning, we must write the possible expectations, some aims and basic objectives of our shift to ERP implementation, and then we must testify the things which were included in our initial goals rather than commenting with the unusual suspect.

Remedies of an ERP Failure:

ERP failure in an organization could be rectified by following certain critical steps.

- Utilizing recourses of an enterprise completely for the purpose of a fault free ERP implementation.
- A need greatly emerges that new technologies have to be learnt and there should be no resistance in term of change.
- An ERP system should be managed professionally and information (recourses) should be saved as back up on daily basis to avoid disaster.
- An Enterprise's strategic management must be committed in terms of pre and post ERP implementation phases & investments.
- An ERP software Package must be inline with the basic business process of an enterprise.

CONCLUSION

An ERP system is considered a back bone of every enterprise as multidimensional enterprise's resources have greatly increased. Hence a need emerges of a particular system that could overcome the challenges arise in managing those resources and business functionalities. ERP is implemented in different facets of the organization having some percentage of success rates. The main reasons of the failure of an ERP in an enterprise are lack of resources, commitments to the system, internal and external resistance, misjudgment of ROI and so on.

This study focused on avoiding critical failure factors of an ERP by considering some unnoticed problem i.e. managing resources efficiently, management's commitment must be during and after the an ERP implementation, SRS must receive attention during an ERP implementation, IT infrastructure should be managed properly.

It is likely that more studies will be performed in future in order to further scrutinize the black and white box of ERP implementation failure and enable both practitioners and scholastic researchers to determine the best ways to squeeze the failure rate of ERP implementation. It is also hoped that this study will serve as a guideline for scholars wishing to explore failure factors or problems associated with ERP implementation towards effect and efficient implementation of an ERP system.

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