The impact of project management throughout ERP implementation life cycle

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ABSTRACT

This paper aims to analyze the various aspects of project management in an ERP implementation life cycle. It also reviews the role of project manager, team leader, and other project employees in the implementation of ERP. Project management helps you build a link between your vendor and your employees in order to control and monitor all the activities that are related to the implementation of an ERP software. One of the main reasons why an ERP implementation fail is due to lack of project management. It is very important that an organization has the proper planning and involvement in the development of its enterprise resource planning software (ERP) project. This is why it is often necessary to hire an experienced and professional project manager.

Keywords— Project Management, Enterprise Resource Planning, Implementation Phase, Organizational Culture, Risk Management

1. INTRODUCTION

Due to the rapid emergence and evolution of new markets and customer expectations, companies are challenged to improve their efficiency and lower costs through effective supply chain management. This is where the use of enterprise resource planning (ERP) software comes in. An enterprise resource planning system is a comprehensive set of software that integrates various aspects of a company, such as planning, purchasing, and inventory control. It helps a company achieve its goals by transforming its operations.An ERP system is a collection of client/server-based application modules that connect back-office and front-office processes, as well as internal and external supply chains. ERP stands for enterprise resource planning, and it is a system that integrates all of the information that flows through a firm, including finances, accounting, human resources, supply chain, and customer information. The process of selecting, procuring, and deploying an ERP system entails taking big risks in exchange for significant business and financial benefits, because it may provide managers with an integrated perspective of the processes involved, a successful ERP system can be the backbone of business intelligence for an organization. Effective ERP implementation reduces costs, improves quality, productivity, and customer service, improves resource management, improves decision-making, and planning, and so empowers organizations. Despite the wide spread of benefits of ERP systems, the number of successful implementations has remained low. To overcome the challenges of implementing an enterprise system, the key factors that are necessary to achieve success were identified and summarized in 11 critical factors. It is essential that a project manager be assigned to oversee the implementation of an ERP software system. This ensures that the system's changes are handled efficiently and minimize employee expectations. These individuals will be responsible for coordinating all of the activities involved in the implementation of an enterprise resource planning (ERP) solution. They will also have the authority to oversee the project's entire execution.

2. CONCEPTUAL BACKGROUND OF THE RESEARCH STUDY

In today's business world, deploying ERP systems is standard procedure. Kumar and Hillegersber (2000) discussed the influence of ERP systems on businesses and affirmed that ERPs are becoming increasingly common in today's corporate world. ERP implementation projects typically entail choosing an ERP vendor, establishing business process reengineering, implementing the system, and evaluating it (Wei, 2008). An ERP project is a strategic development process within a firm that goes through several stages of planning and implementation. ERP systems can be complicated and time-consuming to set up. However, a well-structured and disciplined approach can make implementation much easier. (Umble, J. 2003) ERP stands for Enterprise Resource Planning, and it is a centralised information system with a shared computing platform that aids in the efficient use of an organization's resources and enables the flow of information between all business units and external stakeholders. (2011, Ray).

Project management is the process of applying knowledge, skills, tools, and processes to project operations in order to meet projet requirements. It entails the application of skills and knowledge to coordinate the scheduling and monitoring of defined activities in order to ensure that the stated implementation objectives are met. By arranging the implementation process, the formal project implementation plan outlines project activities, commits individuals to those actions, and fosters organisational support (Bhatti 2002) Furthermore, ongoing project management ensures that the focus remains on the critical areas of the ERP deployment and that timeframes and schedules are met (Al-Mashari et al, 2003). Finally, according to the IPMA Competence Baseline (2006), a project is a time and cost-constrained activity that aims to deliver a set of defined deliverables that meet quality standards and requirements. Project management is defined by IPMA Competence Baseline (2006) as the planning, organising, monitoring, and controlling of all aspects of a project, as well as the 5 management and leadership of all parties involved, in order to achieve the project objectives safely and within agreed-upon time, cost, scope, and performance quality criteria. It is the sum of a project's coordination and leadership activities, as well as its organisation, procedures, and metrics. It is critical to balance the time, cost, and risk parameters with other requirements and plan the project accordingly. Project management helps projects at four different levels: projects, subprojects, programmes, and portfolios.

3. RESEARCH METHODOLOGY

The current research study is based on secondary data, as stated. Secondary data on ERP, Project Management, and other topics is gathered from numerous reference books. Secondary data for the research study is gathered from a variety of national and international research books and journals on the subject. The data for the following objectives was gathered in the current research study through a survey of the literature on the issue. As a result, the literature was gathered by visiting a variety of relevant websites.

3.1 Objectives of the Research Study

The main goals of this research are:
1. To investigate project management processes and techniques used during the ERP implementation life cycle.
2. To apply for the position of project manager.
3. Examine the role of project management in the ERP implementation process.

3.2 Hypothesis of the Research Study

ERP systems are regarded as the backbone of most businesses across all industries. It will typically include all business functions at all management levels, supporting most or all functional areas in the day-to-day operations of the company, and it is regarded a source of competitive advantage for some companies.The following hypothesis was tested in the current research study:

H0 There is a correlation between project managers and successful ERP deployment life cycles.

H1   Project management has a beneficial relationship with the ERP deployment life cycle.

4. PROJECT MANAGEMENT METHODOLOGIES AND TECHNIQUES

ERP project implementation entails a variety of management tasks, resulting in several levels of management eorganizations. It's a ll about risk management when it comes to project managemet.This can be accomplished through the use of a formal project mana gement organisation (PMS). Project management body of knowledge (PMBOK), developed by the Project Management Institute (PMI), is one of the most wellknown PMS in the world.Project initiation, planning, execution, control, and closure are among the fi ve project management processes covered by this technique. The nine knowledge areas covered include project integration management, project scope management, project time management, project cost management, project quality management, project human resources management, project communications management, project risk management, and project procurement management.

The findings of Fergal et al's study on project management strategies inside the PMBOK framework show that PMBOK is wellsui ted to ERP projects and highlights the need of project governance.Because the ERP environment is always changing and reassessing organisational processes and technology, the project management strategy utilised with ERP installations must be adaptable and agile enough to accommodate these evolving processes and technology. The most significant issue in software development and deployment is management, not technological. As a result, Alleman proposes project techniques with agility to build a new approach to project management.

Agile and Waterfall were determined to be two traditional methodologies to ERP deployment in the study. The traditional technique is Waterfall, while Agile has provided an alternative that understands the difficulty of managing technology projects over extended periods of time in a changing environment. The drawbacks in the old approach can be overcome. The following concepts for managing ERP projects in an agile way can be applied by adopting agile ideals, such as assume simplicity, embrace change, enable the next effort, incremental change, and maximise stakeholder value.

4.1 Project Manager's responsibilities

- One of the key objectives of the ERP project manager is to ensure the success of the entire ERP implementation by knowing the deliverables, tasks, and functionality created by the technical team.
- Analyze the current system and procedures and manage them in ERP software via standard or customized implementation.
- Timeline management is another project manager responsibility; ERP deployment might take time if the rollout and timetables for each module are not completed on time. In order to ensure ERP software success, the project manager assists in maintaining the deadline, which includes testing.
- A smooth transition of existing processes into the new ERP system that the organisation has deployed.

- Ensure that each department receives proper training from a functional standpoint, and that they are able to comprehend the ERP's full capability.

4.2 Project management's role in ERP implementation

ERP deployment can have a variety of effects depending on the context, and it affects numerous aspects of a firm: economic, human, and organisational, and it changes depending on the company and its surroundings.

The adoption of ERPs in businesses has resulted in a shift in "information" consumption patterns, with increased speed, flexibility, and openness. It offers a systematic method that serves as a useful framework for understanding and following when installing an ERP system in a business. When it comes to ERP implementation, an organisation can take a variety of ways, but the most essential thing is to adopt the optimal plan for their specific business. Several ERP implementation life cycles have been proposed in the literature, including the (Markus & Tanis) and (Esteves and Pastor) models, which define the process flow from start to full system stabilization. Post-implementation tasks such as software development, maintenance, enhancement, and support are given more emphasis by Brehm and Markus (2000).

It was broken down into three steps:
1)Phase one is the pre-implementation phase.l
2)Phase two is the implementation phase.
3)The post-implementation period.

For any firm, implementing new Enterprise Resource Planning (ERP) software is a big investment, and the implementation process can be challenging in and of itself. In fact, it could be the most important endeavor a corporation ever does. The initiatives are large, covering almost every element of the organization if not delivering information to all of those corners as well as the main executive team and high management.

4.2.1 Phase one is the pre-implementation phase.

Tasly ERP projects have a solid track record in terms of pre-project research, project organisation, and project management. The success of the ERP system and the overall enterprise management level is eventually achieved through the project management concepts and techniques of operation. Tasly was successful in deploying ERP as a result of an effective project management team, good project management information, and the need for change that continues to develop.

4.2.2 During the phase of implementation.

Following an extensive literature review, these project management achievement levels were determined as-
1) preparation of a plan for execution
2)Analysis of the company's business processes.
3)ERP package customization
4)Acquisition of information technology infrastructure
5)Data conversion, i.e., system integration.
6)User acceptance testing.
Here, management of all of those items gradually improves the ERP implementation's performance.

4.2.3 Post implementation

Based on the life cycle theory, project management theory and methods are employed in the production of enterprise information. Planning, organisation, management, and monitoring are used in the ERP project implementation process to achieve the desired objectives and impacts, as well as to provide better benefits to the firm, based on the overall planning and implementation principles.

4.3 Organizational Culture

The implementation of an ERP project is built on three factors: people, process, and technology. However, the majority of IT-related difficulties in government sectors are human rather than technical. Poor project management is one of the leading causes of these problems. According to the findings of a study on Jordanian culture, there is a substantial variation in project management characteristics, as well as ERP implementation, when applied to the public and private sectors.

4.4 Risk Management

ERP initiatives have a reputation for being difficult and dangerous to adopt in businesses. Because of the importance and risk of ERP projects to firms, it's critical that they concentrate on measures to make ERP deployment effective. ERP adoption is a difficult task since it entails both technological and functional concerns. A well-defined plan for managing the related risk and effectively modifying the organization's processes will go a long way toward ensuring the project's success.

5. CONCLUSION

ERP deployments are typically massive, complex projects involving large groups of employees and other resources, many of whom are working under extreme time constraints. It has been discovered through the study of various project management methodologies and techniques, as well as through various literatures, that project management plays a critical role in the ERP implementation Life cycle, and that selecting the project team and Project Manager is of particular importance in ensuring proper decision making and timely project completion. The most important components in ERP deployment are proper awareness,

training and support for users, and the composition of the implementation life cycle. As a result, using project management theory and methods increases the likelihood of success during the ERP deployment life cycle.

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