IMPLEMENTATION OF KNOWLEDGE MANAGEMENT TO MINIMIZE ERP BASED SYSTEM'S FAILURE OF AN ORGANIZATION: A SURVEY

Anubhav Kumar *

Dr. P C Gupta**

ABSTRACT

ERP system implementation is wide adopted technology in big and small size organization for improvement their business. ERP implementation takes a lot of effort, time and money and if these are not handled properly they can become the reasons why ERP is not successfully implemented. There are many reasons for failures of ERP system, one of them time. Most of ERP projects take more time than scheduled to be completed, due to which the cost also increases. In this paper I have given an idea how Knowledge Management can be implemented to minimize the failure of An ERP implementation of an organization.

*Research Scholar (Asst Prof In Lingaya's University)

** Head of Department (Engineering),Affiliation: JNU, Jaipur

1. Introduction

Knowledge management

KNOWLEDGE MANAGEMENT is the process of creating, capturing and using knowledge to enhance organizational performance [1]

Gryskiewicz propose the six principle of knowledge management

1. Knowledge is personal.

2. Capturing knowledge does not ensure an increase in performance

3. Acceptance of Knowledge Management comes by connecting people.

4. Technology is necessary

5. Knowledge Management learning events focusing on helping individuals and team learn before.

A key component to the successful delivery of knowledge management solutions is going.

Knowledge can be categorized into two forms namely.

- Explicit or

- Tacit.

Explicit knowledge can be thought of as knowledge that can be expressed in terms of words and numbers. It can be shared in form of data.

On the other hand tacit knowledge is highly personal, hard to formalize and difficult to communicate [2].

1.1 Challenge in knowledge

The bigger challenge in knowledge management is to convert tacit knowledge in to explicit knowledge. Tacit knowledge is commutative store of experience, expertise, understanding, learning skills and expertise. This comes through the past and present experience. It can also

referred to as embedded knowledge is usually localized either with in the brain of an individual or embedded in the group interactions within a department or branch office [3].

Tacit knowledge involves expertise or high level skills. It is diffused, unstructured without tangible form and therefore, difficult to coding. It is difficult to put tacit knowledge into words [4]. For example you can not express correctly the whole movie with expression of characters in words. Tacit knowledge is highly personal and hard to formalize making it difficult to communicate or share with others.

Explicit knowledge is the policies, written text, white paper, annual report, product, strategy, goal, mission and profile of the organization. It can be shared through communication and media, but is difficult in the case of tacit knowledge. Tacit knowledge can be sometimes communicated through shared understanding between individuals. But tacit knowledge must be converted into explicit knowledge before it can be shared [5].

2. Enterprise Resource Planning systems

Enterprise Resource Planning (ERP) system is an iterative system for identifying, analyzing, evaluating, testing, and monitoring the entire process of an organization or a company. In every organization, Enterprise Resource Planning is recognized as, an essential contributor to business and project success. Enterprise Resource Planning mainly focuses on addressing business or project uncertainties, in a proactive manner in order to minimize threats, maximize opportunities, and optimize achievement of objectives.

Figure 1 Isolated Information System   **Figure 2** ERP System
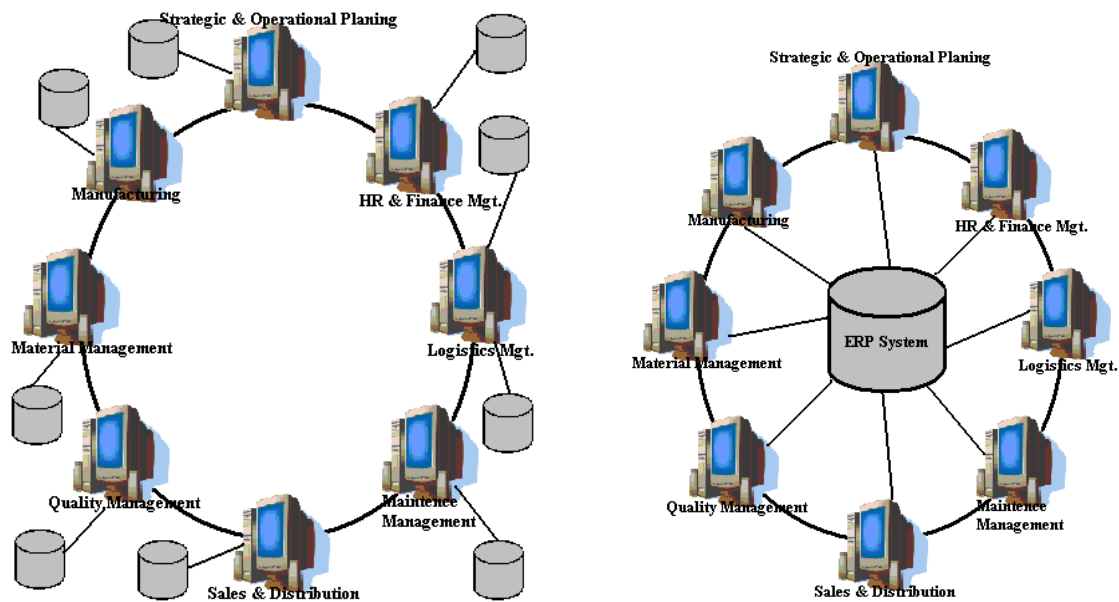
There is wide convergence and international consensus on the necessary elements for an Enterprise Resource Planning system. Enterprise Resource Planning software is intentionally designed to model and automated many of the basic processes of a company. It established an effective link between the various functions of a company from top level to the bottom level of the hierarchy, with the goal of integrating information across the company, figure 1 shows A pre-ERP Scenario where all the department have its own system to handle their day to day activity. But in figure 2 shows how information is integrated with in an organization using ERP system. This system is similar to the pre-ERP system but, in the Enterprise Resource Planning system all the different departments of an organization are linked to a centralized system which stores all the information from various departments. Any department at any time can gain access any required information from any other department via ERP or from the ERP database itself [6].

2.1 Benefits and Use of ERP System

Enterprise Resource Planning system has many advantages both direct and indirect. The direct benefits include improved efficiency, information integration for better decision making, faster response time to customer queries, and so on. The indirect benefits comprises better corporate image, improved customer goodwill, customer satisfaction and so on.

Some of the benefits that you can find in an organization with Enterprise Resource Planning implementation are [7]:

- Reduction of lead-time

- On-time shipment

- Reduction in cycle time

- Better customer satisfaction

- Improved supplier performance

- Increased flexibility

- Reduction in quality costs

- Improved resourced utility

- Improved accuracy of information and decision-making capability

2.2 Life Cycle of ERP implementation

Following are eleven phase which involve in Enterprise Resource Planning implementation life cycle. First two activity pre-selection screening and package evaluation are optional if an organization already decided which ERP package they want to implement in their organization [8].
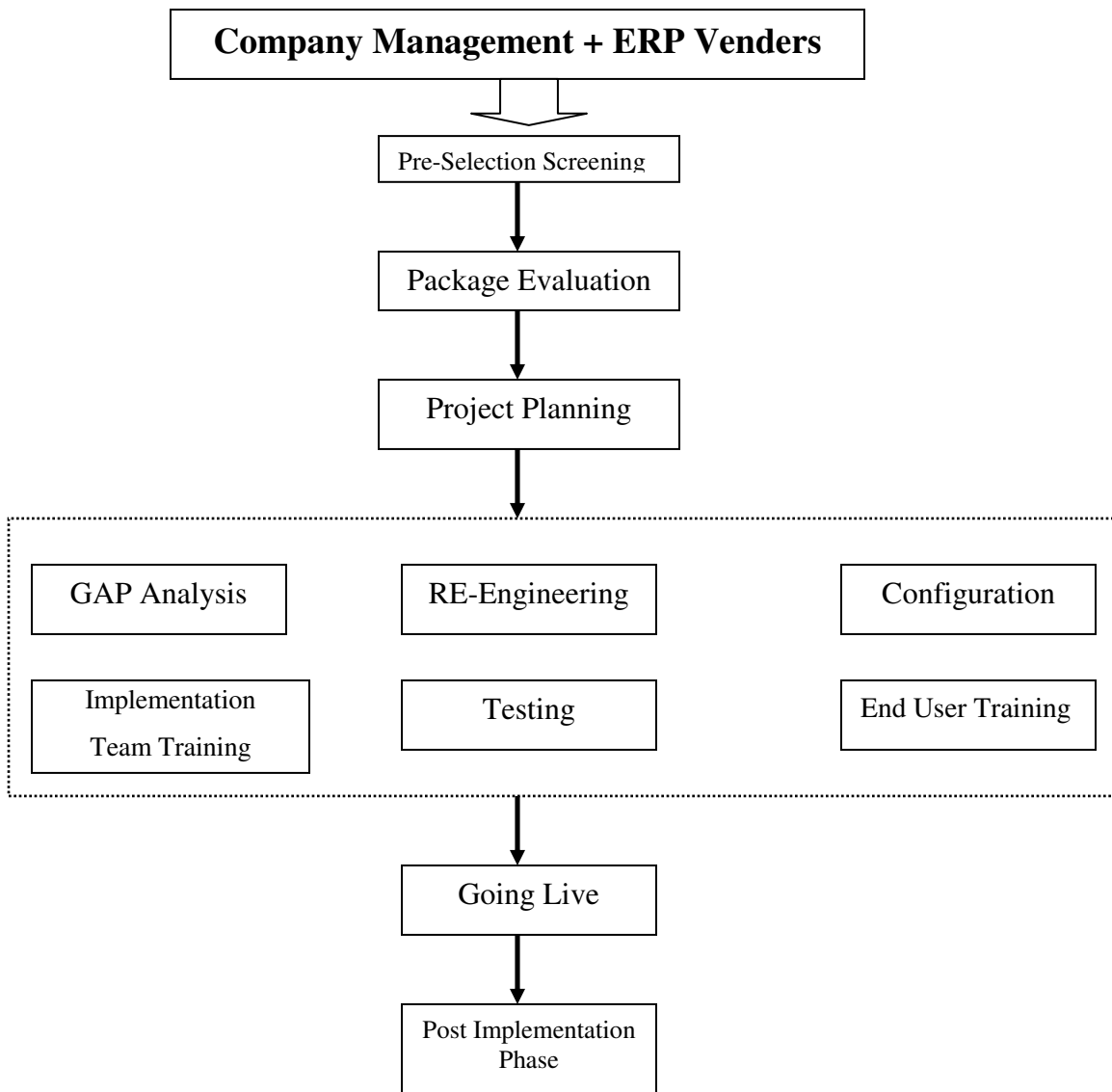
Figure 3 ERP implementation Life Cycle

2.3 Failures of ERP

To work successfully, the ERP solutions need to address a lot of factors. There should be good people who know the business. The vendor should be good, and his package should be one of the best suited for the, company's needs. The ERP consultants should be good. The system developers should plan well and execute perfectly the implementation. The end user training should be done so that the user must be aware of the system, and effect of their efforts on the overall success of the program. In case of any of the above mentioned factor are not addressed

properly by company's top management, the possibility of system failure is evident during the implementation process of the ERP system.

ERP implementation takes a lot of effort, time and money and if these are not handled properly they can become the reasons why ERP is not successfully implemented. Most of the ERP projects take more time than scheduled to be completed, due to which the cost also increases. There are many reasons why the delays happen and one may not be able to pinpoint any one reason. The most common reasons why ERP is not successfully implemented are as follows [8]:

1. Changes

2. Communication/Coordination issues

3. Budget issues

4. Customization issue

5. Lack of experience

3. Review of Literature

In a research three dimensions of KM is focused, namely Knowledge creation/capturing, knowledge integration and knowledge transfer, while most past research has dealt with knowledge transfer. These three dimensions of knowledge management are [9]:

Knowledge creation & capture: the implementation of ERP creates a new knowledge of new routines and procedures specified in the ERP system. ERP implementation also requires the capture of explicit and tacit knowledge of the business processes [10].

Knowledge sharing: there are mainly two type of knowledge, transferred during an ERP implementation; transfer of existing businesses process to vendors and transfer of ERP knowledge to users [11].

Knowledge integration: knowledge integration issues stem from team functioning related issues and management issues.
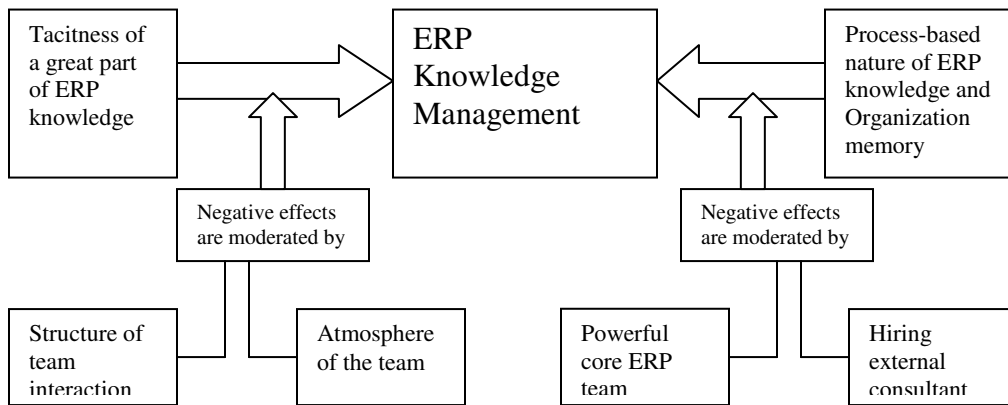
Figure 4 Two major areas of concern regarding the management of enterprise system knowledge and their respective facilitators

This work investigated the major concerns of different lines of research which arise as the consequences of two distinct characteristics of ERP specific knowledge: tacit and process-based nature of enterprise system knowledge. Fig 4 summarized these two areas of concerns in enterprise system knowledge management along with their facilitators that moderate their negative effects which are identified to be prevalent in cases studies by different researches. The first area concerns the effect and implication of the tacit chunk of ERP specific knowledge. The subject of tacit knowledge management is addressed extensively in the literature and different issues along with their respective mitigating solutions are provided in various research works.

Tacit knowledge sharing facilitators during enterprise system implementation are classified in to two categories: structure of team integrations and atmosphere of the team. Proper utilization of each method can assist the adopting organization in overcoming the difficulties of tacit knowledge sharing. Organizing communities of practice composed of the different groups involved in different stage of enterprise system life cycle is one way to overcome the difficulties of transferring such knowledge from where it resides to where it needed.

Process-based nature of organizational knowledge is the second area of concern in enterprise system knowledge management whish was examined from the lens of organizational memory. Organizational process embeds substantial knowledge of the organization's history and can be

regarded as the organizational memory. Viewing the ERP knowledge through lens of organizational memory sheds light onto some interesting issues of concern in ERP implementation projects.

ERP implementation is continuous improvement effort and continued efforts after system start up will influence the ultimate success of an ERP implementation system. This research work defines a four phase ERP refinement model that incorporated knowledge management into each major implementation phase.

4. Problems to be considered

(i). Changes

If there is a change in the management or in the management procedures, it can cause delays. We are concerned with designing of a system in which changes related to short term need should be avoided. A number of changes have to be made in the automated system and take time. These changes are not easily accepted and cause problems.

(ii). Implementing proper Communication/Coordination between departments for ERP system implementation

A lack of communication or a lack of coordination is one of the most common reasons for ERP failure. The ERP implementation process involves a lot of people and it is essential that proper coordination and communication exists between these people. A proper understanding with the customer is essential for the proper functioning and lack of it can cause failure.

(iii). Appropriate Customization of the system

ERP can be customized to fit the requirements of the client. However, too much customization can become a problem and eliminate all the features of the application. The application may not be able to support the real time environment and turn into a failure.

(iv). Applying KM in ERP to utilize Human Resource in term of experience
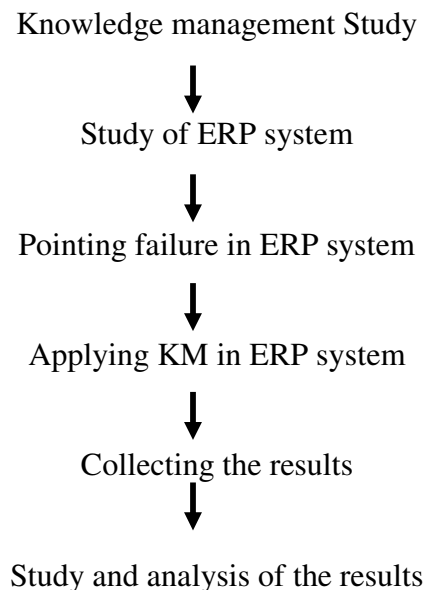
Many people are involved in the implementation of the ERP. The consultants and the project manager have an important task and their roles and responsibilities are well defined. They need to be experienced in their fields for proper execution of the project.

5. Methodology

This study focuses on a contemporary phenomenon in a real life context and explores how and why questions. Hence we adopted case study approach [12].

A combination data analysis technique including pattern matching and explanation building formed a major part of the investigation.

Flow of work will be as follow:

Knowledge management Study

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Study of ERP system

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Pointing failure in ERP system

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Applying KM in ERP system

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Collecting the results

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Study and analysis of the results

6. Conclusion

In our proposed research work we have considered Knowledge management to minimize the failure of ERP based system implementation. We have proposed to apply different techniques for this purpose.

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