

Solving the Problems in Sharing the Information in ERP Implementation Systems

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Abstract: Enterprise Resource Planning Systems, usually referred as ERP, is one of the largest areas in Software Implementation. ERP Systems are systems, which are used to manage the information and functions in a company. It is also used to solve a lot of business problems and to transfer the knowledge in a particular business environment effectively into a database, where information can be connected together. ERP Systems are also used where information are need to be shared easily and securely. The best known ERP Systems are SAP, PeopleSoft, Oracle Applications and J.D. Edwards. As ERP Systems can help in business growth, companies tend the implement the same. As Implementation of these ERP Systems, would lead to modifications within an organization, there is a possibility of sharing redundant information. Due to unskilled employees, it becomes difficult to implement an ERP System, and it requires a complete knowledge transfer, which includes a step-by-step process for each flow of information. The difficulties in transferring this knowledge between employees, customers and within departments in an Organization can be solved using the Knowledge Management, which might support this ERP Systems. This paper discusses about the Knowledge Management process, which could help in solving the problems in sharing the information in ERP Implementation Systems.

Keywords: Enterprise resource planning (ERP), Knowledge Management (KM), Enterprise System (ES).

1. INTRODUCTION TO KNOWLEDGE MANAGEMENT

Davenport et al, (1994) defines Knowledge Management as the process of capturing, distributing and effectively using knowledge. Duhon et al, (1998) of Gartner Group defines it as a discipline that promotes an integrated approach to Identifying, Capturing, Evaluating, Retrieving and sharing all of an enterprise's information assets. These assets may include databases, documents, policies, procedures, and previously un-captured expertise and experience in individual workers.

Knowledge Gathering Methodology

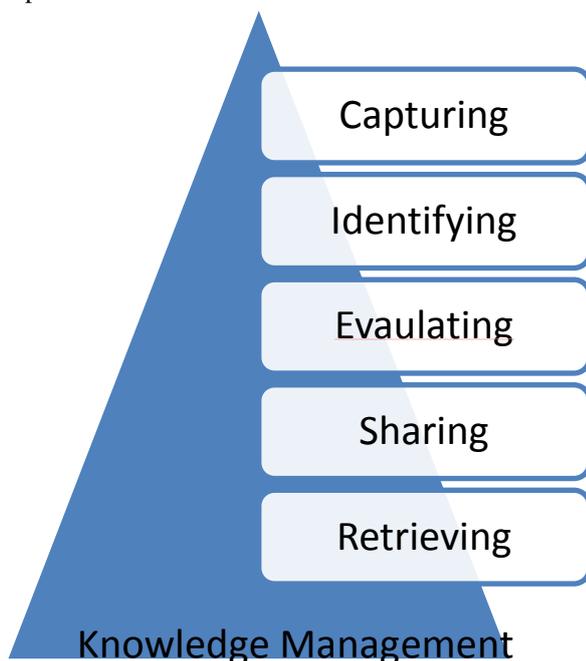
Before Implementing the Knowledge Management, information about the work process within the company, need to be gathered through formal and informal interviews with different employees like management, administration, etc. These interviews are done repeatedly for a period of time, until all necessary information are gathered. After gathering the information, a work plan will be created.

2. INTRODUCTION TO ERP SYSTEMS

An Enterprise System (ES) is set of integrated applications that interact together to perform the functions of the organization [1,2]. Enterprise Resource Planning(ERP) as integrated, customized, packaged application software solutions that is employed by organizations to interact with a range of processes and functions into a holistic view of the business from a single IT architecture [3,4]. There are four stages in ERP life cycle i.e. analysis, design, construction, and deployment, and each stage has deliverables and outcomes [5].

Benefits of ERP Systems

- a. ERP Integrates people and data while eliminating the need to update and fix many separate computer systems. For Example, Boeing had 450 data systems initially and now has a single system for recording all its production data.[6]
- b. ERP allows management to manage operations instead of just monitoring them, as ERP gives answer to the



question “How are we doing?”. As ERP System has all the required data, it captures data from each business unit and then analyzes the data for a complete and integrated picture, thereby focuses on enhancing the management and making the organization more adaptable. [6]

Problems in ERP Systems:

• Name conflicts – Lack of Experience Issues:

Names of the products used in an organization are represented in different ways in different departments. These name conflicts causes confusion.

• Lack of updating information – Changes Issues during Implementation:

Modification of updated price is very important in a business. If there is a deviation in the price mentioned in purchase order and invoices, it might lead to trouble in the finance department and checking the individual invoices and purchase orders will be time consuming.

• Issues of Communication and Coordination:

➤ **Maintenance of Product Stock**

○ Deviations in stock and purchase order department leads to purchase of products, which would have already been purchased based on customers' request.

➤ **Accounting Information.**

○ Information related to invoices needs to be maintained in the system, so as to avoid confusions due to retired or left employees of the company

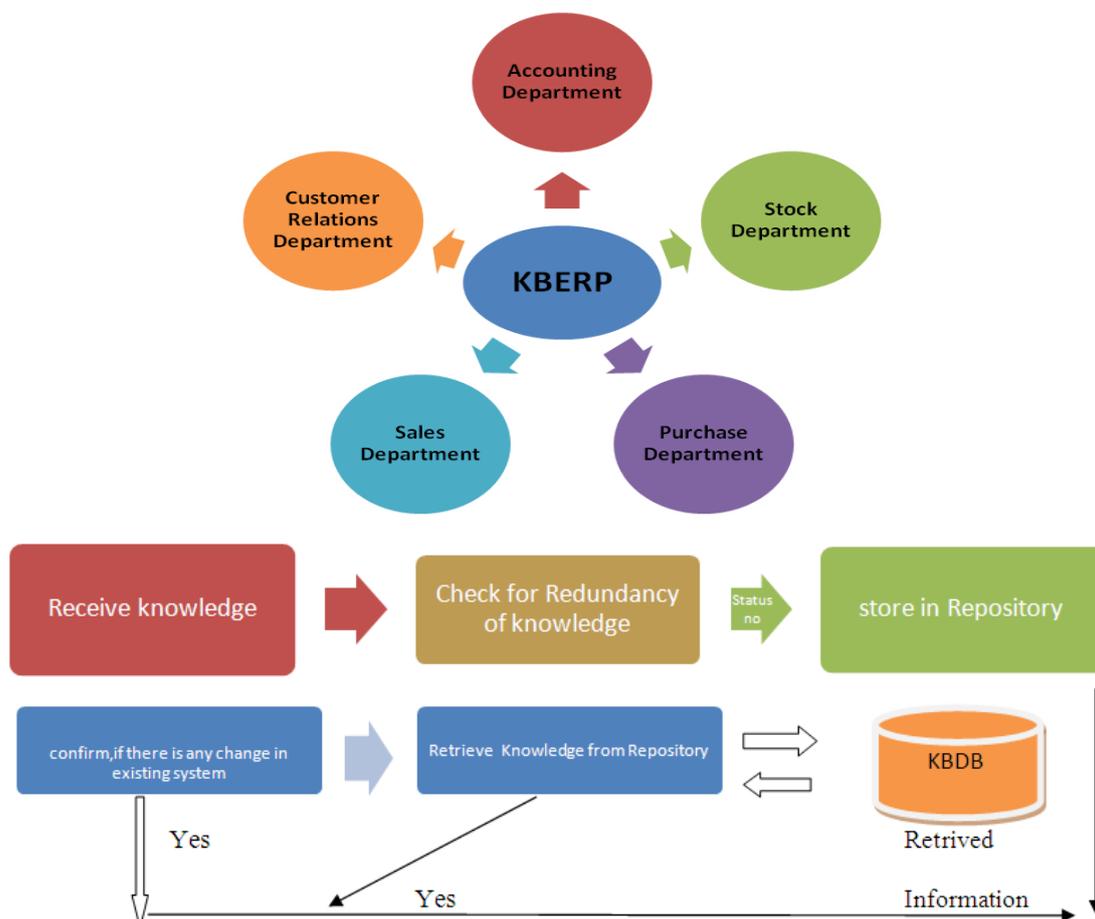
These problems can be solved, if Knowledge Management is merged with Enterprise Resource Planning and constructing a knowledge bank for storing the knowledge, which addresses the problems, discussed above and Improves the experience of sharing.

ERP and KM

Transfer of knowledge related to work procedures of the organizations and transfer of knowledge to users about the use of ERP Systems are the categories of knowledge transfer during ERP Implementation. Knowledge Management can be used to identify all kinds of special knowledge which will help us in managing ERP in the right way and to distribute knowledge at various levels.

KBERP will have the database of all kinds of knowledge from various departments like, Sales, Purchase, Stock, Customer Relations and Accounting. The data will be analyzed before storing into this Knowledge Bank.

Issues pertaining to name conflicts usually arise due to the members who are newly joined in the organization. This can be solved by following a common naming convention across departments. Rules related to this can be stored in the proposed system and it can be used by the members before getting involved with the ERP Implementation. Issues pertaining to non-maintenance of consistent information and Issues of communication and coordination could also be solved by sharing that information in KBERP systems to avoid deviations.



Proposed Framework

The Proposed Framework KBERP (Knowledge Bank ERP) is used to capture information from various departments of the organization, so that it can be used to solve the problems in ERP Systems, which was discussed previously.

3. CONCLUSION

Knowledge management is a superior information management process, combining ERP and Knowledge management. KBERP is information processing for such tasks. It adapts to the progress of enterprise management form. This paper focuses the basics, coherent comparison of the parallel between ERP and KMS. It is based on the proposed Multi-Agent based ERP knowledge management system framework. The conceptual model based on thinking from the management, software implementation, the three integrated systems perspective of the relationship between ERP and KMS to form enterprises to adapt to the combination of ERP and KMS integration of knowledge management model, which can be a powerful to promote knowledge management enterprises. The proposed knowledge-based ERP Multi-Agent Management System Model is Efficient in term of implementation. In conclusion, the paper describes the process from planning to implementation of knowledge management ERP system with multi-Agent interaction and impact from three concepts, management thinking, software and system. The Future work will be refining the multi agent process to adapt the system.

REFERENCES

- [1] Hernandez J, "The SAP R/3 Handbook", New York, McGraw Hill 2000.
- [2] IDC, "Enterprise Resource Management Application Market Forecast and Analysis," IDC Software Research, June, 2000-2004.
- [3] Watson E., Schneider H., "Using ERP in Education", Communications of the AIS, Vol, No 9, February 1999.
- [4] Klaus H., Rosemann M., Gable G., "What is ERP?", Information Systems Frontiers, Vol2, PP. 141-162, 2000.
- [5] Thomas, Zhenyu Huant, "Incorporation of Knowledge Management into ERP continuous improvement: A Research Framework". Issues in Information Systems. Nov 2 2004.
- [6] CONCEPTS IN ENTERPRISE RESOURCE PLANNING, Ellen F. Monk University of Delaware Bret J. Wagner Western Michigan University, Fourth Edition, 2013.