

9

KNOWLEDGE MANAGEMENT FOR ERP IMPLEMENTATION

Kong Rong, Othman bin Ibrahim

9.1 INTRODUCTION.

The business people are arguing how to implement ERP successfully. But there a single point where everyone is the same – effect of ERP implementation in the large is management, while technology has just its local impact. So how to reinforce management is becoming more important in ERP implementation. Success story to share on ERP implementation is actually less than 20% resulted from many enterprise failures, including Dell and Boeing [1]. Therefore, how to implement ERP becomes a question.

The ERP is also known as neural network of enterprise. But ERP is usually not integrated into the enterprise. ERP is more likely an advanced management system; it is not just a tool for big enterprises. To achieve this goal, most enterprises normally choose to create training programs that ERP has its own role to play. Nevertheless, this traditional way needs a lot of time with limited trained employees from the training programs. These problems re-emphasize the importance to reinforce in management.

Apparently, an ERP system merges firm's data, information flows and business processes into a single package [2]. It provides a tightly integrated solution to information system needs of the organization. These solutions are in high demand by both manufacturing and service organizations [3]. However, most implementations upshot failures in terms of time cost, and scope

[4]. Gradually, modern organizations have realized the need of properly managing the two types of assets, namely, physical assets and knowledge assets. In order to manage knowledge assets, the integration of KM and ERP systems becomes a strategic initiative [5]. The principles and practices of implementing ERP and other information system projects have certain major differences. These can be mainly attributed to the cross functional nature and the broader human interaction in the ERP implementations. In fact, the ERP implementation may lead to redefinition of jobs and demolition of organizational boundaries [6]. ERP systems facilitate KM related activities in a number of ways. Accordingly, KM is increasingly critical for the success of ERP implementations [7].

Moreover, knowledge is considered as enterprise's invisible assets. In our time, knowledge already becomes the key resource of economic growth and the social development and the enterprise growth. There is the most important thing for enterprise which is maximum grasping and using knowledge. Unprecedented attach importance to knowledge, causes the Enterprise Resource Planning (ERP) which is using chain of work as stress, faces a stern challenge. Therefore, my research will be discussing on how to use knowledge management to help and support the ERP implementation.

9.2 LITERATURE REVIEW

9.2.1 The Relationship between Knowledge Management and ERP

Knowledge management is a collective enterprise knowledge and skills acquisition. Consequently, the distribution of knowledge and skills to help Enterprises in achieving maximum output of the process Goal of Knowledge Management is to seek the most appropriate knowledge to the most appropriate people in the most

appropriate delivery when needed. Thus, enabling them to make the best decisions. So, the connection between ERP and knowledge management is still not clear.

9.2.1.1 The Relationship of ERP and Knowledge Management

In the implementation of ERP systems, most companies change their business processes to adapt to the ERP system in the real business world - the industry standard implicit business processes. It means workers must abandon the original business process and accept the standard of ERP system process knowledge. The implementation of ERP standard process itself is the dominant standard business process transformation of knowledge. It is the conversion of knowledge implicit in the acceptance of ERP enterprise management mode, the formation of the new management model and the process of corporate cultural values. Based on Knowledge Management concepts, it can effectively conclude and sublime explicit knowledge which is produced during ERP implementation. It can make explicit knowledge easy to use. It also can be used by discussing, communicating, imitating, practicing and so on. With those processes, the tacit knowledge can be transformed to explicit knowledge. With these two knowledge's management and reciprocal transformation, they promote knowledge creation. It can help the enterprises having advantage and benefit in the competition.

On the other hand, the implementation and application of ERP is a complex information system construction process. It is also very inconvenient. But from the Knowledge Management angle, ERP implementation is the process of knowledge transfer and accumulates:

- (a) Enterprise employees have a clear idea about the successful business process and Knowledge Management Lifecycle process.

- (b) Have a clear idea about current management logic of ERP, and management lifecycle process.
- (c) The management process of accumulate, create, and spread knowledge of ERP application knowledge.

By managing these three lifecycle processes, it can effectively support and help ERP implementation and application. Thus, it brings forth energy to enterprise. The relationship between ERP implementation and Knowledge Management can be described in Figure 9.1:

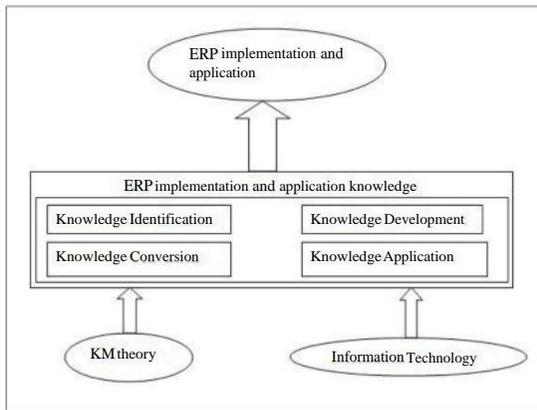


Figure 9.1 The Relationship With ERP Implementation Application And Knowledge Management (Chang Xiangyun, Chen Zhigao, 2004)

Knowledge Management is through the use of Knowledge Management concept and Information Technology. From the knowledge stream of management, ERP implementation and application process, it distinguishes, develops, diverts, and the use of ERP implement and application produce knowledge. By implementing system management, it increases enterprise knowledge's storage and accelerate innovation of knowledge. This knowledge content of management is used by the whole process of ERP implementation and application. It also supports

ERP implementation and application. If we divide ERP implementation and application into three steps, Knowledge Management is supporting every step as shown in Figure 2.

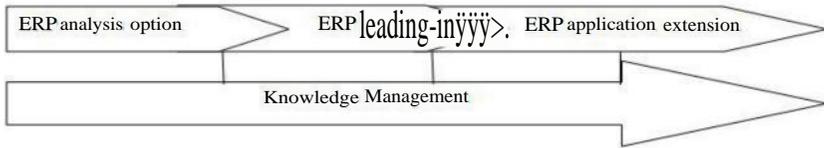


Figure 9.2 Operation Stage of ERP and Knowledge Management
(Chang Xiangyun, Chen Zhigao, 2004)

9.2.1.2 Knowledge Management Support Enterprise Demand Analysis and ERP Option

In this phase, it starts with ERP training where each user will be exposed with the ERP main function, implementation process, and software product. Users will have clear idea in financial affairs, distribution, manufacture, technology and so on. At the same time, one can learn from other enterprise or case study of ERP implementation. Hence, they can learn implementation experience and methods from them. Later, ERP users can grasp from initial situation. They can combine enterprise with its own condition, aim at lack and needful information of organization on currently framework, institute enterprise's system function and demand plan report. This is followed with overall merit on ERP product. Finally, ERP users accord their existing work flow to plan on future enterprise flow, simulate and modify, export enterprise's work flow and future blueprint. Enterprise system function demand analysis. System option will affect enterprises implementing ERP of failure and economic benefit as well. Therefore, all departments need to cooperate, survey, and modify the plan.

Moreover, execution on pertinent knowledge management

is crucial. The salient point is assimilation and spread of ERP basic knowledge, expands shared range of knowledge, and prepares for related knowledge and usage to clear about the ERP demand and the reasonable type selection.

Primarily, it should begin on the collection of basic knowledge of ERP. Educating the staff to have a better understanding of the whole picture of implementation and application of ERP is also needed. During the process of learning large scale of software, a trainee would sometimes miss some very important part of the core knowledge. This kind of ephemeron may become more apparent when the software is very complex and due to a limited ability of trainee. Moreover, learning is a process of gradual understanding and practicing. Therefore, using some tools of knowledge management and ideas, especially knowledge transformation, could support this kind of learning process. Furthermore, some information of ERP needs to be collected and distributed to every staff. For example, some related training of advisory consultant should be given to the employees. They have to make sure that every staff could understand questions like, why our company should carry out ERP program and what is the major task of implement of ERP, as well as the function of individual module. This could promote the employees' knowledge on the basic modules of ERP. In summary, studying some business cases could help our staff have a better understanding of the benefits of learning ERP and the program's aim in making the staff understand the design concept and basic function of ERP before they make detailed solution.

Secondly, one has to use known knowledge to support demand analysis and ERP type of selection. Before an enterprise choose to implement ERP system in the office affair, they should do abundant survey, expend source of information, and combine all the demands of the enterprise departments, to be a new demand for the whole enterprise. This action is one of the ERP selection standard procedures which are advisable to avoid future disagreements. This action will enhance exactitude of system selection and satisfaction of system operation. Enterprise

employees will have some knowledge in ERP when they do some studies. During the demand analysis and type selection, they have ability to do their jobs. At the same time, they will learn some knowledge and to show it when they're in their position. More opinion, give counsel, is a passive execution order for the enterprise leader.

9.2.1.3 Knowledge Management Support ERP System Leading-in

ERP leading-in process is defined as “from the first model of enterprise leading-in system to all the final model of leading-in system”. This organizationally structures the business flow to improve ERP system leading-in phase. The whole process seems easy. In fact, it is all linked with one another. Leading-in an ERP system needs users and implementation work together and coordinate. For example, ERP system provider has to provide system software and relevant document as soon as possible. Likewise, preparation for training and testing environment for project implementation person and users are also needed. ERP consultant firm is in charge of managing project in every respect, to make sure they can finish work on time with high quality. ERP implementation enterprise or ERP user has the most important role. Its responsibility is to clear with ERP relevant content, to know well and grasp software operation process, and learn some content-related of software.

In this phase, the core is on how to manage the knowledge. The salient point is absorbing and spreading of ERP system knowledge, expands sharing range of knowledge, educates organization business cadre man, and to support ERP. With all these things, leading-in can be successful. In ERP system leading-in process, there will be frequent errors or problems. Hence, the ERP users will need to discuss with ERP consultant having the same problem to solve. When ERP user and developer pinpoint the problems, they should base on Knowledge Management idea.

Then, record the problem. In some situations, ERP user may have same or similar problem. If the problem has been solved, ERP user can find previous solution; also one can find who did it and information about the solution. If the problem still exists, and the other has the same problem, then they can cooperate together to find solution; otherwise it will cost user and implementer more time. For this situation, we should start from knowledge transform. Let people from the enterprise join into the learning and know leading-in process.

9.2.1.4 Knowledge Management Support Application and Extension of ERP System

In the application and improvement phase of the enterprise import ERP system, it needs to consolidate ERP technologic framework. This allows stable work table for staff. This phase provides process of knowledge mining, knowledge accumulation, knowledge innovation, and knowledge dissemination for ERP system application technology. It can make daily operation flow faster, reduce the cost, straighten out ERP system flow, and gain profit.

The importance of Knowledge Management includes two aspects: one is for system captured data to knowledge excavate. Another, it is more focused on personal tacit knowledge to organization knowledge transformation, system management of distributed knowledge and promotes sharing.

Primarily, focus on system captured data to excavate knowledge. User of an Enterprise implementation ERP system always hopes they can get some valuable things from system. For this kind of action, it becomes: data → information → knowledge. Continuing usage of ERP will capture huge amount of data that involves huge usable information which is an important source of enterprise. Enterprise should adopt suitable tools such as statistical software, data mining software and so on. The top management is advised to encourage employees in

excavating related knowledge as these can be used for doing management decision. Thus, bringing benefit to enterprise.

Secondly, focusing on personal tacit knowledge transforms to organization knowledge, system management and sharing of distributed knowledge is needed. Upon completion on importing ERP, besides daily maintenance, it may have new requirements. When something wrong happens to the system, improvement is vital. If system runs well, enterprise needs new requirement. Where it needs to extend function, it needs people to continue work for system maintenance and development.

There are many well known and huge ERP system makers. Quantity is a kind of method for measuring its size. The well-known companies of ERP are: SAP, PeopleSoft, Oracle and so on. For example, ERP system of Oracle has about 40,000 tables. It is not easy to understand the functions of this product. One enterprise using 100% of ERP function is impossible. As an enterprise and business movement changes, they are also using this software in longevity. Furthermore, it also needs to understand ERP system enterprise' own employees. They can study advanced idea in ERP. Agilely, use ERP system and its other functions to solve new problem of enterprise developing process. So we can conclude, then, that people are the core in ERP application because people have the knowledge of system application. Using ERP system is not the end of ERP process though. If we want to implement all ERP functions and to help enterprise achieve all abilities and economic benefit of ERP implementation process, we should positively use Knowledge Management strategy; continually focusing on ERP system and the person who uses the system. One aspect is to enhance employees' personal knowledge excavation. Moreover, one can also enhance existing knowledge management system by studying employees' reduce enterprise knowledge and how to prevent staff loss.

9.2.2 Details of Knowledge Management in ERP Implementation and Application

There are lots of knowledge productions in ERP implementation and application. This can be divided into five aspects: knowledge in documentation, new knowledge in implementation and application, knowledge in ERP consultant firm, knowledge and industry experience in ERP provider. Figure 9.3 illustrates this.

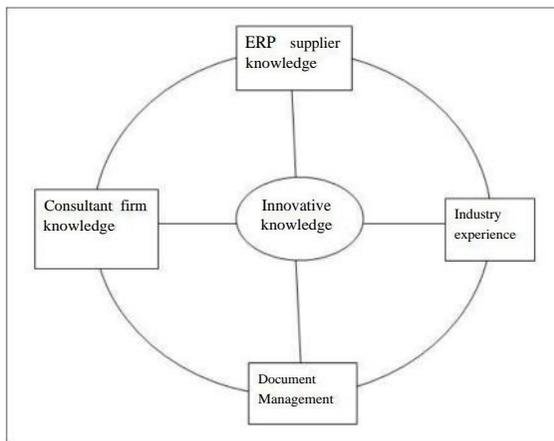


Figure 9.3 The Content of Knowledge Management in ERP Implementation Application

9.2.2.1 Knowledge in ERP Consultant Firm

A consultant firm plays a very important role in implementing ERP project. For enterprises, they rely on experienced consultant firm to provide guidance in information-based process, where it can help enterprise to prevent mistakes. This can guarantee that all things are properly done. ERP is not simple generalized software because the product manual has particular function declaration. Finding a way to combine software and enterprise

business successfully isn't a cup cake. Generally, regular ERP consultant firm has the following knowledge:

- (a) Have profound experience in BPR (Business Process Reengineering).
- (b) Have enough experience and knowledge accumulation in several services.
- (c) Have a good ERP implementation method.

ERP consultant firm can make enterprise employees understand ERP system on deeper knowledge since “know – how” knowledge is not provided in ERP software provider training. Moreover, the experience of consultants can help users directly.

Hence, managing the relational knowledge of ERP consultant firm provides the enterprise employees to revise. It is good for employees how to understand ERP deeply, as it will reduce the resistance and hindrance of implementation. This will also increase implement success ratio and implementation efficiency.

9.2.2.2 Knowledge in Providers

ERP provider in ERP implementation and application process has the following activities:

- (a) Provide software and relevant document to user, and prepare testing environment
- (b) User training. This includes system function, modular structure, information flow, operation methods, matters which needed attention, and so on.
- (c) Having a consultant firm to cooperate together in implementing ERP.

The knowledge of ERP provider is a knowledge which needs focal point and to save. One aspect is ERP training itself is a study process. It is impossible to understand all things in the

training process; it needs understanding in the usage stage. On the other hand, enterprise may experience staff changing and dropout problems during ERP implementation and application process. If enterprise can manage related knowledge, this action may reduce investment of staff training.

9.2.2.3 Document Management

Standard flow leading-in process needs lots of document usage. This document is the emphasis of Knowledge Management in the phase. It involves:

- (a) The complete documentation of enterprise flow before enterprise import system, standard flow of ERP system and the difference of both; for enterprise Business Process Reengineering (BPR) to refer and using for ERP customization
- (b) Demand analysis document
- (c) The whole record of enterprise Business Process Reengineering process
- (d) Solution of ERP implementation and the whole record of standard process after enterprise import ERP system
- (e) Training document
- (f) Changing document management
- (g) ERP operation manual
- (h) Client software and redevelopment document
- (i) Implementation planning and change of plan document

Demands, suggestions, solution and conclusion regarding ERP related implementation have to undergone documentation and standardization. Following this system management stages will make it more becoming a part of Knowledge Management. This action is good for consulting, communicating, and studying in ERP implementation and application process, and it can reduce training fee.

9.2.2.4 Innovative Knowledge in Implementation and Application

Innovative knowledge means the implementation and application process. Thus, contacting enterprise employees who understand and have experience in using ERP system. Combination of antilogous knowledge generated experience should also be considered. With Knowledge Management concept and related incentive system, transform to usable document is easier. In ERP implementation and application, many enterprises face brain drain problem. Based on a survey conducted [1], it showed that 95% above enterprises met the similar question, especially in big city and great enterprise. ERP is a long-term system, hence we need to understand the advance ideas of ERP, use the other function of ERP software flexibly in order to solve new problem in enterprise developing. So ERP application's core is people, and how it is about knowledge of people hold in hand.

Knowledge management produces tacit knowledge, therefore absorbing explicit knowledge more rapidly in employees' intellect. Tacit knowledge holds quite great proportion in enterprise knowledge resources. It has its vital role to enterprise's continually innovation, and it is a precious resource of enterprise. Strengthen management; on the other hand, is making tacit knowledge becoming explicit knowledge. Therefore, it expands the range of knowledge sharing. It is also an encouragement for enterprise employees because the result could be something that they can be proud of.

9.2.2.5 Industry Experience

As enterprise implementation goes, "give limitation where 100% is impossible". Therefore, precept of ERP in other enterprise, implementation, and application can provide thread to ERP implementation and application.

9.2.3 The meaning of Knowledge Management Support ERP Implementation and Application

There are two aspects that embody the meaning of Knowledge Management on support to ERP implementation and application.

9.2.3.1 Accelerate Knowledge Transform to Organizational Knowledge of ERP Production Company and Implementation Consultant Firm

The limited understanding on enterprise work style on ERP Production Company and ERP consultant firm makes an excessive dependency state. It causes data planning, gathering data and software implementation according to enterprise request to take place. Previously, this was a serious issue because when some unwanted incidents occur, they are unaware of the usage. Secondly, if the knowledge transformation process is not good, ERP production company and implementation consultant firm can leave anytime. Enterprise is the main part of ERP application. The success of ERP is building on enterprise which its own employees can use the system and management analysis.

9.2.3.2 Reduce Loss of Manpower Flow

Finally, in the ERP implementation, enterprise brings the innovation. Businesses, staff, organization which may often change, need constant adjustment. In some enterprises, they will need to modify their system after implementing ERP. Unfortunately, expertise may not remain, hence the issue on updating will arise which will cause a big test of enterprise Knowledge Management. Therefore, the need of having KM is crucial as it will reduce this kind of loss, [1].

9.3 METHODOLOGY

Following a line of investigation, there are four phases in my research:

- (a) Phase 1: Identification of Research Area – in this phase, researcher reviews and expounds the problem of ERP implementation, continues with research scope, research, and objective and explains the importance of the research.
- (b) Phase 2: Literature Review – exploration of Literature Review and understanding of Knowledge Management for ERP implementation.
- (c) Phase 3: Data Collection – preparation of data collection. Researcher gathers data from the case study, analyzing the data.
- (d) Phase 4: Knowledge Management for implementing ERP and Knowledge Management System in ERP implementation – strategic analysis of data from previous actions of Knowledge Management for Implementing ERP section and Knowledge Management System in ERP Implementation section.
- (e) Phase 5: Outcome – concluding steps based on previous studies and outcomes. See Figure 9.4.

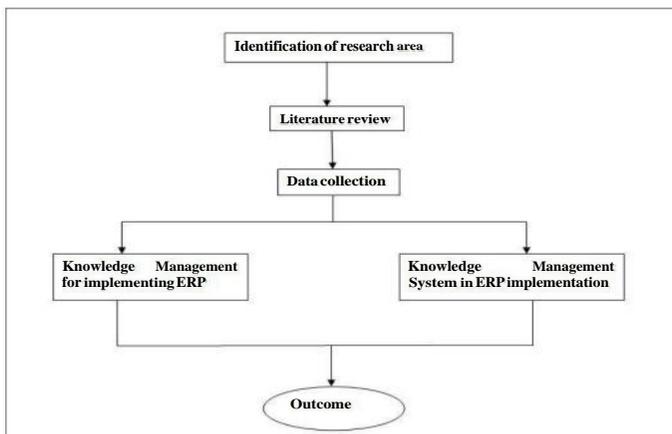


Figure 9.4 Framework of Research

9.4 CASE STUDY FINDINGS AND DISCUSSION

During the research, researcher found out that there are 3 dimensions of knowledge that are clearly identified for the successful ERP implementation – Project Management Knowledge, Business and Management Knowledge, and Technical Knowledge.

- (a) Project Management knowledge – refers on how to manage the implementation process and doing it right.
- (b) Business and Management knowledge – refers to the knowledge about enterprise structure and organizational culture to deal with these issues during or after implementation.
- (c) Technical knowledge – refers on installing and implementation the ERP system and other related system.

9.4.1 Project Management Knowledge

Based on the enterprise capacity, researcher suggested having a single project, implemented by some particular staffs. Implementing the system department by department or known as “portion to portion” implementation of the ERP can also be considered. Since Dongfeng Motor Corporation is a huge enterprise, direct implementation of ERP system will be very difficult and may cause the implementation a failure. The reason lies on the fact that the enterprise needs time to adopt the changes. Based on this, researcher suggests on following it. And in this situation, Project Management knowledge is necessary for ERP implementation.

- (a) Project Definition – project definition requires enterprise implementation staffs to identify the goals and objectives of the project.
- (b) Project Planning – project planning needs the implementation

- staffs to capture the knowledge used to plan the project.
- (c) People/Resources – the implementation staffs need to identify the implemented department's staff and resources to join together and implement the system. It is because this process can make the implementation staffs understand the implemented department's function easily and clearly.
 - (d) Time Management – the knowledge of time management is very important in any project. Managing time efficiently results to a better project.
 - (e) Risk Management – based on the ERP implementation, failure rate is quite high. With this, the implementation staffs need to identify and control the risk.
 - (f) Cost Management – the knowledge of cost management is also a major factor in the implementation of any project. In this case, Cost Management means to control cost of consultants, cost of hardware, and cost of software.

9.4.2 Business and Management Knowledge

Application and implementation of ERP system differ from some business and management, since different department has its own business and management. For implementing ERP system, the following details are suggested:

- (a) Project Definition – project definition requires enterprise implementation staffs to identify the goals and objectives of the project.
- (b) Change Management – when the ERP system is implemented, problems will occur. This will cause anxiety or fear on the part of the staffs. Change Management seeks to resolve and abdicate these fears.
- (c) Top Management support – the support of top management has been widely recognized, which is called as “the head engineering” [8]. Lots of problem will be solved easily with top management support, especially financial support.
- (d) Department Participation – each department may have a

representative to join the implementation process of implementing department. They can share the knowledge of every department with each other. And this kind of sharing will help ERP implementation directly.

- (e) Training and education – refers to make the staffs in the corporation having base knowledge in using the system.

9.4.3 Technical Knowledge

The implementation of ERP system refers to computer technologies as well. According to literature, the following knowledge is suggested:

- (a) Process Engineering – this kind of knowledge can help the organization to understand their business process better. It also helps for a better ERP system implementation.
- (b) Programming - though ERP may offer a standard set of “processes”, some parts can be customized. In this point, the programming knowledge is necessary.
- (c) System administration – this ability refers to performance monitoring, authorizations, database monitoring, and so on.
- (d) Hardware/Network – for implementing the system, hardware/network skills are required.

9.4.4 Knowledge Management and ERP System

Knowledge Management is a management which compromises a set knowledge as the core. It manages knowledge and knowledge application by using knowledge sharing and using group wisdom to enhance the organization’s innovative ability. Enterprise knowledge management theory describes the core of knowledge management in two knowledge types: the transformation of tacit knowledge and explicit knowledge, where the personal tacit knowledge will be transformed to organizational explicit knowledge. This cycle of transformation exist during the ERP

implementation.

Knowledge management rise from the knowledge management theory and knowledge management technology (such as computer processing technology, database storage technology, network communication technology and so on). With the collaboration on the knowledge of management enterprise, it is made easier to distinguish, store, share and communicate on the knowledge of ERP implementation. Thus achieving the purpose of effectively support ERP implementation. The content of knowledge management is from ERP implementation process. The purpose, however, is to effectively support ERP implementation.

The disadvantage when an enterprise implements ERP lies on the fact that it will use lots of documents. Managing these documents effectively is another problem for enterprise, especially when people test ERP. It needs lots of business data, and if there is something wrong with the data, it will directly affect ERP implementation. Hence, before implementing ERP, knowledge management system has to collect document, then store them.

The specific knowledge document includes:

- (a) ERP implementation document: such as project implementation planning.
- (b) External consultation document: during the ERP implementation, there are other consultations companies that will be attending. Consultation companies will provide consultation report, research report and so on.
- (c) Basic data document: in ERP test phase, it has to provide exact data, include all kinds of business data, documents and so on. If the data is incorrect, it will affect ERP testing and application. Implementation can even be a failure.
- (d) ERP training document: different level of employees needs different training information. Managing huge training document is also difficult by using manual alone.

9.4.5 Knowledge Management System

Enterprise Knowledge Management System involves two basic models: first, knowledge document collection, storage, sharing and communication; second, to create an environment wherein employees can communicate freely, such as E-mail, BBS and so on. Figure 9.5 shows each level of the functions.

- (a) Document Management: involves create document, audit document, find document and so on.
- (b) Knowledge retrieve: search knowledge which is needed, include enterprise knowledge map.
- (c) Communication platform: provide several ways to make the employees communicate easily, such as E-mail, BBS, and so on.
- (d) System maintenance: involve user management, keyword maintenance, knowledge classification maintenance, database configuration, E-mail configuration, database back-up and restore and so on.
- (e) Common tools: based on network's peer to peer transform document, and other tools.
- (f) Personalized service: knowledge customizes personal address list, personal knowledge base, and online studies and so on.
- (g) Expert map: classifying knowledge quickly according to its areas of expertise

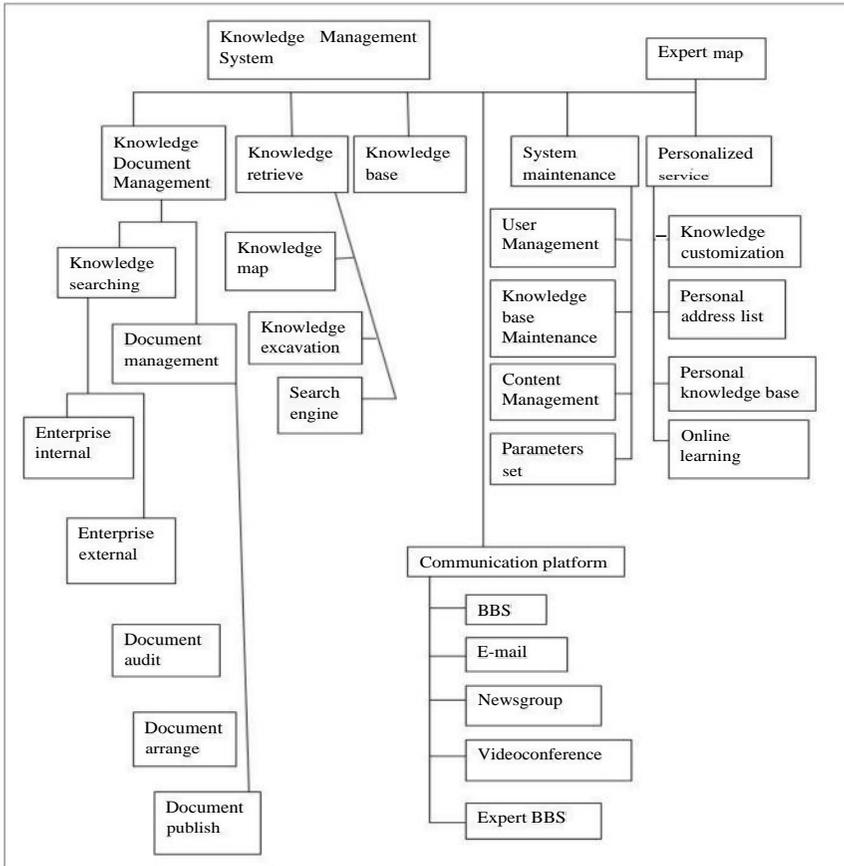


Figure 9.5 Knowledge Management System Function Level

9.4.6 Implementation of ERP

Apparently, the preliminary stride that suggested by the researcher in making the enhancement of the corporation success was on initializing a special unit that would act as black room on ERP implementation testing room and in implementing to other favored departments in the enterprise. Therefore, Finance Department must be the first implementing department. This group or department may cooperate with other ERP consultant

firm.

Figure 9.6 shows the first step for implementing ERP system. Implementation group or department has to focus on their situation to choose an ERP provider. Next, Figure 9.7 shows the implementation process.

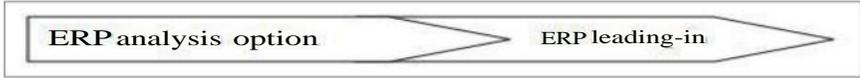


Figure 9.6 First Step of ERP Implementation

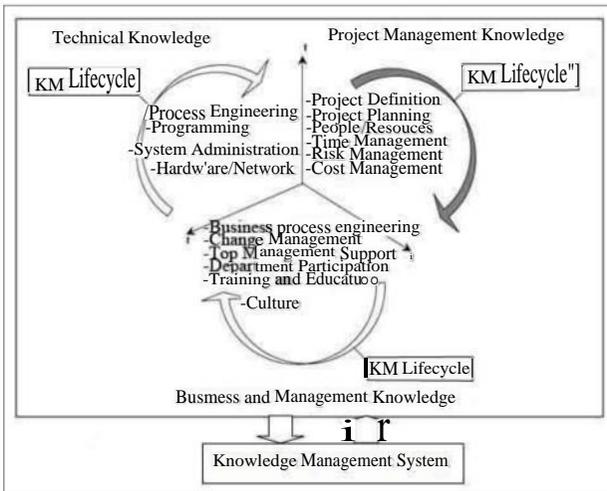


Figure 9.7 Implementation Process

The knowledge in KMS is already becoming an invisibles asset of the corporation day after day.

9.5 OUTCOME

Below is the Knowledge Management System which supports the

whole ERP implementation. The framework is shown in Figure 9.8

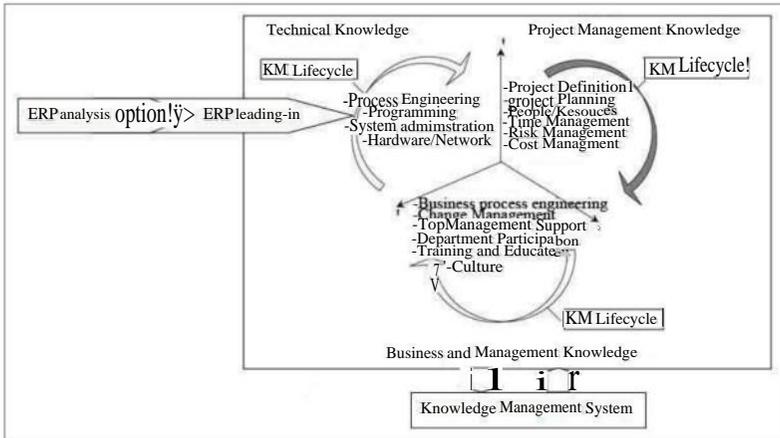


Figure 9.8 KM and KMS for Implementing ERP

REFERENCES

- [1] Chang Xiangyun, Chen Zhigao. Knowledge Management During ERP Implement and Application. 2004
- [2] C.A. Lengnick-Hall, M.L. Lengnick-Hall, and S. Abdinnour-Helm, “The role of social and intellectual capital in achieving competitive advantage through enterprise resource planning (ERP) systems”, Journal of Engineering and Technology Management jet-m, vol, 21, pp. 307–330, 2004
- [3] E.M. Shehab, M.W. Sharp, L. Supramaniam, and T.A. Spedding, “Enterprise resource planning: an integrative review”, Business Process Management Journal, vol. 10, no. 4, pp. 359-386, 2004.
- [4] N. Basoglu, T. Daim, and O., Kerimoglu, “Organizational adoption of enterprise resource planning systems:A

- conceptual framework”, *Journal of High Technology Management Research*, [online], 2007.
- [5] L. Xu, C. Wang, X. Luo, and Z. Shi, “Integrating Knowledge Management and ERP in Enterprise Information Systems”, *Systems Research and Behavioral Science*, [online], 2006, vol. 23, no. 2, pp.147-156
- [6] T. Suraweera, U. Remus, and S. Wakerley, “Dynamics of Knowledge Leverage in ERP Implementation”, *Proceedings of 18th Australasian Conference on Information Systems*, Toowoomba pp. 728-738, 2007.
- [7] H. Zhang and Y. Liang, “A Knowledge Warehouse System for Enterprise Resource Planning Systems”, *Systems Research and Behavioral Science*, vol.23, pp.169-176, 2006.
- [8] Ranzhe Jing, Xun Qiu, “A Study on Critical Success Factors in ERP Systems Implementation”, 2007