

## **Knowledge Management System Implementation: Enterprise Resource Planning (ERP)**

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**Abstract.** This is the era where digital age and technological era conquer the entire world. We can see many technologies been created every single day to make work more effective. Same as organization which they keep developing new system to help their business transaction and activities. For instance, for banking sector. They have core banking system that can help them in their daily business transaction such as loan, transfer money, remittance etc. Not only that, a small enterprise company also have their own system that can manage their business transaction such as point of sales (POS) system. By doing that, people are depending on technology to make the world function more efficiently.

**Keywords:** Enterprise Resource Planning, Implementation, Knowledge Management,

### **1 Introduction**

One of the major reasons why technology is important in daily lives because one of the platforms for communication. Whether it is for business or personal life, technology has improved communication and it make people stay connected even not in the same place. When mentioned about communication, it relates to knowledge sharing. Knowledge sharing is where people exchanged knowledge among people whether colleague, family, friends or communities. According to Rao Nemani (2011) stated that the most important for organization to achieve competitive advantage is by creating and sharing knowledge. Therefore, some of organization have been implemented knowledge management (KM) within their work environment.

Knowledge management is identifying the shared knowledge in an organization to help the organization achieve competitive advantage. For instance, big company in Malaysia such as PETRONAS, Bank Negara etc. They realize that knowledge management can give benefit to them. As they have high skilled engineering processes are involved, they figure out that they need integrated operation between various

knowledge areas. There are two types of knowledge which are tacit and explicit knowledge. For tacit knowledge, it is not easy to document it as much harder to share. This is based on someone experience and skills which depend on individual if they want to share or not. But as for explicit knowledge, it is easy to share and in documentation format which anyone can refer it in the future. To make sure that the organization can sustain their business, hence they need to implement knowledge management system (KMS) within the organization.

There are many types of system nowadays that can integrate with KMS. In this case, enterprise resource planning (ERP) can relate to KMS. According to Yuan, L., Xiu, W. L & Hong, Z. L. (2006), a process of knowledge creation, storage/retrieval, transfer and application from KM perspectives can relate to implementation process of information system in ERP. ERP is not just usual system that tailored to an organization but then it represents how well the organizational infrastructure that can affect people work and business strategy.

## **2 Enterprise Resource Planning (ERP)**

ERP is a software for organization use to manage daily business activities such as product planning, purchasing, inventory control, sales, financial and human resources into one single system with a joint database (Alavi and Leidner, 2001). A successfully implemented ERP can give major benefits to the organization such as (Yusuf et al., 2004) (i) automating business process where the system will handle all business transaction without using traditional way, (ii) timely access to management information which user can easily access the information anytime when they needed and (iii) improving supply chain management through the use of e-commerce. Nowadays, most of organization is going towards e-commerce, hence they need to have ERP to support their business need. Figure 1 summarize all functions of ERP system to organization. Based on the function of ERP, there are some important module that been using by the organization. The first one is Production Management Module where ERP systems helps in planning and enhancing manufacturing processes such as manufacturing capability, parts, components, and material resources etc. using the past data pattern and the demand by outside. Then, Purchasing Management Module which ERP systems will help in procurement process of stock and supplies. For Inventory Management Module, it is the major parts of ERP system in inventory management is to sustain ideal inventory amounts. Other than that, Sales Management Module helps in increasing the process productivity by restructuring the order management system from order to invoice and lastly cash. Next is Finance Management

Module help in making available all the financial statements to give good decision making for the organization. Finally, Human Resource Management Module. It is related to managing people process and pay outs to employees. From there, it can be seen that ERP can support business activity in order to achieve competitive advantage. ERP systems are created by using one single common database that will help to ensure information used across enterprise is normalized based on user experience. For example, an ERP can track all item and purchase of goods to ensure entire pro-

urement process use consistent and clean data. ERP can benefit to business such as improve business insight to generate report in real-time information. Meaning to say, it can generate real-time report so that it can make better decision making and enhance business insight. Other than that, it will enhance efficiency of work through a common user experience as well as business processes. ERP can help people to improve their work such as they do not have to do it manually as it will require more time in their work.

### **3 Knowledge Management System (KMS)**

Knowledge is a facts or information based on someone's experience, know-how, skills and understanding for certain subject. Knowledge can be anything that is valuable to certain things. In this context is about benefits knowledge to the organization. This time, people are aware about the importance of knowledge not only to them but to the organization. In other way, we can say that organization need knowledge to improve their performance of organization. From knowledge, it has two types of knowledge under it which are tacit and explicit knowledge. These two types of knowledge can be seen in the structure of organization where we can see how the creation of knowledge from tacit and explicit knowledge. Tacit knowledge approach highlights understanding of knowledge certain individual. It can be their experience, practice, values, understanding and know-how. Compared to explicit knowledge, tacit knowledge is very hard to communicate as it is depending on someone how they transfer their understanding when it comes to tacit knowledge. Because of it is hard to communicate, this type of knowledge requires special mode to transfer the knowledge. As for explicit knowledge, it can be identified in a form of documentation, reports, database, images, figures and so on. this explicit knowledge is easy to retrieve, identify and store because it is in documentation and texts. It can be easily access through any material or devices as it can be seen compared to tacit knowledge. On the flip side, as for explicit knowledge is codified and embedded in physical formats, it is easily captured, shared and sustain.

Based on Nonaka and Takeuchi's theory in 1995, they proposed a theory named SECI model for knowledge creation. SECI model is stands for Socialization, Externalization, Combination and Internalization. It is a spiral process where consist of tacit and explicit knowledge, starting at the individual level and moving up across sectional, departmental, divisional and organizational boundaries. Based on figure 1 shows that spiral process where in there are socialization (tacit to tacit knowledge) followed by externalization (tacit to explicit knowledge), combination (explicit and explicit knowledge and last internalization (explicit to tacit knowledge). They stated that in knowledge creation, this is the process that involved in organizations. Knowledge creation is a method, ideas, approach and the innovation which can be benefit to people and organizations.

A knowledge management system is any kind of IT system that stores and retrieves knowledge to improve understanding, collaboration, and process alignment. KMSs can exist within organizations or teams, but they can also be used to center your knowledge base for your users or customers. Nowadays, most of companies have implement KMS to generate new knowledge especially between workers for competitive advantage within the organization, making massive amounts of corporate information that is easily accessible, sharing of best practices, and technology that supports all of the above. The purpose of KMS is to help in managing knowledge that been utilized to preserve and sustain the knowledge so that it can be use in the future for decision making.

Not to mentioned, KMS focusses more on people and process. Process on how they can share and be able to retrieve and use its knowledge assets in current applications as they are needed. As we can see, the role of Information technology (IT) in knowledge management is become critical. They need to ensure that every worker in organization can use the system to store expertise or knowledge necessary for the task. In addition, KMS can support process lifelong learning particularly used for sharing of knowledge, transfer the knowledge, request for knowledge and communicate with others.

## 4 Discussion

Based on the empirical research paper, it can be seen that relationship between KMS and ERP have positive relationship to each other. This is because KMS can help ERP in achieving maximum output of the process to make sure that the knowledge will be distribute to the right person in the most appropriate delivery when needed. In the implementation of KMS, 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 leave the original business process and accept the standard of ERP system process knowledge. In order to have a successful KMS implementation, it is important to pay attention to this fact that the required ERP is disseminated in the organization itself. They must know the function and capabilities of ERP before integrating with KMS.

From the findings of empirical research paper, most of study investigate about knowledge management and ERP. There are only some of the study that propose KMS implementation in ERP (Klos, S., 2016 and Nupap, S., Chakpitak, N., Neubert, G. & Tra-Ngarn, Y., 2016). And other than that, focus on knowledge management that can support ERP In development to support organization business. This is because they want to focus more about knowledge management before implementing it to the system. If the organization does not have basic information about knowledge management, therefore, it is hard for them to implement a KMS in ERP because both of it can support each other.

Planning of ERP system becomes very important in business activity because ERP strategy can make the company achieve competitive advantage. Because of that it played a major role in transforming the company into a better computing environ-

ment. According to Stenmark, D. (2001) stated that knowledge management is used during the project planning for ERP in facilitating the practice of sharing knowledge. Other than that, there is a part where knowledge difficult to captured and documented during ERP system development cycle. For instance, tacit knowledge cannot be set during repository of knowledge in the company. Therefore, KM techniques facilitate explicit KM system such as documentation of manual etc.

Most of the researchers pick quantitative as their research approach by distribute a questionnaire to the respondents. Two of research studies used mixed method research where they conduct semi-structured interview and distribute questionnaire. The reason why some of research prefer mixed method research because the researcher gains scope of details and intensity of understanding and justification, whereas balancing the weaknesses fundamental to using each approach by itself.

## **5 Conclusions**

As for the conclusion, it can be that the framework of KMS can give good outcomes to organization especially for those who still surviving in a competitive and technology-led environment. To make sure they have good KMS in ERP implementation, they must know the support of KM. KM activities such as knowledge sharing really help in implementation of ERP. Some of them difficult to find someone who have expertise in certain issue, but if they have good KMS, they can easily access and find someone who have expertise to solve the issue. It is to make sure that organization must know the function of KM before they can implement KMS. Successful of ERP implementation system is affected by the level of skills and user's knowledge to operate the features of ERP system. In addition, a knowledge asset is able to provide beneficial learning for the growth of the company in the way of the creation of a knowledge worker or knowledgeable employees. Therefore, they need to have structured planning in order to have successful ERP system that can impact good benefits to the company. It is not based on how good the ERP system is but how good knowledge transfer that they used during the implementation. Because of the knowledge process during that implementation, it helps a lot in execute the process with the knowledge and expertise they have. To ensure the applicability of this implementation success, the future work includes its implementation and evaluation in various organisational and business settings. It is also interesting to observe how the proposed methodology contributes to the formulation of business and strategic plan. To conclude all, a good KM will affect the successful of KMS implementation in ERP environment. This is to ensure that organization can achieve business competitiveness in knowledge capabilities, marketing and quality (Yee and Eze, 2012). During the implementation, there are KM activities that will involve such as knowledge sharing whether in tacit knowledge or explicit knowledge.

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