KNOWLEDGE TRANSFER FOR A PROJECT MANAGER:
A COMPARATIVE STUDY BETWEEN THAI'S SME'S
AND JAPANESE ELECTRONICAL APPLIANCE
MANUFACTURER

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ABSTRACT

Many organizations still have problems of knowledge transfer from high level managers to employees. Dynamic Group Products Co., Ltd. is one of them. The company has only one project manager, who lack of skills to turn his tacit knowledge into explicit knowledge. The purpose of this study is to identify factors that can help the company solves problems of knowledge transfer from the current project manager to the next generation. Furthermore, it also facilitates the company to build sustainable competitive advantages. According to the literature review part, the study focuses on knowledge management theory to discover solutions. In addition, This study implemented qualitative study by arranging focus group meeting with a project managers and stakeholders. The study also compared the result with Fujitsu Systems Business (Thailand) Ltd. which was the company that has been a good example in knowledge transfer. As they implemented the knowledge management system to the entire manager. The study also gave recommendations to Dynamic Group Products to implement KMS as well. Further recommendations have been provided for FSBT to solve other current issues. Lastly, we also provided the steps of KMS implementation for Dynamic Group Product to develop the company' knowledge transfer processes.

KEY WORDS: Knowledge Management/Knowledge Transfer/KMS
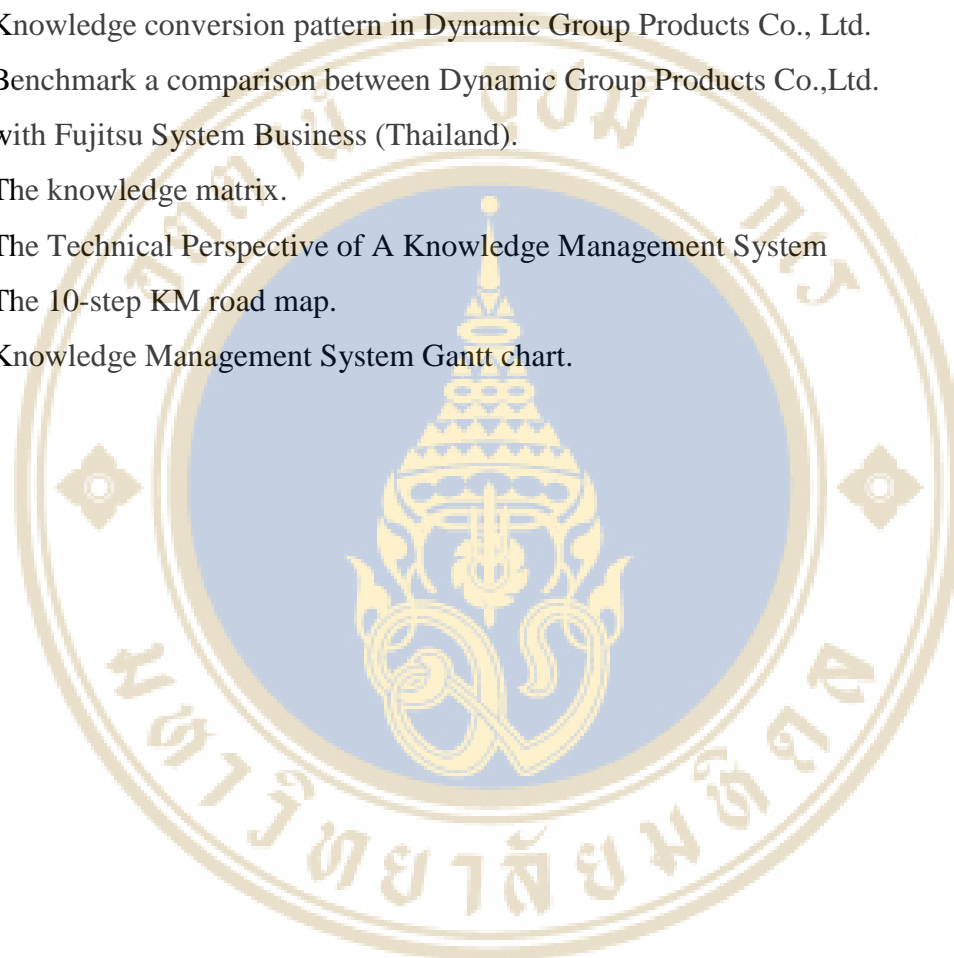
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CHAPTER I
INTRODUCTION

In many organizations, the way to transfer important knowledge from the higher level to the next generation is quite difficult. In fact, most of them cannot pass the knowledge to the right person or the next generation (Inkpen & Dinur 1998). Some of them cannot continue their work as smooth as the previous workers. Moreover, they cannot do their work effectively. The reason for this issue is they cannot apply all knowledge to use in their own way. Consequently, this problem may lead to a company failure for a long-term perspective (Nonaka 1994). For the topic that this study has purposed, the direct way to solve this problem is difficult to identify. However, it does not mean that the company cannot do anything without a solution. Accordingly, "what is the best way to pass all knowledge from experimental old generation workers to the new comers of the next generation?". The best answer for this question that we would recommend is to apply a part of knowledge management theory (Alavi & Leidner, 2001) in this case. For this reason, Knowledge management can help the company to transfer knowledge of the current project manager to the next coming project manager or expand this position to be more than only one person. Not only a conceptual, it can also implement in a systematic way such as a knowledge management system which can be included as function IT, network IT and enterprise IT.

For knowledge transfer and sharing, there is a process of a communication between a sender to a receiver cooperate which each other. If these knowledge cannot be learned or used then knowledge is not considered transferred. In this study, we will focus on knowledge transfer and sharing in an organization.

Problem Statement

   Based on the researchers' experience at Dynamic Group Products Co., Ltd, The Company is taking responsibilities from government to work in a process of a construction for Provincial Waterworks Authority by auction. For the company issue, it can be seen that the company still has some disadvantages if compare with another larger construction companies. Mainly, this study would focus on a problem of knowledge sharing and transfer of a project manager whom works at a provincial site area. As currently, the company has only one project manager and he is going to be retired in the next few years. Therefore, the company does not have a system or any criteria to train the next generation project managers. So, if the existing project manager jumps out of the company, the company will face with a huge problem. Dynamic Group Products Co., Ltd. is now based on only one project manager. However they all clear with the importance of transfer the knowledge because the next project manager is needed.

Importance

   According to aforementioned issue, it would be better if the company apply the theory of knowledge management especially on the process of knowledge transfer and sharing and then adapt it to fix this problem. First of all, knowledge management is generally use in every level of an organization to capturing, distributing and effectively using knowledge and sharing an enterprise's entire information assets (Benbya, 2008). These assets may include databases, documents, policies, procedures and previously un-captured expertise and experience in individual workers. Moreover, knowledge management is about the way to collect knowledge in an organization and transfer it from one person to another person by translating all individual knowledge from his own work experience (Tacit knowledge) to easy understand knowledge such as put in the text as an employee's manual (Explicit knowledge), which also involve with a forwarding of one important position to the next generation (Inkpen & Dinur 1998) like project manager.

Research Question

"What factors enable successful knowledge management in organization?"

Research Objective

1. To study the way to transfer all important knowledge from current project manager to the next generation project managers.

2. To identify key factors that can help Dynamic Group Products Co., Ltd. carry out further development when they face with the problem of replacing in the position of a project manager.

3. To analyze the best possibility that can help Dynamic Group Products Co., Ltd. apply knowledge transfer and sharing most effectively.

Research Scope

This study focuses on knowledge transfer for a project manager of Dynamic Group Products Co., Ltd. focus group interview has been implemented, this method will have facilitator which is a researcher, recorder which is the company' administrator and focus group members which include 15 people (a project manager, a fore man, a worker, a technical staff, an administrator and assistant managing director). Lastly, we will benchmark with the company that successful in knowledge transfer which is Fujitsu Limited, particularly in Fujitsu Systems Business (Thailand) Ltd. (FSBT)

Expected Benefit

The researcher approaching the best result for Dynamic Group Products Co., Ltd. from applies a theory of knowledge management (Alavi & Leidner, 2001). The result can solve the problem, and then can increase an amount of project managers to expand the business. Furthermore, we expected to build sustainable competitive advantage. Finally, the author expected that this study will be implemented as an example for other people and provide the best information for them to further study.

CHAPTER II
LITERATURE REVIEW

2.1 Theoretical Foundation

Knowledge management in an organization

When the project ends and it is time for the project managers on to finish up, will you prepare a staff to take over the next project? Will they be able to deal with problems relating to people, processes and equipment? Or is all your expertise about to walk out the door when these project managers leave? All these questions seek the reason how to increase performance on knowledge transfer between project managers. Over the past few years, the business has increasingly engaged project managers on a contract basis rather than hiring them as permanent employees. Since the global financial crisis, uncertain economic situations have caused companies to think carefully about their employment strategies. This will aim to discover on the process of knowledge sharing. Then, how to manage the knowledge from project manager? The way of providing is very efficient, specific, context-based, on-the-job training. It gives staffs the knowledge and confidence they need to continue their development or to manage the project into the future. Often, it may be the first step in encouraging a staff member to seek additional training and formal skills certification. Most importantly, it adds to an organization's store of resident knowledge.

To understand how to study and develop this project, this study will look through the meaning of Knowledge Management. Knowledge Management, (KM) is a concept and a term that arose approximately two decades ago, roughly in 1990. Quite simply one might say that it means organizing an organization's information and knowledge holistically, but that sounds a bit wooly, and surprisingly enough, even though it sounds overbroad, it is not the whole picture. Very early on in the Knowledge Management movement, Davenport (1994) offered the still widely quoted definition:

"Knowledge management is the process of capturing, distributing, and effectively using knowledge."

This definition has the virtue of being simple, stark, and to the point. A few years later, the Gartner Group created another second definition of KM, which is perhaps the most frequently cited one (Duhon, 1998);

"Knowledge management is 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."

Both definitions share a very organizational, a very corporate orientation. Knowledge management, historically at least, is primarily about managing the knowledge of and in organizations.

The knowledge management process is an everyday business process within the company, with major role in transfer of relevant information for decision-making across all levels of structure and corporate governance. The ultimate result of well-created process of knowledge management is that every employee in the company fulfills its mission, which reaches the corporate objectives and strategies, and identifies the most valuable knowledge from the "sea of information". It is not an easy task because it involves the management structure at the highest levels of management (Winch, 2003).

Knowledge management is important as a managerial tool, which promotes the creation of new knowledge and it's sharing through the corporate values (Nonaka 1994). Managers need to have a greater sense of invisible and intangible assets of people, featured in the minds and experiences of employees. Without these assets, companies are unequipped with vision and ability to predict the future. The using of knowledge management process increases the effectiveness of decision-making processes, as well as the level of operational efficiency, flexibility, commitment and involvement of employees. (Jelenic, 2011)

Knowledge management mean the way to collect knowledge in an organization and transfer it to the right person at the right position with the right time by converting a quality knowledge from both inside and outside the company (Alavi &

Leidner, 2001). Then record it into the most understandable language. This is like a process which making use of a firm's collective expertise anywhere in the business. In terms of theory, there are two types of knowledge which can define to "explicit knowledge" and "tacit knowledge" (Nonaka 1994). Explicit means rational knowledge that can be expressed in words, sentence, numbers or formulas so is mostly see in document, database or etc. that people can use it like a principle (Nonaka 1994), whereas Tacit knowledge is subjective and experiential that cannot be expressed in words because it comes from personal experience of specialists and it always cannot explain in word or put in to the book (Nonaka 1994). Moreover, tacit knowledge is very important and many companies try to store it as much as possible (Nonaka and Takeushi, 1995). For example, most tacit knowledge comes from a specialist in a company that sometimes it might be a risk if only one person have a core knowledge which can impact to a whole company because when they want to negotiate with their boss, they will have more bargaining power. Furthermore, tacit knowledge may keep in only one senior worker that nearly to retire, if a company wants to keep that important knowledge from old people and transfer to new generation worker, knowledge management will be the best answer for this solution. We can say that tacit knowledge is the most important part of this study. Because of a project manager is the key of company's success. Our intention need to know how to transfer the valuable from the current project manager to the other for sustainable growth of the company.

In KM, the emphasis is given to the deployment of knowledge to create value for organizations. Some researchers (Harari; Nonaka and West) have come into consensus that organizations leveraging the knowledge of their human capital are able to innovate and adapt to the rapid changes of today's business world. KM is therefore important to support innovation in organizations. This study will begin with consider the type of knowledge management, consist four sets as following (Alavi & Leidner, 2001).

2.1.1 Knowledge Creation

The creation of new knowledge which serves as an essential input element is critical for organizations to innovate more effective (Nonaka 1994; von Krogh 1998). The outcomes of the innovation could be new products and/or services, new technologies, new production processes, and new organizational structures. As long as organizations are able to continually deploy the power of knowledge to support their innovative efforts, it is expected that their business is able to outperform rivals and sustain growth in the long run.

Knowledge creation is one of the four general processes of KM which include knowledge sharing and knowledge utilization. It emphasizes on the creation of new knowledge in organizations (Alavi & Leidner, 2001, p. 116). Knowledge can be created through social interactions between individuals or through the use of knowledge codified and shared through knowledge management systems (Quinn et al., 1996).

Knowledge creation is a process of developing a new content in order gain new knowledge that can be benefit to an organization and help organization gain its competitive advantage (Nonaka 1994). For this reason, knowledge creation plays an important role as a beginning point of knowledge management cycle. People commonly use Nanoka's knowledge creation model to be a criteria to measure how to create knowledge and how to make it useful in organization.

SECI Model

SECI Model is a concept of an interaction and combination of tacit and explicit knowledge leads to four conversion patterns (Nonaka and Konno, 1998: 42). The four conversion pattern are divided into four quadrant; (1) Tacit to Tacit or Socialization quadrant, (2) Tacit to Explicit or Externalization quadrant, (3) Explicit to Explicit or Combination quadrant, and (4) Explicit to Tacit or Internalization quadrant.

- From tacit knowledge to tacit knowledge – it has been called socialization, this is the process that creating knowledge or information from directly interaction with the real specialist and absorbs that knowledge to memorize and turn it to be your knowledge. For example, socialization is means person come to learn anything which he/she

interested by the real specialist within the real situation and try to copy it or remember the tips that the specialist show to him.

- From tacit knowledge to explicit knowledge – it has been called Externalization, when people have their own tacit knowledge an trying to put it on words by using analogy this is the progress of externalization. It can come after socialization or it can begin with the own tacit knowledge from a specialist, it just the way to translate the knowledge which hardly to explain into the word. For example, when you learn something from the specialist, you have to share or discuss and take a note of the knowledge into a paper.

- From explicit knowledge to explicit knowledge – it has been called Combination, after we got many information that we put on the note, we have to combine them and make it more useable. This is the process which collecting all data both from inside and outside the company and combine them to create new explicit knowledge in the company.

- From explicit knowledge to tacit knowledge – it has been called internalization, the process from internalization is the embodying explicit knowledge through action or practice and apply to be personal tacit knowledge. For example, after we finished combine all explicit knowledge, the study will get one official manual book or etc. which can use as a principle for new workers in the company then we teach them as referring to that manual and when new workers understand it clearly until they can apply it as their own knowledge, the internalization will complete.

2.1.2 Knowledge Storage and Retrieval

Regarding to the explanation referred to as organizational memory, Organizational memory includes "memory residing in various component forms, including written documentation, structured information stored in electronic databases, codified human knowledge stored in expert systems, documented organizational procedures and processes and tacit knowledge acquired by individuals and networks of

individuals" (Tan et al., 1999; Alavi & Leidner, 2001, p. 118). The organization should ensure that acquired or shared knowledge is readily accessible to others. This can be done by storing information in a centralized location with sufficient provisions for easy retrieval. For example, reports, statistical data on economic, social and environmental areas can be stored in databases while official documents, once approved, should be categorized and stored electronically in suitable file systems. From our perspective, the documents and information in databases could then be retrieved through the Internet or the organization's intranet websites. IT systems that aid in organizational memory include storage technology, database management systems and query languages. These tools are able to increase the speed at which organizational memory can be accessed and help prevent organizational memory loss.

2.1.3 Knowledge transfer

Knowledge transfer is innate to our human nature of wanting to connect and collaborate with others. And also, this is another way of learning and acquire. We have been bounded to share what we know with others, so that our learning curve never becomes flat. Knowledge sharing can be enhanced through the implementation of appropriate technologies, operations and systems that stimulate collaboration, facilitate the process of sharing, and reward those individuals that share the most knowledge as well as the individuals that actually utilize knowledge that have been shared (Inkpen & Dinur 1998). Organizations are generally able to make decisions with impact when knowledge is efficiently shared (Alavi M., 2001). People are able to make and execute decisions rapidly when individuals throughout the organization can gain access to important strategic ideas. For this step, our intention to study knowledge transfer because we have problem about sharing know between project manager and other colleagues. A worker with specialized knowledge in one area might ask, "If my knowledge is a valuable resource that makes me an essential asset of the company, why should I share it and create a competition?" On the other hand, a worker confident of his or her expertise in one field might ask, "Why should I use the knowledge of others when it might put to risk the quality of the work that I am doing?" These are the main problem of the company, if the company lost project manager, the valuable knowledge will go along with them. They must ensure that employees have direct

access to one another rather than requiring them to go through higher management whenever needed information or knowledge are required in the implementation of certain projects or the design of certain products. In this manner, the persons who have the right information or knowledge can readily share it with those who can use it to produce the greatest benefit for the organization. The most effective transfer mechanism depends upon the type of knowledge being transferred (Inkpen & Dinur 1998). To make sure that knowledge will transfer to the receiver we have to know the knowledge transfer methods (Alavi M., 2001).

- Decide what the detail is needed
- Determine from whom you want the knowledge to be transferred, to which the knowledge is transferred to and the accuracy of the transferred knowledge
- Determine the medium of detail to transfer the knowledge
- Observe if the knowledge is understood and applied by the receiver or not

After knowing all objectives and methods, strategic alignment needs to be mentioned. It has 3 components as follows (Robert B., 2004).

- Product and market positioning – to know where is the position of your product in the market. Then, change a product or market position to be line with exiting organization knowledge.
- Knowledge positioning – to know what knowledge that drives your product and services by managing knowledge as an operational issue, not as a strategic one. Then see what and organization know and need to know by mapping organization and its competitors based on knowledge to better support its product and market position (To know to successfully compete creates a strategic knowledge gap that it must try to eliminate).
- Innovation positioning – to know how much the organization will focus on developing external innovations that are experienced directly by customer. Innovation position specifies how much it will focus on developing external innovations that are experienced.

2.1.4 Knowledge Application

Knowledge application is applying existing knowledge to work and decision-making. It leads to enhanced decision making and competitive advantages (Nonaka 1994). IT can enhance knowledge application through embedding knowledge, codifying routines and automating organization routines (Alavi M., 2001). Examples of this include capturing, updating and making directives available, as well as increasing the efficiency of organization routines. To be effective it will require the transformation of highly individualized tacit knowledge into explicit knowledge that can be more widely shared. In an organization where there is fear of the management or hierarchy, the employees will have a tendency to keep their knowledge to themselves and share it with others only cautiously. In cases such as this, management must take the lead in creating an environment of understanding, cooperation and learning. It should also encourage knowledge sharing, even if the positive results of doing so are not readily apparent. Such results can best be measured in the long term (Alavi M., 2001).

Knowledge Application is another one of the tool has been stored in numerous ways, including in human minds, documents, notes, manuals, and reports; and it has also been shared among individuals through several communication channels such as conferences, seminars, training programs, and forums. These have been applied for many years and although they are still being used, the emergence of new computer-based communication technologies has, not only complemented the traditional storage and delivery methods, but has also improved the efficiency and effectiveness of the overall knowledge delivery mechanisms.

Application of knowledge to organizational technologies and processes aids in producing a competitive advantage. To prove that this knowledge application is good there are 3 factors to analyze (Alavi M., 2001).

- Knowledge validation – accepts or reject by using signaling theory or reinforcement theory.
- 2.1.4.2 T-shaped manager – manager whom will use this application has to be like T-shape which is has to know deeply in his own department and good for wide range of subjects to share knowledge freely across the organization.

- Knowledge boundaries – The line making the limit of an area of the knowledge

This study has been conducted to investigate the construction industry which is family business, since this is a well-researched industry and a good example of a project-based environment. The construction industry is a complex industry involving a number of discrete transactions usually undertaken on an ad hoc, one-off geographically specific basis. Innovation performance of the construction industry in terms of productivity, quality and product functionality has been low in comparison to other industries (Winch, 1998). The low level of innovation performance is based on the fragmented nature of the industry; the uniqueness of the construction as a product; the division between design and construction; the role of consultants and the procurement methods for receiving assignments (Naoum, 2003). Since the construction industry mainly focuses on organizational processes, contracting arrangements and assembly methods (Seaden & Manseau, 2001) and the way innovation is measured; e.g. architectural and engineering firms are usually not included (Winch, 2003), while they score relatively high on innovation. New ideas can be adopted by firms and implemented on projects (top-down), or result from problem solving on projects and be learned by firms (bottom-up). According to Winch (1998) the processes of adoption and implementation in the top-down mode are iterative learning cycles as the features of the new idea and the existing organizational context are mutually adjusted. Brady and Davis (2005) discuss in the bottom-up mode three phases: exploratory vanguard project phase (creation of knowledge), the project-to-project phase (transfer of knowledge to other projects) and the project-to-firm phase (transfer of project knowledge to the firm). In the bottom-up mode, new ideas generated through problem-solving need to be learned by the organization so that they can be internalized and applied for future projects (Winch, 2003). Winch (2003) however, does not mention specific projects designed to create a new idea or product in cooperation with other firms and R&D institutes and universities, i.e., innovation projects. In the construction sector it is a relatively new phenomenon to join other organizations in order to develop new knowledge that can be applied by the involved firms or even applied in the whole industry. This type of cooperation can enhance innovative performance of the industry. Important in these cooperative innovation

projects is how firms cooperate in such a different setting, how they transfer and create knowledge and how they internalize this knowledge into their own firm and in future construction projects.

In order to investigate cooperative innovation projects in the construction industry we apply a knowledge-based perspective, in which knowledge is considered as the most strategically important resource of the firm (Grant, 1996). Knowledge is gaining increasingly attention as an important source of competitive advantage. The role of the firm and its source of unique advantage rest in its ability to collect, integrate, use and transfer the knowledge of individuals in the production of goods and services (Grant, 1996). Through the execution of projects, knowledge capabilities and resources are built up in the firm over time. In this paper, we mainly deal with knowledge creation and transfer between firms who cooperate in innovation projects. From literature we know that the pursuit of cooperative strategies can be used as a means for creating knowledge or gaining access to knowledge and skills outside the boundaries of the firm. Several authors (Harari; Nonaka and West) have however indicated that knowledge transfer in project-based environments is difficult due to a short-term perspective and a fluctuating workforce, moreover project-based organizing often lacks incentives and formal structures for cross-project learning. This study therefore, mainly focus on how the developed and transferred knowledge from the innovation project is transferred towards the project partner firms. It also apply the notion of absorptive capacity which is defined as a set of organizational routines and processes, by which firms acquire, assimilate, transform and exploit knowledge to produce a dynamic organizational capability.

2.2 Proposed Framework

According to the above literature, it hypothesized that following factors may have an impact on firm's performance. Especially, it will highly affect to the issue of knowledge transfer and sharing for a project manager in the company. To support the reason, this study will propose a framework that can link factors which can solve the problem in this case.

Provided Framework

Factor 1: Knowledge Management System (Positive)

- Knowledge Creation	Expected Outcomes/Factors
- Knowledge Storage and Retrieval	- Success in company's knowledge transfer and sharing for a project manager
- Knowledge Transfer and sharing	
- Knowledge Application	
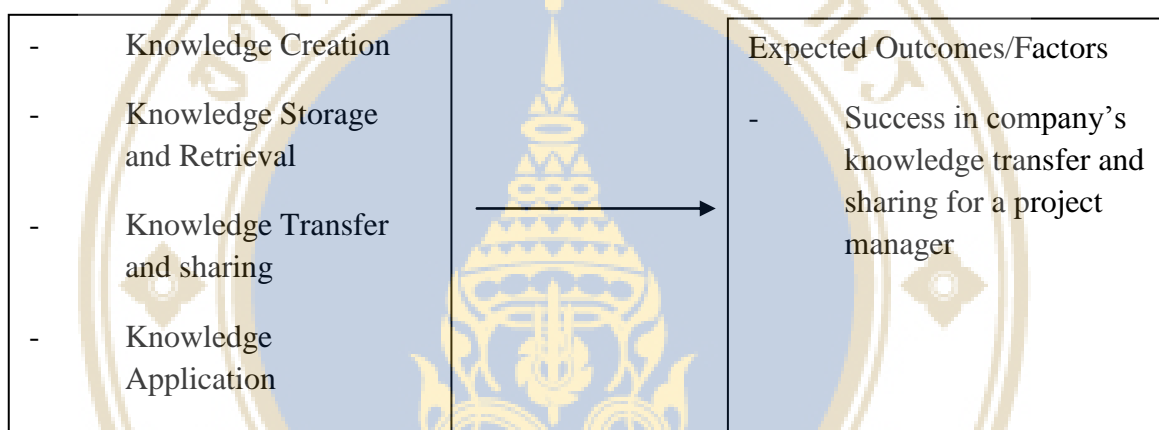
Figure 2.1 Propose Framework

According to the framework above, the study expected to get a success of knowledge transfer and sharing to the next generation project manager by using a facilitator and fixing a barrier which can be an obstacle for the solution. For a facilitator, it comes from Knowledge Management Process, which mainly relies on knowledge transfer and sharing. Anyway, it still has to combine four main steps together to create the best income and use it in a systematic way by implement a knowledge systems. For a barrier, we also focus on cultural problem that comes from a conflict between an old generation project manager and a new generation project manager. To explain deeply, the study also plan for implement knowledge management to the company based on the literature review.

2.2.1 Facilitator (Knowledge Management Process)

This study will use knowledge management cycle to capture current knowledge management process in Dynamic Group Products Co., Ltd. focus in position of a project manager on a construction site. Begin with knowledge creation, how they create knowledge within their organization. We will focus on SECI model (Nonaka 1994). After knowledge creation, move to knowledge storage and retrieval in this company, how they store knowledge, and how they retrieve the knowledge from the storage. Then, capture the knowledge transfer in organization, how they share knowledge in the department. Lastly, it will talk about knowledge application.

Knowledge Creation

Refer to the company's issue that has been mentioned in the previous topic, Knowledge conversion pattern in Dynamic Group Products Co., Ltd. project manager can be analyzed according to Nonaka's SECI model (Nonaka 1994) illustrated as follow;

Tacit to Tacit (Socialization) • Provide on-job training.	Tacit to Explicit (Externalization) • Provide training lecture.
Explicit to Explicit (Combination) • Turn the knowledge to be a manual	Explicit to Tacit (Internalization) • Adapt the knowledge by themselves.

Figure 2.2 Knowledge conversion pattern in Dynamic Group Products Co., Ltd.

Knowledge storage and retrieval processes

According to the role of information technologies, which are create, store, process, share and access. Project manager can create knowledge and store it in a server (Benbya, 2008). According to Mcafee's (Andrew McAfee, 2006) 3 categories of IT, the file that store in the server considered to be network IT which is the technology that provide a means by which people can communicate with one another. In this case, project manager did not realize the importance of storage and retrieval processes. In fact, the process can help eliminating the redundancy of work process. It also can make the department provides faster solutions for work (Quinn et al., 1996).

Knowledge Transfer

In term of solving, project manager will transfer or share their knowledge by record in server and let the next generation gather and find out the knowledge for each purpose (Quinn et al., 1996). Sometime junior project manager or others face technical issue that they never do it before or cannot troubleshooting then they will need some consult or advice from current project manager during situation. They also can contact over the phone to discuss and transfer knowledge each other. This process also depends on who expert are and trust to ask for advice so knowledge transfers individually interaction among senior and junior project manager (Alavi M., 2001). This action also implies that it is a senior project manager responsibility and take care that work assignment of junior project manager as well as transfer and share necessary knowledge among the position.

Knowledge application

For knowledge application, this study analyzed department based on 3 topics that is Knowledge validation, Knowledge boundaries, T-Shaped manager (Alavi M., 2001). The company has to find the best way to validate the knowledge from project manager. Then, find out the boundaries for knowledge management. Lastly, the company has to train the next generation project manager as a T-Shape manager who deep in a specific skill and wide in over all work operations.

CHAPTER III
METHODOLOGY

Research Setting

In this study, the researcher chooses a comparative between a construction company in Thailand with Japanese electronic appliance company to study, because the researcher is currently working at Dynamic Group Products Co., Ltd. The company is also a construction company that has a problem with knowledge transfer and sharing for a project manager. Moreover, one of a key success factor of a construction work is depend on how the project manager well-managed in overall operation from the beginning until the end. Therefore, knowledge of a project manager is very precious for the company, whereas the company has only one project manager which going to be retired in a few years. So, this issue is very interesting for study the way to transfer important knowledge from old generation to continue all operation smoothly and better than before. In this study, a case study from a subsidiary of Fujitsu Limited which is Fujitsu Systems Business (Thailand) Ltd. (FSBT) has been chosen to compare with our chosen company. Based on the interview of the Department Manager of FSBT which has been conducted in the class of Knowledge Management in the 3rd semester, 2013, the company is the expert in information and communication technology, they sell product and services and also have expertise to be a consultant to organization or individual customer to support their product. FSBT is already has the processes and activities that supported knowledge management cycle, knowledge creation, knowledge transfer, knowledge storage and retrieval, and knowledge application. So, FSBT can be a good case study for Thai's company to benchmark a standard of knowledge management system. In addition, if this thematic paper done effectively, the company can use information from this study then adapt and increase a growth of the company.

Data Collection

This study implemented qualitative focus group interview. Data Collection is an important aspect of any type of research study. Qualitative methods are evaluated by providing information useful to understand the processes behind observed results and assess changes in people's perceptions of their well-being The measurements were adapted from literature review. The study added new information that we learnt based on the definition provided by the literature. Since learning is primarily regarded as a process of knowledge transfer and sharing between a project manager and a next generation project manager, the researcher selected the company that currently working for. This study is approaching the success of knowledge transfer and sharing for a project manager by the right way to transfer that lead to the company successful and sustainable.

As mentioned before, the selected company is Dynamic Group Products Co., Ltd. The company is doing a construction work for a provincial waterworks authority. Authorized capital of the company is 700 million baths. This company is a top-down approach which the top level is CEO and then managers of a several areas such as financial, sourcing, project manager and etc. The company has finished many works in many provinces such as Rajburi, Prachuab Khirikhan, Songkla and more. Currently, the company still works in a process of construction at Chaing Mai. The style of the company is a family management style, the CEO and the project manager are brotherhood, and both of them manage work together. The CEO is responsibility for all decision making and negotiating, and the project manager is responsibility for all provincial site of a construction. Rely with the study, the problem of knowledge transfer come from a project manager whom is one of the main people in the company. So, the research will use this qualitative method to find out the way to help the company by conduct a focus group to make a strategic discussion to collect useful information.

Specifically, in-depth focus group with people who are involve with the flow of site construction project of Dynamic Group Products Co., Ltd. such as a project manager, a fore man, a site worker, a technical staff, an administrator and an assistant managing director of a company. For all those people, the study will specify a person in a high level management and randomly for workers and administrators with a total number of 15 people in this focus group. Which mean that this focus group will

set the team of 15 people which all involve with the effect in a problem of knowledge transfer of a project manager, they all are different in roles and responsibilities. For the steps of this focus group interview, it has to categorize all people in the interview into three tasks. One person called facilitator that must be the researcher whom is preceding the aim of focus group by encourages people to discuss from the question that set from an issue of a thematic paper. Facilitator has to ask other people and ensure that the conversation is not out of the main topic, and then conclude all the result to group at the end of discussion. Another one person has to be a recorder, who is setting all recording device and controlling the time while having a discussion. Moreover, the recorder has to help a facilitator to summarize factors and share to all members after this focus group finished. So, the recorder must be one of an administrator in the company which is not the same person that we selected to interview. Lastly is a focus group's team member, the rest of 15 people which we mentioned before have to share all idea that important to the topic which asked by the facilitator then discuss and debate with each other. After the end of the interview, the researcher has to collect all information from the recorder and use the data to analyze with the case.

The rationale for choosing focus group as the evidence collection approach was to provide a rich insight into the complex problem of knowledge transfer in projects. Focus group interview are conducted in which respondents are interview for a short period of time, and the interview are followed by a set of questions prepared earlier. This type of interview can remain open-ended, while ensuring relevant ideas are addressed and allow for focused, conversational, two-way communication (Yin 2003). The possibility of asking open-ended questions in focus group interview is useful where there is a need to clarify some responses as well as to facilitate respondents in providing valuable comments and feedback. The alternative closed and remote survey approach provides little information on the underlying meaning of data (Gable 1994). The average time for a focus group is one hour. After that, we will use all information from the set of answer which come from a focus group to benchmark with FSBT to compare an expected outcome with the company whom success in knowledge transfer.

Focus Group's Questions

According to Knowledge Management-process, there are three main components of questions (Stewart, D and Shamdasani, P, 1990) that this study will explain step by step clearly with all details as below.

3.1 Warm up

- What is knowledge management?
- How it is important in the company and if you think it is important, why you think so?
- Do you think it has any problem about knowledge management in your company? If so, what is it?
- Do you think the company needs to improve in knowledge transfer for a project manager?
- What are the key factors that can help the company success in knowledge transfer for a project manager?

3.2 Explore Knowledge Management Scenario

- Have you ever use a knowledge management? If yes what kind of work do you use knowledge management?
- Based on knowledge management theory, how can you use a theory to help in a process of knowledge transfer for a project manager?
- Do you think all process of knowledge management which are knowledge creation, knowledge storage and retrieval, knowledge transfer and knowledge application are important?
- Which process of knowledge management are the most important to success in transfer knowledge for a project manager? please give a reason for your answer?
- Do you think the company needs to implement knowledge management system? and why?

3.3 Barrier for Knowledge Transfer

- What are the barriers that will lead to the failure of knowledge transfer?
- What are the problems of a current project manager to transfer the knowledge to the next generation?
- What are the problems of a next generation project manager to receive the knowledge from the current project manager?
- What is the key factors that can solve a barrier for knowledge transfer?

CHAPTER IV
RESULTS

In this part, the researcher got all information that came from method in Methodology part. The source of information came from two comparative companies which we choose one from the company that already implemented knowledge management system which is a subsidiary of Fujitsu Limited called Fujitsu Systems Business (Thailand) Ltd. (FSBT). For FSBT, this study has all information from the final report from the class of Knowledge Management that we studied before. The information came from the interview with the department manager of FSBT. For another company, Dynamic Group Products Co.,Ltd. has been chosen to be a case study in this thematic paper. For the method, focus group for 15 people in different role and responsibility has been conducted but they all working in the same flow which all involve with a construction, because this study focus on a project manager of working site. We took 1 hour and 30minutes for the actual interview which is take a little bit longer than our plan.

After the researcher has done focus group interview, it can briefly analyze from all the record data as follow. Based on the set of questions in Methodology, we divided in to three main categories for the question which are Warm up part, Explore knowledge management scenario part and Barrier for knowledge transfer part.

4.1 The Result of a Focus Group Interview

Warm up

Firstly, the questions has been asked in general knowledge of knowledge management, and all interviewers seems not understand exactly "What is Knowledge Management". So, the researcher has to explain theory before move on to the rest of questions. Then, it can make all interviewers think that knowledge management is

important. The project manager said that it would be important, because only one person cannot do everything, if he can manage the knowledge in organization it will help all project working more smoothly. Most of the rest of other still not understand clear about the definition. However, they said that it has to be important because most of them concern about the communication between worker and worker. If they want to pass the work but the receiver don't understand, working of the project will going in the wrong method.

Next, the problem of knowledge management in the company has been asked. The vice president said that it have problems about misunderstanding and lack of knowledge, it will lead employee working wrong from the expectation. He also said that the company needs to have more knowledge and training. In addition, Project manager said that it have problems of a different of experience, ideal and knowledge in each individual people. And another problem is about timing, when the situation is rush it will make a lot of mistake. For the rest, they said that it have a problem of communication among employees which lead to failure of knowledge management. However, one of employee said there is no problem because current process is still good. For this argument, we think that it was an attitude of him in work without trying on knowledge management system.

Due to the issue before, all members understand more about knowledge management and most of them agree that it have some problems about knowledge management. So, it is important to transfer knowledge but now the company is difficult to find more engineers who are going to be the next generation project manager. In the view of the project manager, he said that it is important to transfer knowledge, because now he is the only one who is a project manager and takes all responsibility alone, so the company will difficult to expand more project because now have only one project manager and he cannot manage more than one site. Moreover, it important to improve knowledge transfer because he aim to train new project manager and he want to apply from the case in the past. For other opinion, all of them agree that the company want to improve knowledge transfer for a project manager, in case that project manager away from the site it has to have another one project manager to cover all work and continue the current project.

For the last question in this part, all interviewers answered quite same opinion. It can be list in to four main key factors that can help the company success in knowledge transfer for a project manager which are corporation among project managers, Understanding between people, Intention of receivers and sender and Performance of learner.

Explore knowledge management scenario.

For this part, questions about deeper scope of knowledge management scenario in company have been asked, these are including the process of knowledge management which are knowledge creation, knowledge storage and retrieval, knowledge transfer and knowledge application. Moreover, we also asked about the implementation of knowledge management system.

In the first question for this part, all interviewers said that they all never use any type of knowledge management system. Actually, they all are not familiar with any type of company system such as SAP system or knowledge management system, because the company still use only an easy application system such as Micro soft word, Excel and etc. Anyway, some of them said that they use knowledge management when corporate with down line or other department. For example, when they teach their workers on a construction site, they use a note or send a message via Facebook or Line application. Moreover, they not exactly use a knowledge management system but they all self-learning by internet searching such as Google or website which related to their responsibility. In this question, we got one important point that technology is important for knowledge sharing but they all still not see a big picture of knowledge management system.

Secondly, to use a theory of knowledge management to help in a process of knowledge transfer for a project manager can be apply by many way of transfer. Most of interviewers said that the best way is to create the knowledge and transfer by face to face teaching. Some of them said that it may use a blog or write an e-mail to transfer. On the other hand, one of the interviewers said that he is only a receiver, but he is never being a sender. Therefore, he did a note for himself when he studied with his boss, but it would be better if his boss make a manual or note for him.

For the next question, 5 of interviewers think that knowledge transfer is the most important process of knowledge management, because if the sender cannot transfer the right information or skill of sender is not good enough to share, it will failed in knowledge management. Furthermore, 4 of interviewers chose knowledge creation, because this process is the beginning. If the company failed in knowledge creation, everything will be wrong, whereas another 4 of interviewers chose knowledge storage. Because all knowledge is need to be store in somewhere. For example, the case of construction work in the past need to be store because, in the future may have the same problem and it will be easy if the company already has a solution. Lastly, 2 of interviewers chose knowledge application, because learner is an output of knowledge management process.

For the last question, all interviewers said that "if the company implements knowledge management system, it can be improve in knowledge transfer of a project manager". Actually, the vice president said that the company was planned for implement the system, but they still not ready because they were not well study on the system. Moreover, if the company needs to implement knowledge management system, it needs to hire a consultant, but the cost of consultant and implementation is quite expensive.

Barrier for knowledge transfer

Mainly, the barrier of knowledge transfer is most happen from the ego of both sender and receiver. For a project manager, sometimes he has an ego because he is the boss with a higher education level. So, he may not listen to other suggestion which will lead to some internal conflict. However, some new generation of project manager are not a good learner as well. Some of them are fresh graduated so they have an ego. Some of them think that they are older or have more experience so they are not listening to the project manager.

For the key factors that can solve a barrier for knowledge transfer, all interviewers said that it is most important to reconcile among a current project manager and next generation project manager to remove conflict. It may have a middle person to mediate or it may remove the conflict outside the work such as bring them together in the party.

4.2 Case Comparison

After gathering all information from the focus group interview, it is clearly seen that Dynamic Group Products Co.,Ltd. still does not have any type of knowledge management system whereas FSBT already implemented. To compare the current situation of Dynamic Group Products Co.,Ltd. with FSBT more clearly, the comparable table has been utilized as the following information;

Dynamic Groups Product	Fujitsu System Business (Thailand)
Self-learning activities • Study by surfing on internet • From a construction blue print Troubleshooting activities • Provide troubleshooting technique via phone • Ask person to person Training activities • Face-to-face learning Construction Report activities • Hard copy in personal folder	Self-learning activities • Study installation manual Troubleshooting activities • Record self-finding troubleshooting technique • Share troubleshooting record in share server • Provide troubleshooting technique via phone Training activities • Provide training lecture • Provide on-job training Maintenance Service Report activities • Create PDF file for MSR report • File MSR hard copy in personal folder

Figure 4.1 Benchmark a comparison between Dynamic Group Products Co.,Ltd. with Fujitsu System Business (Thailand)

Knowledge Creation

For knowledge creation, FSBT seems to be more systematic because the company uses a system to help in terms of knowledge creation. Based on SECI model (Nonaka and Konno, 1998: 42), FSBT can complete a full cycle of the SECI model by the process of the company's knowledge creation. The knowledge of FSBT created job training which directed to "Socialization" (Tacit to tacit) is. Then, they also create trouble shooting activities and provide training lecture that come from the job training. So, this is also directed to "Externalization" (Tacit to Explicit). Moreover, from the maintenance service report which created in a computer format (PDF or MSR), they use knowledge management system to store all knowledge from job training and turn it to be a manual for others to study. So that they turn the difficult understand knowledge to be more general which is directed to "Internalization" (Explicit to explicit). And employees have self-learning by reading the manual from the maintenance service report and adapt to their own skill which directed to "Internalization" (Explicit to tacit)

On the other hand, Dynamic Group Products can complete in "Socialization" because they also have face-to-face training but they are not stored this knowledge. So, even they complete the step of transferring tacit knowledge to tacit knowledge, but they not turn that knowledge to be explicit. It show that the company incomplete in knowledge transfer to the next generation project manager, because they not change knowledge to explicit. Therefore, they are not applying the knowledge from face-to-face learning, which can point out one of the problem of knowledge transfer. Another one problem also comes from the difficulty of knowledge finding. Because they make only a hard copy so it is hardly to find the solution is the past. If they have knowledge management system, is will be easier to stored knowledge that can help the company transfer knowledge easier.

Knowledge Storage and Retrieval

As this study mentioned in the previous topic, Dynamic Group Products still use a manual way of knowledge storage. They have a lot of hard copy folders that are not store in one place. So, it is not easy to find and no one want to find it for study. Moreover, a project manager teach other by face-to-face, but he never put it in a

computer which mean that he keeps all of his knowledge in his mind without sharing in a text, whereas all learners just listen to him and learned face-to-face but no one have a record of it or just make a note in a piece of paper. In addition, this can lead to the failure of knowledge transfer for a project manager as well. Because they all not serious on knowledge storage, they write it in hard copy and forget where they put it.

In contrast, senior engineers of FSBT solve customer's problems using 4 main methods. The first one is self-learning by learning problem and solves it by themselves. After solving the problem, senior engineers will then share it in study installation manual. The second method is problem solving which will be shared within troubleshooting file in the server of the company. This will be shared to other departments to utilize it in the future. The third method is training by providing the training lecture and on-the-job training using face-to-face communication. The forth method is maintenance service report which will be shared through the MSR PDF file to the call center. For these processes, it can be noticed that knowledge has been stored in the company server but employees ignore to retrieve it. As they are getting used to the same process, they tend to use manual method. For example, study the installation manual, call to consult the senior engineers.

Knowledge Transfer

To continue from the previous topic, a project manager of Dynamic Group Products transfers his knowledge by face-to-face training. Therefore, it may not effective as expected because of some boundaries that will block the success of knowledge transfer. According to the interview, all of interviewers said that it always has a problem of an ego between sender and receiver. So, if the company uses a manual way to transfer like this, it may have an error of knowledge transfer by human problem. Moreover, this can link to the problem of knowledge creation and storage because the company did not use a system to help in knowledge transfer, which means that even they can complete knowledge transfer face-to-face but no one record it and keep it for the next generation. In consequence, all knowledge still tacit knowledge and it's all still difficult to transfer.

To compare with FSBT, senior engineer who has much experience and knowledge as imply as expertise need to transfer knowledge as their assignment for

junior for example on job training or lecture in some technology or new equipment. This is common traditional or assignment of senior engineer who need to take care of transfer and sharing knowledge for new comer or junior. This responsibility is common in every organization for senior engineer.

In term of solving technical skill senior engineer will transfer or share their knowledge by record in troubleshooting file in server and let people gather and find out the knowledge for each purpose. Sometime junior engineer or others face technical issue that they never do it before or cannot troubleshooting then they will need some consult or advice from senior engineer during situation. They also can contact over the phone to discuss and transfer knowledge each other. This process also depends on who expert are and trust to ask for advice so knowledge transfers individually interaction among senior and junior engineer. This action also implies that it is senior engineer responsibility and take care that work assignment of junior engineer as well as transfer and share necessary knowledge among team.

All in all, it is clearly seen that knowledge transfer will increase a chance for success. If a company has a system or server to store all knowledge, it will like a tool to help employees share information easier and easy to pass to the next generation.

Knowledge Application

According to the theory of knowledge application, it said that IT can enhance knowledge application through embedding knowledge, codifying routines and automating organization routines. While, Dynamic Group Products does not have a system in company so it would be difficult to validate a knowledge that transfer from a project manager. Therefore, company has to find the best way to validate the knowledge from project manager and validate it as useful information. As the company still has one big boundary which is an ego of a project manager and learner, it is also one of a problem as this study mentioned in the previous topic which is a chance of human error in knowledge transfer. Moreover, the project manager still needs to be a T-shape who can deeply in his career and widely in overall work. So, the company has to train the next generation project manager as a T-Shape manager. From an interview, the vice president said that the project manager cannot do everything

because he does not know in finance and account. Actually, the T-shape manager should know at least a basic of finance and account to manage his workers.

For FSBT, this study found that the knowledge validation process of FSBT still not effective. Because the knowledge of the operation based on personal experience. After they solve the problem, they will submit the report to call center team, but they not prove the context of the case. Sometime the problem might differentiate by each situation and the solution might not work in different situation. So, this kind of working process creates the weakness of knowledge validation. In knowledge boundaries and T-Shaped manager, FSBT drive a lot of process to reduce the knowledge boundaries, improving cross-boundaries process among networked team, and doing a lot to develop and keep the talent T-Shaped manager. Which mean that the company is focusing on building a T-shape manager.

In summary, problems of Dynamic Group Products Co.,Ltd. when compared with FSBT which is a company that has a better knowledge transfer process. This can be shown a gap between two company such as the process of knowledge management when the company implemented a specific system. To analyze current status of two companies, we can say that Dynamic Group Products still a beginner in terms using a knowledge transfer process. First of all, from the interview that all employees are not familiar with knowledge management and they still work very manually. So, they need to change a company to be more systematic and learn how to be a T-shape person especially with a project manager. For FSBT, they already has the processes and activities that supported knowledge management cycle, knowledge creation, knowledge transfer, knowledge storage and retrieval, and knowledge application but it still need to improving in some part. Right now, the business support department use only file sharing which nobody use it. This is because they always follow the same work process which they get used to it. More importantly, the management didn't aware with the importance of the knowledge within the organization. Anyway, if compare with Dynamic Group Products, FBST still have a higher level of knowledge transfer process because they have a system to support knowledge transfer already and employees seems to understand the way to use it. For all result, it can be concluded that Dynamic Group Products has many problem and

unclear process of knowledge transfer, but they can use a case of FSBT to benchmark and apply it to develop knowledge transfer system of a project manager.

CHAPTER V
DISCUSSION & CONCLUSION

This study aimed to study knowledge management for a project manager by a comparative study between Dynamic Group Products Co.,Ltd. and Fujitsu System Business (Thailand). This research contributes Knowledge Management theory as a standard for a comparison. It also focuses on an important of knowledge management system (KMS) to implement and help the company fix their solution. For Knowledge management system (KMS), refers to a (generally IT based) system for managing knowledge in organizations for supporting creation, capture, storage and dissemination of information. It can comprise a part (neither necessary nor sufficient) of a Knowledge Management initiative (Akscyn, Robert M., Donald L. McCracken and Elise A. Yoder, 1988). The idea of a KM system is to enable employees to have ready access to the organization's documented base of facts, sources of information, and solutions. This study is significant because we compare two companies which have both of systematic and not systematic. So, it will clearly contrast an advantages and disadvantages when they transfer knowledge. Knowledge transfer and sharing has always been a challenge for organizations. Its importance has grown in recent decades for three related reasons. First, knowledge appears to be an increasing proportion of many organizations. Second, organizations have moved away from hierarchical methods of control toward more decentralized organizational structures and increased employee involvement (Levine, 1995.). Finally, advances in information technology have created new means of knowledge transfer. And if we look at current problem of Dynamic Group Products, the company based on only one project manager who stay at the company for a long time but cannot share his tacit knowledge to the next generation. Therefore, the company cannot expand a project and they still can do only one project at the same time. It can be seen that knowledge management theory can help the company to develop their process of knowledge transfer which will lead to an opportunities of the company to growth in the future. Moreover, the study also compare the case with FSBT which already has a knowledge management system

back ground. So, this thematic paper will gives a lot of benefit for Dynamic Group Products to compare and find out a current problem to improve.

According to the result in chapter 4, the study has shown a big gap between Dynamic Group Products and FSBT. For example, Dynamic Group Products still work with a very manual way and they have a huge problem with knowledge storage and transfer. Actually, they have problems with all knowledge management processes while FSBT already implemented knowledge management system. Therefore, FSBT can manage their knowledge transfer knowledge much better than Dynamic Group Products. Even FSBT is not the best company in terms of using a knowledge management system, but it is enough to compare the different with non-systematic company like Dynamic Group Products.

5.1 Contribution of a Study

According to the expected benefit from chapter 1, the study will helps Dynamic Group Products improve their process of knowledge transfer for a project manager and other managers. Because of this case deeply research on two companies and bring the literature of Knowledge Management theory. So, this thematic paper can be a guideline for Dynamic Group Products and show them an overall problem if compare with FSBT. Therefore, this can help Dynamic Group Products to benchmark with another company to develop their own knowledge transfer process and let them increase performance by comparing with FSBT until the company success as FSBT or better than that. For FSBT, we also found that even the company success in implementation of Knowledge Management System, but they still have some problems with it. Therefore, it will suggest the way to deal with the problems we analyzed and this can be a guide line for FSBT to move on to further steps as well. It is clear seen that this thematic paper will benefits to two companies that we use as a comparative case because we analyzed concurrently on both companies and leverage them and find out problems of them to create a good way to develop companies in the future.

5.2 Managerial Implication & Suggestion

Based on the proposed frame work, if Dynamic Group Products needs to improve their knowledge management process especially on knowledge transfer, we would recommend step by step. First of all, problems of knowledge creation in chapter 4 that the company incomplete in knowledge transfer to the next generation project manager, because they cannot change knowledge from tacit to explicit because of the lack of communication skill among a project manager and learner and also lack of technology to help the process of knowledge transfer more easily. The explicit for the company is knowledge that can be codified. Because it is easily shared and communicated, most organizations have captured this knowledge in ordered repositories, systems, or operating technologies of the firm, thus making it available to all the members of the organizations. For my suggestion, there are three types of explicit knowledge resident that an organization should have – cognitive knowledge, advanced systems skills, and systems understanding (Figure 5.1).

Figure 5.1 The knowledge matrix. (Meso and Smith, 2000)

Cognitive knowledge, also termed "know-what", is the "basic mastery of a discipline that professionals achieve through extensive training and certification" (Quinn et al., 1996). Advanced skills or "know-how" refer to the "ability to apply rules of a discipline to complex real-world problems" (Quinn et al., 1996). Systems

understanding, also termed "know-why" is the deep understanding of the web of cause-and-effect relationships underlying a discipline (Quinn et al., 1996; Nonaka, 1991). Secondly, all knowledge still keeps in hard copy, which means that, all knowledge are difficult to find and hard to keep in one place. Therefore, they also lack of system to well-managed and store all knowledge in one place and can be easy to find from the database. Thirdly, there are some boundaries in a process of knowledge transfer especially with an ego of a sender and a receiver. Lastly, there is no system to validate the knowledge and the company not focus in develops of a T-shape skill. So, this study suggests the company to implement Knowledge Management System (KMS) to be one of the best ways of problem solving. However, for the solution of FSBT we also suggest concurrently, but FSBT already implemented. However, we will also mention about the solution of FSBT after implementation of KMS of Dynamic Group Products at the last of this chapter.

For an important of KMS, this is an important system that should be developed in an organization (Benbya, 2008). There are many ways to describe a KMS, KMS systems deal with information (although Knowledge Management as a discipline may extend beyond the information centric aspect of any system) so they are a class of information system and may build on, or utilize other information sources. Distinguishing features of a KMS can include:

A KMS offers integrated services to deploy KM instruments for networks of participants, i.e. active knowledge workers, in knowledge-intensive business processes along the entire knowledge life cycle. KMS can be used for a wide range of cooperative, collaborative, adhocracy and hierarchy communities, virtual organizations, societies and other virtual networks, to manage media contents; activities, interactions and work-flows purposes; projects; works, networks, departments, privileges, roles, participants and other active users in order to extract and generate new knowledge and to enhance, leverage and transfer in new outcomes of knowledge providing new services using new formats and interfaces and different communication channels. To make a picture of KMS more clear, from the technical perspective as proposed by (Meso and Smith, 2000), as shown in Figure 5.1, which consists of three components: technology, function and knowledge. This KMS involves the processes for acquiring or collecting, organizing, disseminating or sharing knowledge among people in an institution.
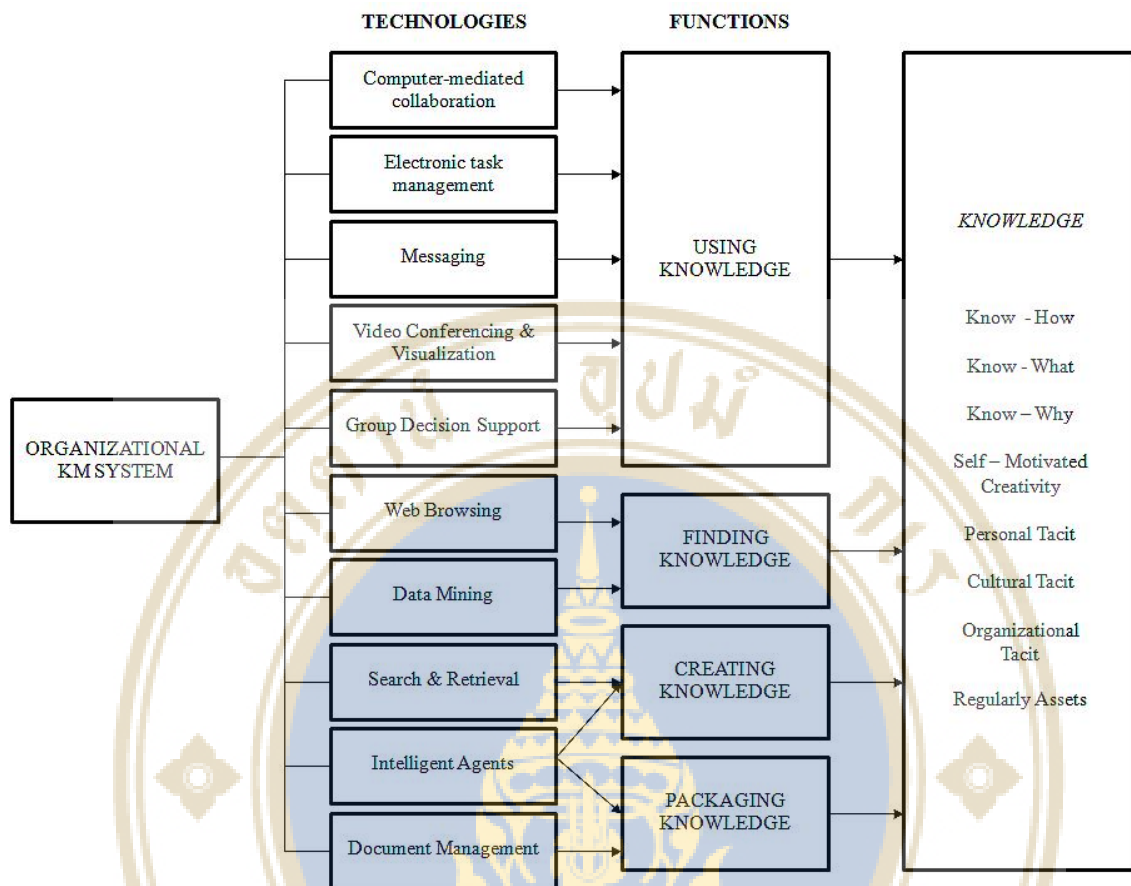
Figure 5.2 The Technical Perspective of a Knowledge Management System. (Meso and Smith, 2000)

To implement KMS system, we can divided the implementation steps into 10 main steps and create a road map (Amrit Tiwana, 2002) which have four main phases that the 10 steps of the road map comprise:

a). Infrastructural evaluation

b). KM system analysis, design, and development

c). System deployment

d). ROI and performance evaluation

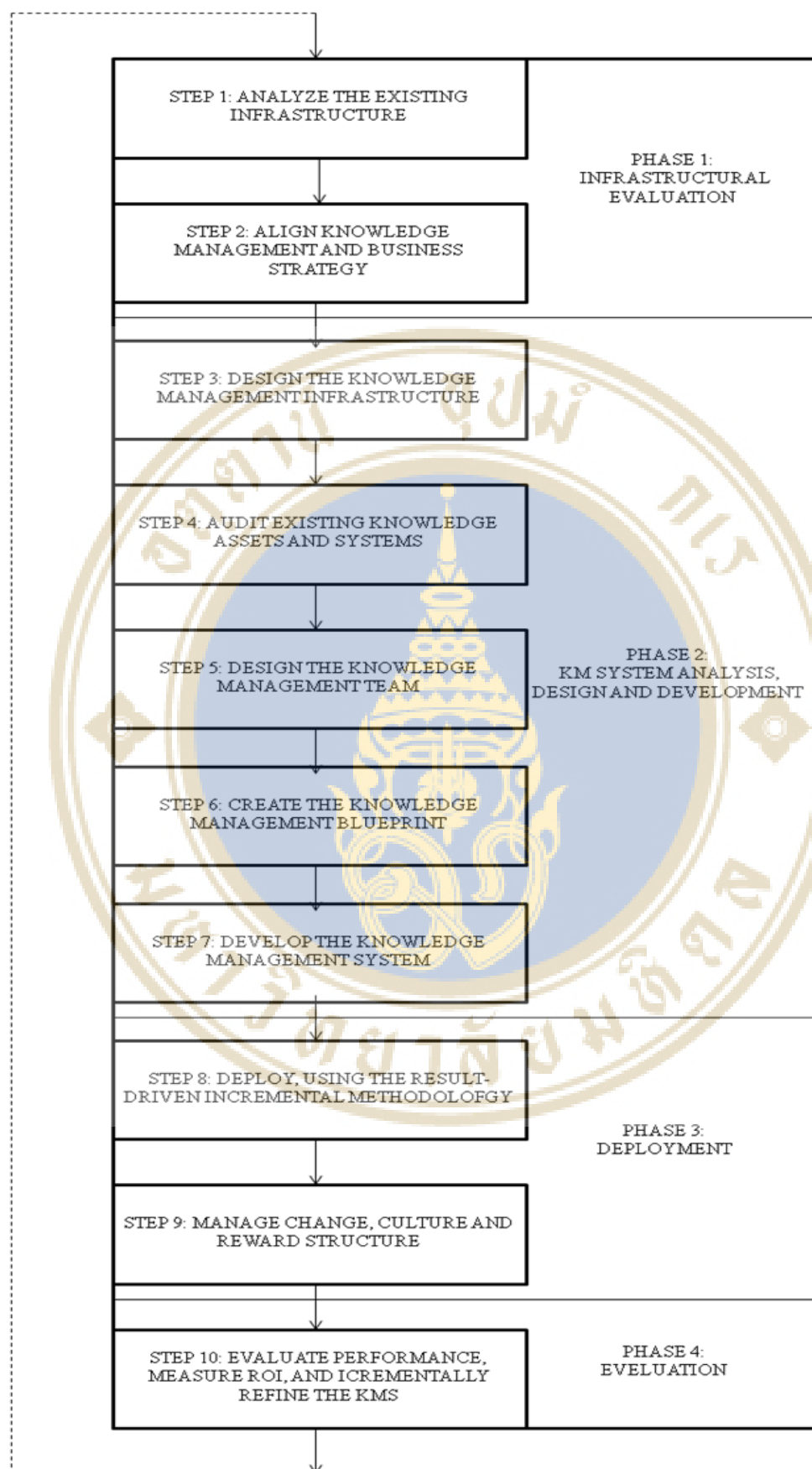The 10 steps in these four phases can be described in the figure below.

Figure 5.3 The 10-step KM road map. (Amrit Tiwana, 2002)

Phase 1: Infrastructural Evaluation

For the first phase of an implementation roadmap, we include 2 of overall 10 steps which are Analyze the Existing Infrastructure and Align Knowledge Management and Business Strategy.

Step 1: Analyze the Existing Infrastructure

First of all, clearly identify on what is already in place in Dynamic Group Products, and then identify critical gaps in the existing infrastructure. After that, see what can be able to build on what already exist, instead of telling what component to build on. It also stands a better chance of generating stronger management support for your KMS project because of the perception that you are not completely abandoning the "old" existing investments. However, If the company is not really has much existing infrastructure like this, we have to invest more on infrastructure to support this KMS in the future.

Step 2: Align Knowledge Management and Business Strategy

Because of business strategy always at a high level, whereas developing systems is always at a low level: Specifications and features are needed, not abstractions or visions. Therefore, the second step is to connect knowledge management in this company with business strategy to raise KM platform design to the level of business strategy and pull strategy down to the level of system design.

Phase 2: KM system analysis, design, and development

In the second phase of KMS implementation, it involve analysis, design and development of the KMS. This phase is including 5 steps from ten which are KM architecture design and component selection, Knowledge audit and analysis, KM team design, Creation of a KM blueprint tailored for organization and The actual systems development process.

Step 3: KM architecture design and component selection

The third step, suggest to select the infrastructure component that constitute with the KMS. Moreover, we should collaborative the platform to decide whether the platform is better suited to the company. Then, also identify and understand components of the collaborative intelligence: artificial intelligence, data ware house, generic algorithms, neural networks, expert reasoning systems, rule bass

and case-based reasoning. Moreover, we have to examine how newer development, such as peer-to-peer platforms, hold promise for corporate KM.

Step 4: Knowledge Audit and Analysis

In this step, audit and analyze existing knowledge process have been implemented because a knowledge management project must begin with the knowledge that the company is already has. Firstly, the company must understand an important of knowledge audit. Then assemble an audit team to perform a preliminary assessment of knowledge assets within the company to identify those that are critical and weak.

Step 5: Designing the Knowledge Management Team

For the fifth step on this road map is to form the team to design, build, implement and deploy the company's KMS. To design an effective KMS, we must identify key stakeholders both within and outside the company. For example, the group of people in our research's focus group is needed because we are focusing on the process of knowledge transfer for a project manager.

Step 6: Creating the Knowledge Management System Blueprint.

Create KM blueprint to provide a plan for building a KMS. This step integrates work from all preceding steps so that it culminates in a strategy oriented KMS design.

Step 7: Developing the Knowledge Management System

After created a blueprint from step 6, then the next step is to actually putting a system. This step will tackle the issue of integrating a system across different layer to build a stable knowledge management platform.

Phase 3: System deployment

For the third phase, it included another 2 of total 10 steps which are Deploy, Using the results-driven Incremental Methodology (commly known as the RDI methodology) and Manage Change, Culture and Reward Structure.

Step 8: Deploy, Using the results-driven Incremental Methodology

In this step, it aim to make the decision how to select cumulative releases with the highest payoffs first. Then evaluate the need for a pilot project and also appreciate scope issues and ways to identify and isolate failure points. Finally, evaluate how to use RDI methodology (RDI or results driven incremental

methodology is recommended for deployment of KM projects (Fichman & Moses, 1999). This approach uses targeted business results and end objectives to drive decision making at each point throughout the process.) to deploy the system, using cumulative results-driven business releases.

Step 9: Manage Change, Culture and Reward Structure

When the company has a big change like this KMS implementation, employees may resistant because they are not like a change that may effect to stability of their work. Encouraging use and gaining employee support requires new reward structures that motivate employee to use the new system and contribute to its enthusiastic adoption.

Phase 4: Evaluation

The last phase involves one step that most companies have been struggling with: measuring business value of KMS.

Step 10: Evaluate Performance, Measure ROI, and Incrementally Refine this KMS

The last step of a whole project implementation, we have to measuring ROI – must account for both financial and competitive impacts of KMS on the business of Dynamic Group Products.

After clear on all step of implementation, we also need to set a schedule for this implementation. As we decided based on the 10 steps above, we set at least 1 year for develop KMS, which assume that the implementation start on January and end on December following the 10 steps and 4 phases. We also conduct Gantt chart for this implementation schedule to clearly explain our example of an implementation. Anyway, this implementation guide line is not an actual one, we just use it as a guide line for the real case which the company has to apply the schedule that match with the company later.

Task Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1. Analyze the Existing Infrastructure	█											
2. Align Knowledge Management and Business Strategy	█											
3. KM architecture design and component selection		█	█									
4. Knowledge Audit and Analysis		░	░									
5. Designing the Knowledge Management Team					█							
6. Creating the Knowledge Management System Blueprint						█						
7. Developing the Knowledge Management System								█				
8. Deploy, Using the results-driven Incremental Methodology										█		
9. Manage Change, Culture and Reward Structure											█	
10. Evaluate Performance, Measure ROI, and Incrementally Refine this KMS												█

Figure 5.4 Knowledge Management System Gantt chart.

For the risk of implementation, this study mitigate some of risk by putting a solution in some steps of an implementation plan such as we manage change by planning for reward structure, and we also have a plan to evaluate ROI to reduce the risk of financial error. However, there is still having a risk that may happen inter

future like "how to keep information current and update". For this risk, we would recommend to create training for all staff to more clearly on how to update information and make it as a routine.

For FSBT, there is still having some gap to improve due to our analysis. However, it is not much to improve in KMS because the company can skip the process of implementation as the company already has KMS. Anyway, since FSBT is a large company, company still need to implement on a bigger system such as ERP. Therefore, we would suggest briefly by this following recommendation.

According to the workflow within the organization, the company should add the system that helps to connect every department together. This system should be able to store and retrieve information that each employee wants at the same time. Right now, the business support department use only file sharing which nobody use it. This is because they always follow the same work process which they get used to it. More importantly, the management didn't aware with the importance of the knowledge within the organization. The team would recommend Fujitsu to implement ERP system for the organization. This system will help the business support department and other department store and retrieve information easier with valid information. With the system, the company will be able to transfer information about customers and specification of hardware to employees that really need it. Moreover, everyone in the company can access and share the same information. Knowledge will be shared more which will improve work process to be faster. As a result, customer satisfaction and productivity of the service will be increased. Employees will be able to perform different task with accuracy simultaneously. Hence, the company profits will be increased.

In conclusion, these recommendations can help Dynamic Group Products to have a guide line for implement KMS as we focus to improve in 4 main process of knowledge management which are knowledge creation, knowledge storage and retrieval, knowledge transfer, and knowledge application as we mentioned on proposed framework in our literature review. Therefore, the recommendation will lead the company to Success in company's knowledge transfer and sharing for a project manager which is a biggest goal for this research. Moreover, the recommendation for FSBT will probably help FSBT increased the company profits due to an improvement of company overall system management.

Limitation

There are some limitations in this study. First, the external validity of the results may not extend beyond specially defined and selected samples. The data was collected only Dynamic Group Products. The experience of respondents may have some bias from their experience and opinion. If possible try to get different people with different experiences. The author hopes that future research will explore the performance implications of our findings in relation to social capital, computer-mediated communication and organizational learning. Second, due to the limited of time to explore for this research, which is has only 6 weeks to study and discover the main result of this topic. Because we hope the results after researching will bring the opportunity to enhance company's performance and develop knowing sharing process in each division. And the third was clearly that theory presented in this paper has limitations and requires further exploration. Moreover, the respondents have no experience on knowledge management. We need to provide some information about some knowledge transfer and sharing to respondents to understand what could be the right answer of receiver's perception to receive effective information on knowledge transfer and sharing.

Future Research

To continue with this study, this study aims to follow up the result of KMS implementation for Dynamic Group Products which is the researcher's company. After that, we expected to extend the size of system to be a real big corporate system such as ERP system to makes all employees in the company are connected together by only one server and it may help the company create intranet and extranet system to gain more customer and employee satisfaction in the future.

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