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# A PROPOSED KNOWLEDGE MANAGEMENT SYSTEM TO IMPROVE THE BUSINESS GROWTH AT PT. MULTI GUNA EQUIPMENT

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## Abstract

The construction equipment industry in Indonesia, in which the lifting equipment is a part of, is showing promising growth with an estimated value of 4.5 billion US dollars in 2028, growing at a compound annual growth rate (CAGR) of 6.79% during the period of 2021-2028. PT. Multi Guna Equipment (PT. MGE) is one of the authorized distributors of lifting equipment specializing in reach stackers and harbour mobile cranes from Konecranes – a company based in Finland. In recent years, PT. MGE has experienced stagnant business growth, despite the enormous potential demand for lifting equipment in Indonesia. In light of these circumstances, the company needs a structured and effective system for managing knowledge, which is through the implementation of a Knowledge Management (KM) system. In doing this, the research is based on two research questions. The first is how can a knowledge management system be proposed to improve the business growth of PT. MGE, and the second is what is the implementation plan for the proposed knowledge management system. These two research questions will be answered using theories related to knowledge, knowledge management, and two knowledge management frameworks, namely People, Process, Technology (PPT) and Socialization, Externalization, Combination, Internalization (SECI). Because a qualitative method is used in this research, data is collected through interviews and observations, which are then analyzed using thematic analysis. The results of data collection show that there are several issues related to the PPT and SECI frameworks. These issues range from the limited sales knowledge and sales skills possessed by salespeople, the lack of knowledge sharing processes within and between teams, the lack of proper knowledge transfer, difficulty in accessing knowledge and information due to manual access, and others.

**Keywords:** Knowledge Management, PPT, SECI, stagnant business growth

## Introduction

Indonesia is a maritime country and is located in a cross position, between the two continents of Asia and Australia and two oceans, the Indian and the Pacific, making the Indonesian state in a very strategic position because it is a trade route between countries (Daily, 2022). Based on these facts, the shipment of most commodities or goods will be transported by sea routes whose process of entry and exit must be through ports spread from Sabang to Merauke (Priadi, 2022). This is also supported by the export and import data below from Indonesia's *Badan Pusat Statistik* that showed 94.66% of export (BPS, 2022) and 88.05% of import (BPS, 2022) in 2021 were done by sea transportation.

Table **Error! No text of specified style in document.**. Indonesia's Exports by Mode of Transportation

| Moda Transportasi | 2020 | | 2021 | | Perubahan (%) | |
|---|---|---|---|---|---|---|
| | Berat (Ribu Ton) | Nilai (Juta US$) | Berat (Ribu Ton) | Nilai (Juta US$) | Berat | Nilai |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Udara | 123,2 | 11.062,5 | 287,5 | 9.482,4 | 133,25 | -14,38 |
| Laut | 573.418,7 | 150.237,1 | 615.312,5 | 219.243,8 | 7,31 | 45,93 |
| Darat | 92,7 | 54,4 | 54,8 | 27,8 | -40,85 | -48,94 |
| Pipa | 6.042,5 | 1.787,9 | 2.481,3 | 2.481,3 | -0,50 | 58,91 |
| Pos | 1,1 | 49,9 | 0,8 | 14,2 | 24,23 | -71,46 |
| **Total Ekspor** | **579.678,2** | **163.191,8** | **621.667,8** | **231.609,5** | **7,24** | **41,92** |

(Source: (BPS, 2022))

Table 1. Indonesia's Imports by Mode of Transportation

| Moda Transportasi | 2020 | | 2021 | | Perubahan Nilai 2021 thd 2020 (%) | Peranan (%) thd Total Impor 2021 |
|---|---|---|---|---|---|---|
| | Berat (Juta Kg) | Nilai (Juta US$) | Berat (Juta Kg) | Nilai (Juta US$) | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Laut | 150 638,1 | 123 407,8 | 176 881,2 | 172 736,0 | 39,97 | 88,05 |
| Darat | 0,0 | 0,0 | 0,3 | 0,7 | - | 0,00 |
| Udara | 1 241,9 | 18 039,9 | 877,8 | 23 374,4 | 29,57 | 11,91 |
| Pos | 0,0 | 1,1 | 0,0 | 1,4 | 27,27 | 0,00 |
| Pipa/Kabel | 0,0 | 120,0 | 0,0 | 77,5 | -35,33 | 0,04 |
| **Total Impor** | **151 880,0** | **141 568,8** | **177 759,3** | **196 190,0** | **38,58** | **100,00** |

(Source: (BPS, 2022))

With the high dominance of sea transportation, it is necessarily requiring the right equipment to support all the processes, especially the loading / unloading process. In sea transport, cranes and gantries are most often used to move containers for unloading and loading ships whereas reach stackers is used to handling containers in hard-to-reach places (Smartload, 2023). These tools will be found in major Indonesian ports such as Tanjung Priok and Tanjung Perak. In meeting the needs of these tools, most companies in Indonesia, both from the private sector and state-owned enterprises (Pelindo) usually import them from foreign companies through their authorized distributor agents in Indonesia.

PT. Multi Guna Equipment (PT. MGE) is one of the authorized distributors that provides professional container handling products to ports throughout Indonesia, as well as high-capacity material handling equipment both onshore and offshore (PT. MGE, n.d.). As a small private company, the business process in PT. MGE is quite simple because it only relies heavily on the sales of units and spare parts. Established in 2005, PT. MGE has managed to maintain its existence until now. This is mainly due to the cooperation with its sole principal – a Finnish company named Konecranes® which was an excellent strategic move. Konecranes® is a world-leading group in lifting and material handling, they aim to make lifting and material handling more productive and

sustainable by maximizing lifecycle value and eliminate waste of resources, energy, and time throughout the whole value chain (Konecranes, n.d.). With their commitment to provide the best quality products has become one of the reasons they can become one of market leaders both globally and in Indonesia.

After being established for more than 17 years, PT. MGE conducts its business processes on a Business-As-Usual basis or simply maintains its status quo. But recently, during this disruptive complex era with the increasing competitive pressure has made PT. MGE to rethink its strategy to survive, in particular related to the knowledge aspect (DeLong, 2004). It is undeniable that knowledge is one of the most important elements in an organization. The knowledge aspect of both the individual and organizational levels is one of the main foundations in achieving good company performance (Brown & Duguid, 1998). Knowledge is also said to be the basis of the company's innovation potency. With the creation of innovation, it will eventually lead to improving the company's performance as well. Every problem-solving process carried out in the company must involve communication, knowledge usage, and knowledge sharing. Furthermore, (Nonaka & Takeuchi, 2007) has stated that in an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge. And the system to manage the knowledge assets within an organization is called knowledge management.

The need for a knowledge management system in PT. MGE arises from several factors. Firstly, the lifting and material handling equipment industry in Indonesia is growing rapidly as the country's economy continues to expand, it drives the growth for infrastructure, manufacturing, and logistics services (NGUYEN, 2021). Indonesia’s construction equipment in which the lifting equipment is a part of was estimated to reach USD 4.5 billion by 2028, growing at a CAGR of 6.79% during 2021-2028 (Arizton, 2022). Secondly, the industry is highly competitive, with many domestic and international players vying for market share. To remain competitive, companies need to have a deep understanding of their products, services, customers, and industry trends (Ulaga & Loveland, 2014). Thirdly, the industry is characterized by a high level of technical knowledge, which is essential for providing quality products and services (Bocquet, Brossard, & Sabatier, 2007). This knowledge is often held by key employees, who may leave the company, taking their knowledge with them. In addition to those three factors, every company including PT. MGE has a source of knowledge that is untapped within all the workers, especially the tacit knowledge at the senior employees’ level. On top of that, there is a gap of skills and knowledge between the employees, especially in the sales team. With the knowledge management system, this knowledge can be stored and made accessible to all employees (Hallin & Marnburg, 2008). Additionally, several other elements such as past successes and failures as well as knowledge creation can also be added as knowledge assets to boost the workers' competencies.

From the explanation above, the author thinks it is important to have a system to manage PT. MGE's knowledge in a structured and effective manner, thus the purpose of this research is to design a knowledge management system for PT. MGE.

## Method

The method chosen for this research is the qualitative research. In a more detailed definition, qualitative research begins with assumptions and the use of interpretive/theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem (Creswell, 2018). The data collection methods used in this research are interviews and observation. The choice of these two methods is perceived to be able to provide comprehensive insight that can help the author answer the research questions.

The analytical method used to process the data that has been collected is using *thematic analysis*. Thematic analysis is a method for identifying, analyzing, and reporting patterns (themes) within data (Braun & Clarke, 2006). It is a method for describing data, but it also involves interpretation in the processes of selecting codes and constructing themes (Kiger & Varpio, 2020). Thematic analysis is an appropriate and powerful method to use when seeking to understand a set of experiences, thoughts, or behaviors across data set (Kiger & Varpio, 2020).

## Results and Discussion

### Analysis

The author examined all the codes that can be created from the collected data (interviews and observation) and then they were further examined to find out if there were any similar patterns or themes that could be developed. Eventually, seven themes were identified from these codes and could be visualized in below thematic map.

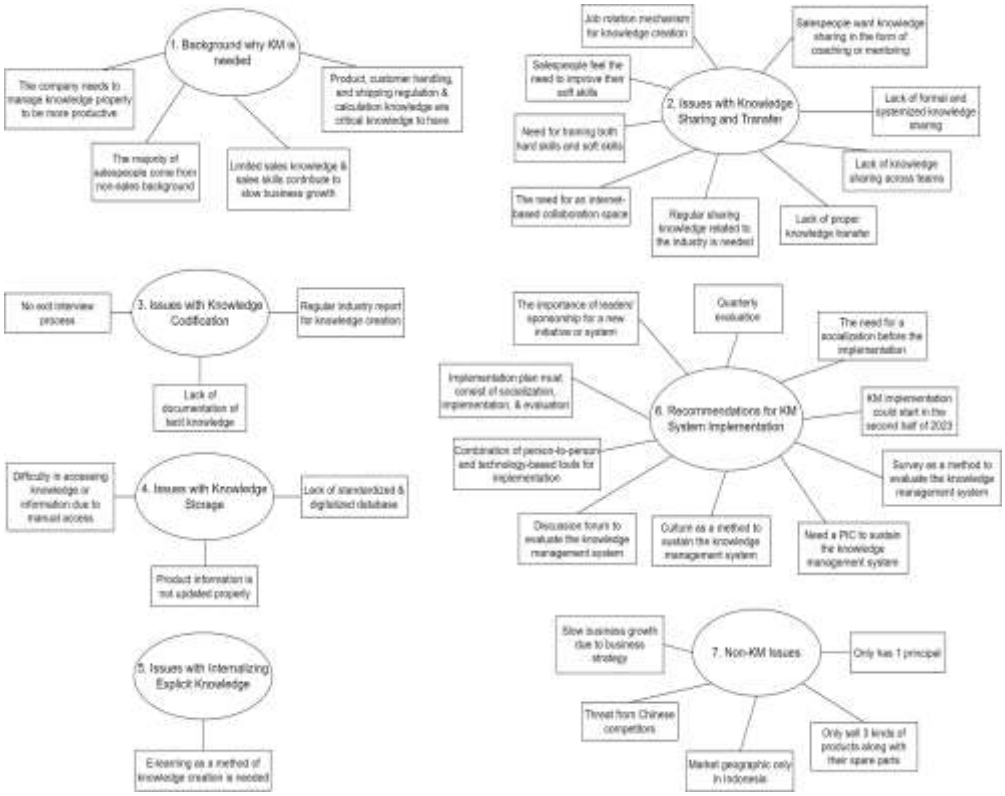


**Figure 1. Thematic Map**

**Table 3. Themes & Codes Classification**

| Themes | Codes | Category | PPT | SECI |
|---|---|---|---|---|
| Background why KM is needed | The company needs to manage knowledge properly to be more productive. | Recommendation | Process | - |
| | The majority of salespeople come from non-sales background. | Root cause | People | - |
| | Limited sales knowledge and sales skills contribute to slow business growth. | Root cause | People | - |
| | Product, customer handling, and shipping regulation & calculation knowledge are critical knowledge to have. | Recommendation | Process | - |

| | | | | |
|---|---|---|---|---|
| Issues with Knowledge Sharing and Transfer | Job rotation mechanism for knowledge creation. | Recommendation | Process | |
| | Salespeople feel the need to improve their soft skills. | Recommendation | People | |
| | Need for training both hard skills and soft skills. | Recommendation | Process | |
| | The need for an internet-based collaboration space. | Recommendation | Technology | |
| | Regular sharing knowledge related to the industry is needed. | Recommendation | Process | Socialization |
| | Lack of proper knowledge transfer. | Root cause | Process | |
| | Lack of knowledge sharing across teams. | Root cause | Process | |
| | Lack of formal and systemized knowledge sharing. | Root cause | Process | |
| | Salespeople want knowledge sharing in the form of coaching or mentoring. | Recommendation | Process | |
| Issues with Knowledge Codification | No exit interview process. | Root cause | Process | |
| | Lack of documentation of tacit knowledge. | Root cause | Process | Externalization |
| | Regular industry report for knowledge creation. | Recommendation | Process | |
| Issues with Knowledge Storage | Difficulty in accessing knowledge or information due | Root cause | Technology | Combination |

| | | | | |
|---|---|---|---|---|
| | to manual access. | | | |
| | Product information is not updated properly. | Root cause | Process | |
| | Lack of standardized & digitalized database. | Root cause | Process | |
| Issues with Internalizing explicit knowledge | E-learning as a method of knowledge creation is needed. | Recommendation | Process | Internalization |
| Recommendations for KM system implementation | The importance of leaders' sponsorship for a new initiative or system. | Recommendation | - | - |
| | Implementation plan must consist of socialization, implementation, & evaluation. | Recommendation | - | - |
| | Combination of person-to-person and technology-based tools for implementation. | Recommendation | - | - |
| | Discussion forum to evaluate the knowledge management system. | Recommendation | - | - |
| | Culture as a method to sustain the knowledge management system. | Recommendation | - | - |
| | Need a PIC to sustain the knowledge management system. | Recommendation | - | - |
| | Survey as a method to evaluate the knowledge | Recommendation | - | - |

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|---|---|---|---|---|
| | management system. | | | |
| | KM implementation could start in the second half of 2023. | Recommendation | - | - |
| | The need for a socialization before the implementation. | Recommendation | - | - |
| | Quarterly evaluation. | Recommendation | - | - |

For the business solution later, the author will divide the solutions into two parts, i.e. in terms of the PPT framework and in terms of the SECI framework. For PPT, it will be summarized in table 4, while for SECI it will be summarized in table 5.

**Table 4. Summarization of PPT Issues**

| Three Pillars of KM | Codes | Category |
|---|---|---|
| **People** | The majority of salespeople come from non-sales background. | Root cause |
| | Limited sales knowledge and sales skills contribute to slow business growth. | Root cause |
| | Salespeople feel the need to improve their soft skills. | Recommendation |
| | The company needs to manage knowledge properly to be more productive. | Recommendation |
| **Process** | Product, customer handling, and shipping regulation & calculation knowledge are critical knowledge to have. | Recommendation |
| | Job rotation mechanism for knowledge creation. | Recommendation |
| | Need for training both hard skills and soft skills. | Recommendation |
| | Regular sharing knowledge related to the industry is needed. | Recommendation |
| | Lack of proper knowledge transfer. | Root cause |

| | | |
|---|---|---|
| | Lack of knowledge sharing across teams. | Root cause |
| | Lack of formal and systemized knowledge sharing. | Root cause |
| | Salespeople want knowledge sharing in the form of coaching or mentoring. | Recommendation |
| | No exit interview process. | Root cause |
| | Lack of documentation of tacit knowledge. | Root cause |
| | Regular industry report for knowledge creation. | Recommendation |
| | Product information is not updated properly. | Root cause |
| | Lack of standardized & digitalized database. | Root cause |
| | E-learning as a method of knowledge creation is needed. | Recommendation |
| | The need for an internet-based collaboration space. | Recommendation |
| **Technology** | Difficulty in accessing knowledge or information due to manual access. | Root cause |

**Table 5. Summarization of SECI Issues**

| SECI Framework | Current Conditions | Expected Conditions |
|---|---|---|
| **Socialization** | • Knowledge sharing is often done in a case-based, informal, directive from leaders to salespeople, and personal - from leaders to a certain salesperson who is facing a problem.<br>• Knowledge sharing among salespeople is very rare.<br>• Knowledge sharing between salespeople and engineers is also very rare, even though engineers have a deep understanding of the product knowledge. In practice, salespeople often contact engineers repeatedly when customers want to buy spare parts to repair their lifting | • The company should provide a collaborative and open working environment where individuals are encouraged to share and learn from each other.<br>• Knowledge sharing should be conducted regularly not just when there is a problem and the results should be stored in an easily accessible place.<br>• Regular cross-functional collaborations, in this case is between the salespeople and engineers should also be conducted. |

| | | |
|---|---|---|
| | equipment. | |
| **Externalization** | The only externalization process in PT. MGE is the creation of hard copies documents for every tender and project that has been conducted. | • The company should encourage employees to codify their tacit knowledge into explicit documents by establishing tools or processes that facilitate the externalization process.<br>• The externalization process should be available to enable employees to access relevant information for their work, serve as a foundation for future learning, and reduce knowledge loss in employee turnover. |
| **Combination** | • Knowledge is stored in a manual manner, making it difficult to be combined and integrated with other different pieces of knowledge. Even the salespeople have become reluctant to access the documents due to the difficulty of having to go to the warehouse.<br>• Product information is not updated properly, hence it can lead to inconsistencies and errors in the knowledge that is being combined.<br>• A lack of standardized and digitalized database hinder the Combination process because it will be difficult to find the relevant information needed for combination. | • The company should provide necessary tools and technology that can enabling the process to create new knowledge by combining existing knowledge.<br>• The tools should be easy to use, easily accessible, updateable, and structured to motivate employees to use them more. |
| **Internalization** | PT. MGE has not implemented any initiative to facilitate the process of internalizing explicit | The company should create an initiative for the internalization process. Without a structured |

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| | knowledge. | process for internalizing explicit knowledge, employees may struggle to understand and apply new knowledge and skills. |

From the comprehensive explanation above, it has been found that a system to manage knowledge properly is highly needed at PT. MGE. This is due to the findings from the collected data which show that the salespeople have limited knowledge and skills, causing their productivity in performing their jobs to be nonoptimal. The absence of a proper system to manage knowledge causes the knowledge sharing, codification, storing, and internalizing processes to be improperly structured. As a result, employees struggle to access the right knowledge when they need it, which hinders their ability to innovate, improve processes, and make informed decisions. This can lead to decreased productivity, lost opportunities, and ultimately impact business growth.

In these situations, a KM system can play a role to provide a structured approach to managing the company's knowledge assets, including identifying, capturing, sharing, and applying knowledge to enhance organizational productivity, profitability, and growth. A well-designed KM system can help ensure that the right knowledge is available to employees when they need it, and that it is continually updated and improved.

**Business Solution**

**Three Pillars of Knowledge Management (PPT Framework)**

To design an effective KM system, we have to address the three pillars of KM i.e. People, Process, and Technology, or commonly referred to as PPT. People involve individuals or groups within the organization who create, share, and utilize knowledge. Process encompass the workflows and procedures that determine how knowledge is generated, captured, and shared. Technology refers to the tools, systems, and infrastructure that support knowledge management activities. Addressing the PPT framework ensures that the organization has the right people, processes, and technology to implement a knowledge management system successfully.

**Table 6. People, Process, & Technology Frameworks**

| PPT Root Causes | | KM Objectives | KM Framework Solutions | | |
|---|---|---|---|---|---|
| | | | **People** | **Process** | **Technology** |
| **People** | The majority of salespeople come from non-sales background. | Utilizing the expertise within the organization. | Director, GM Sales, Salespeople | Coaching | Portal, Repository |
| | | To establish a development program. | Salespeople | Training | |

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|---|---|---|---|---|---|
| | Limited sales knowledge & sales skills contribute to slow business growth. | To optimize human capital. | Director, GM Sales, Salespeople | Knowledge café; Computer-based Training | Repository, E-Learning |
| | Lack of proper knowledge transfer. | Utilizing the expertise within the organization. | Director, GM Sales, Salespeople | Knowledge café, Coaching | Repository, Portal |
| | Lack of knowledge sharing across teams. | To improve coordination and communication in delivering faster and better solutions. | Salespeople, Engineers | Community of Practice | WhatsApp Group, Team spaces |
| | Lack of formal and systemized knowledge sharing. | To capture, store, and disseminate knowledge easily and timely. | Director, GM Sales, Salespeople | Knowledge café | Repository |
| | No exit interview process. | To establish a knowledge retention process. | Salespeople, HRD | K-based Exit Interview | Database, Repository |
| **Process** | Lack of documentation of tacit knowledge. | To better document the organization's knowledge assets. Avoiding redundant effort or repeating the same mistakes. | Director, GM Sales, Salespeople | Lesson-learned documents; Best practices documents | Repository |
| | Product information is not updated properly. | To facilitate the process of finding relevant information easily. | GM Sales, Salespeople | Regularly updating every product information and storing them in the database | Database |
| | Lack of standardized & digitalized database. | To be able to reuse previously created documents, ideas, and | GM Sales, Salespeople | Collecting all existing databases related to products and | Database |

| | | | | | |
|---|---|---|---|---|---|
| | | knowledge. | | customers; Creating a centralized and standardized database and regularly update it | |
| **Technology** | Difficulty in accessing knowledge or information due to manual access. | To facilitate the process of finding relevant information easily. | GM Sales, Salespeople | Digitalizing and archiving the past tenders and projects documents | Repository |

**Knowledge Creation Process (SECI Framework)**

The next step in designing the KM system after addressing People, Process, and Technology is to determine the methods or techniques for each of the modes of the SECI Framework. In this framework, knowledge is created through the interaction between tacit and explicit knowledge. Since PT. MGE does not yet have a KM system, all the following are the proposed techniques or methods based on the author's experience as an employee and from the analysis results that have been carried out in previous section. To summarize all the processes, we can see the following Table 7 that shows all the tools or techniques for each of the SECI process that will be implemented at PT. MGE.

**Table 7. SECI Tools or Techniques for KM Implementation at PT. MGE**

| **Socialization** | **Externalization** |
|---|---|
| • Coaching<br>• Training<br>• Knowledge café<br>• Community of Practice<br>• Job Rotation | • K-based exit interview<br>• Lesson-learned documents<br>• Best practices documents<br>• Industry reports |
| **Internalization** | **Combination** |
| • E-Learning | • Portal<br>• Repository<br>• Database |

Table 8 provides a comprehensive summary of the various processes, tools, and techniques that will be implemented as part of the Knowledge Management (KM) System. The proposed KM system serves as a solution that aims to provide a structured

approach to managing PT. MGE's knowledge assets by identifying, capturing, sharing, and applying knowledge to enhance organizational productivity. This, in turn, will contribute to the company's profitability which eventually will foster business growth.

**Table 8. SECI Tools or Techniques for KM Implementation at PT. MGE**

| Tools / Technique | Brief Description | People Involved | Frequency | Benefits |
|---|---|---|---|---|
| **Coaching** | The process to develop the skills and knowledge in a particular area through discussions between a coach and a coachee. | Coach: GM Sales or Director<br><br>Coachee: All Salespeople | Quarterly | • Enhanced knowledge and skills through personalized and targeted development<br>• Improved job performance<br>• Increased productivity<br>• Higher employee engagement and motivation |
| **Training** | A process that involves the transfer of specific information, skills, and knowledge that can be applied in the workplace. | All Salespeople and Training Facilitators | Bi-Annually | • Increased knowledge and skills<br>• Improved job performance |
| **Knowledge café** | A conversational method in which small groups of people come together to have open, creative conversations on a topic of mutual interest, surface their collective knowledge, share ideas, and gain a deeper understanding of the issues involved. | Director, GM Sales, and All Salespeople | Monthly | • Increased awareness and understanding of a particular topic<br>• Identification of new opportunities<br>• Improved Problem-solving<br>• Improved collaborations among participants |
| **Community of Practice** | A group of people who share a common interest or concern and engage in regular interactions. | All Salespeople and Engineers | Quarterly | • Increased cross-functional knowledge sharing<br>• Improved problem-solving<br>• Better decision-making |

| | | | | |
|---|---|---|---|---|
| | | | | in relation to the process of selling products |
| **Job rotation** | A mechanism in which an employee is moved between different roles within the same department. | All Salespeople | Regular every two or three years or On an as-needed basis | • Allows the salespeople to gain a broader understanding of the department's operations<br>• Increase employee engagement and motivation<br>• Promote a culture of continuous learning and knowledge sharing |
| **K-based Exit Interview** | An approach to exit interviews that focuses on capturing and transferring knowledge from departing employees to the organization. | HRD and departing employee | On an as-needed basis | To help prevent loss of valuable knowledge and expertise |
| **Lesson-learned documents** | Reports that document the experiences, knowledge, and insights gained from a particular project. | Director, GM Sales, and All Salespeople | On an as-needed basis (after a project or tender is completed) | • To improve future project performance<br>• Avoid repeating past mistakes<br>• Serve as references for new salespeople |
| **Best Practices documents** | Reports that focused to provide guidance on the best ways to perform a task or project based on proven and successful methods from the past. | Director, GM Sales, and All Salespeople | On an as-needed basis | • Knowledge and expertise can be leveraged more effectively<br>• Salespeople can learn to try repeating past successes<br>• Serve as references for new salespeople |
| **Industry Reports** | Provide the latest updates, trends, and insights related to the lifting | Director, GM Sales, All Salespeople | Yearly | Help the company to stay informed to identify opportunities and avoid potential risks. |

| | | | | |
|---|---|---|---|---|
| | equipment industry. | and Consultant | | |
| **Portal** | A single access point for each salesperson in accessing various files related to knowledge management initiatives. | All Salespeople | Can be accessed as needed | Easy access to all knowledge assets using customized views and personalized features for each of the user. |
| **Repository** | A centralized storage system to allow all knowledge assets to be stored, searched for, and retrieved. | Anyone who needs access | Can be accessed as needed | • Easy access to all knowledge assets<br>• Reduced risks of knowledge loss |
| **Database** | A structured and organized data sets which include all information related to products, customers, and sales history. | Anyone who needs access | Can be accessed as needed | • Easy access to all historical data<br>• Help to create faster informed-decisions |
| **E-learning** | The use of electronic technology to deliver educational content, courses, and training programs. | All Salespeople | On an as-needed basis | • Enable the learning process in a self-paced manner which is more flexible and convenient<br>• Highly interactive and engaging learning experience |

**Implementation Plan & Justification**

The author plans the implementation process to be divided into four stages, namely pre-adaptation, adaptation, implementation, and evaluation. Dividing the implementation plan into four stages is essential to ensure that the knowledge management system is effectively implemented, and its impact can be measured. This implementation plan will take a one-year period, starting in the second semester of 2023 on August, until the end of July 2024. The rationales behind the implementation plan are largely based on the analysis results and the author's personal judgment.

**Pre-Adaptation Stage**

There are six activities for this stage. First is to discuss the proposed KM solution which has been formulated through this research with the Director to ensure

that he, as the leader and sponsor of this project truly understands and agrees with this solution. Next, is to create a project charter as a proof of commitment. This charter is planned to be signed by the Director as project's sponsor, the author as the CEO office that is appointed as KM PIC, HR Manager, and all sales team as the users of KM System. This activity is to incorporate the code that suggested the importance of leaders' sponsorship for a new initiative or system.

After the project charter is signed, we should source the vendors needed to develop or license the software or apps of knowledge repository and database as well as find the partners to provide us the industry reports, e-learning modules, and training programs. Subsequently, the budget for the KM system can be calculated to then be approved by the Director. After the budget is agreed and the sourcing process is finish, we continue to the hiring process for the selected vendors or partners. Finally, the vendors and partners can start to develop all the tools or programs

**Adaptation Stage**

In this stage, there are two activities – Educating all users about the KM system and training the KM users on how to use or perform each of the tools and/or techniques. The essence of this activity is to educate the benefits of the KM system in order to make the targeted users really understand and be willing to do all the KM initiatives as well as to ensure that all the users are fully trained before using and performing all tools and techniques so that the whole process can run smoothly.

**Implementation Stage**

This implementation stage involves the actual deployment of the KM system. After the users are trained, they are expected to start implementing all the initiatives from Table 6 (PPT Framework) and Table 7 (SECI Tools or Techniques).

**Evaluation Stage**

Final stage is the evaluation stage – it involves assessing the effectiveness of the system in achieving its objectives, identifying areas for improvement, and making necessary changes. There will be two methods in evaluating the KM implementation. First is to use discussion forum – it allows users to share their thoughts, experiences, and feedback about the system. This method is aimed to be conducted more frequently than the other one since it is more convenient and quicker to be executed. The other method is to use survey conducted quarterly. The survey questions will be designed accordingly to serve as a more comprehensive evaluation tool.

## Conclusion

The purpose of this research is to design a Knowledge Management (KM) system as a solution for the business issue of stagnant business growth at PT. MGE. The author started this research by determining 2 (two) research questions. The first question is about how can knowledge management system be proposed to improve the business growth of PT. MGE, and the second question is related to the implementation plan of the proposed knowledge management system.

The unavailability of a Knowledge Management (KM) system causing the knowledge sharing, codification, storing, and internalizing processes to be improperly organized. As a result, the salespeople – who are the main revenue generator – struggle to access the right knowledge when they need it, which hinders their ability to innovate, improve sales processes, and make informed decisions. All of these has led to decreased productivity and lost opportunities which ultimately impact business growth.

A KM system can play a role to provide a structured approach to managing the company's knowledge assets. In designing the KM system, the author used People, Process, and Technology (PPT) framework and Socialization, Externalization, Combination, and Internalization (SECI) framework. Through these frameworks, the author was able to formulate several tools, for example, Coaching, Training, Knowledge café, Lesson-learned documents, K-based exit interview, repository, and e-learning. With a total of 13 (thirteen) KM tools or techniques, the company now able to identify, capture, store, share, and effectively utilize knowledge and information which can improve the organization's performance, enhance decision-making processes, and foster innovation and collaboration, thereby gaining a competitive advantage in the lifting equipment industry which ultimately contributes greatly to the growth of the company.

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