



Designing the Knowledge Management Strategy to Foster Continuous Improvement and Innovation in the Transportation Company

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ABSTRACT: In the contemporary business landscape, organizations and enterprises harness their knowledge as a distinctive competitive advantage to compete with competitors. The emergence of new technology-based transportation services along with the unprecedented COVID-19 pandemic has prompted Limosin Sejahtera, one of the business units of PT. Transportasi Inovatif Indonesia recognizes the importance of knowledge management as a strategic approach to leverage its knowledge assets. Through the APO Knowledge Management Assessment Tool and stakeholder interview, the research identifies several challenges that hinder the organization's ability to leverage its knowledge assets effectively and impede innovation and continuous improvement initiatives. APO KM Assessment shows that KM maturity has already reached the Expansion level. The results then serve as a pivotal reference point, guiding the identification of precise strategies that have the potential to elevate knowledge management (KM) practices and lead the organization to foster continuous improvement and innovation culture.

KEYWORDS: APO KM Assessment, Innovation, KM Maturity Level, Knowledge Management Strategy, Transportation

1. INTRODUCTION

The transportation industry in Indonesia is a vital sector for the country's economy, as it facilitates the movement of people and goods across the archipelago. This trend is happening because of the rapidly growing population in Indonesia. One of the land transportation developments in Indonesia is the taxi, which has a good place in Indonesian society. Taxis are commonly used by individuals to stroll around cities or move between locations, providing a convenient and on-demand service for commuting.

Referring to the World Economic Forum in 2017, the industry was largely dominated by a few players, with Bluebird having a more than 50% share. However, the industry has been undergoing significant changes in recent years due to the emergence of new technology-based transportation services such as ride-hailing companies. These services have disrupted traditional transportation modes, particularly in urban areas, leading to intense competition and challenges for established transportation companies like PT. Transportasi Inovatif Indonesia. Furthermore, the COVID-19 pandemic also has impacted the transportation industry in Indonesia, causing a sharp drop in passenger numbers and revenue for many transportation companies. Based on the data from the Indonesian Transportation Society (MTI), the number of passengers numbers for traditional taxi services fell by around 90% in March 2020, which impacted to decrease in PT. Transportasi Inovatif Indonesia market value by 44.66% (Silmi and Wahyudi, 2022). Eddy & Harahap (2020) also show that there has been a decrease in the number of receipts (IDR) of online taxi drivers due to the COVID-19 pandemic with an average value of 58.14%.

In order to remain competitive in the current fast-paced and dynamic business climate, it is essential for companies to continuously improve and be innovative. Developing a robust knowledge management system (KMS) can facilitate this process by providing a structured approach to capturing, sharing, and utilizing knowledge across the organization. The research will begin with assessing the maturity level of the KMS implementation in Limosin Sejahtera, one of the business units of PT. Transportasi Inovatif Indonesia, followed by conducting the research to understand the current issue and unveiling the opportunities to design a new concept of KMS that is better aligned with the company's needs.

2. LITERATURE REVIEW

A. Knowledge Definition

The definition of knowledge is a complex and multifaceted concept studied and debated by scholars across various fields of study. One definition comes from epistemology, the branch of philosophy concerned with knowledge. According to this definition,



knowledge is justified by true belief. This means that for something to count as knowledge, it must be believed to be true, and there must be a good reason or justification for believing it to be true (Steup, 2018).

Another definition of knowledge comes from Higgs & Titchen, 2018. Knowledge refers to a combination of information, skills, experiences, and understanding that an individual possesses and can apply effectively in various contexts.

Within the business context, two contrasting viewpoints have predominated: the “Western view” and the “Eastern view”. The “Western view” of knowledge emphasizes the re-use of already explicit knowledge, management of projects, and markets, whereas the “Eastern view” focused on the creation of tacit knowledge and management of cultures and communities.

B. Knowledge Management

Many studies have been conducted on knowledge management, resulting in various definitions proposed by scholars. According to Asian Productivity Organization (APO), Knowledge Management is the discipline of enabling individuals, teams, and entire organizations to create, share, and apply knowledge to better achieve their objectives collectively and systematically (Young, 2020b). The main point that needs to be conveyed is that knowledge management involves a unified strategy for generating, disseminating, and utilizing knowledge to improve organizational efficiency, profitability, and growth.

In the organizational context, the sources of knowledge can come from both internal and external sources. Internal sources come from the organization's own operation such as design activities, sales, marketing, manufacturing, customer contact, etc. These internal sources of knowledge can be easier to be conveyed to the knowledge repository. External sources of knowledge may come from professional associations, commercial websites, academic bodies, and research institutions. These external to the organization make knowledge available through training, publication, and seminars on which the knowledge will be internalized by members of the organization to be disseminated and stored internally (Kumar and Kumar, 2015).

C. Knowledge Management Maturity Assessment

This research will utilize the APO method (Young, 2020a) to assess the maturity level of the organization. APO considers seven main elements from the KM framework:

1. Leadership

This category evaluates the organization's leadership capability to respond to the challenges of a knowledge-based economy. The KM leadership is assessed in terms of KM policies and strategies that are in place in the organization. The leadership is also assessed in their effort to initiate, guide, and sustain KM practices in the organization.

2. Process

The process category assesses how knowledge is used in managing, implementing, and improving the organization's key work processes. It also assesses the extent to which the organization continually evaluates and improves its work processes to achieve better performance.

3. People

In the people category, the organization's ability to create and sustain an organizational knowledge-driven learning culture is assessed. The organization's effort to encourage knowledge sharing and collaboration is evaluated. The development of knowledge workers is also assessed.

4. Technology

The technology category reviews the organization's ability to develop and deliver knowledge-based solutions such as collaborative tools and content management systems. The reliability and accessibility of these tools are also assessed.

5. Knowledge Process

The organization's ability to identify, create, store, share and apply knowledge systematically is evaluated. Sharing of best practices and lessons learned to minimise re-inventing of the wheel and work duplications are also assessed.

6. Learning and Innovation

This category determines the organization's ability to encourage, support, and strengthen learning and innovation via systematic knowledge processes. Management's effort to inculcate values of learning and innovation and provide incentives for knowledge sharing is also assessed



7. KM Outcomes

The KM Outcomes category measures the organization’s ability to enhance customer value through new and improved products and services. The organization’s ability to increase productivity, quality, profitability, and sustain growth through the effective use of resources and because of learning and innovation is evaluated.

APO KM’s readiness consisted of seven audit elements. There are a total of 42 questions covering each of the seven audit categories with a maximum score of 210 points. Each category has a maximum score of 30 points. Each question can be rated from 1 (doing poorly or none) to 5 (doing well).

D. Continuous Improvement and Innovation

Continuous improvement refers to an ongoing and systematic effort within an organization to enhance its processes, products, and services (Chakravorty and Attri, 2018). It involves identifying areas of inefficiency or opportunities for improvement, implementing changes or innovations, measuring the impact of those changes, and continuously seeking ways to further optimize performance. Continuous improvements aim to create a culture of learning and collaboration, where all employees are actively engaged in contributing to the organization’s growth and success.

Whereas innovation refers to creating, developing, and implementing new ideas, methods, processes, and services that result in significant improvement that can transform the organization (Pavitt, et all. 2017). Innovation usually involves the initiation of novel concepts, the application of creative thinking, and the implementation of ideas that can bring a competitive advantage and positive impact to the organization.

3. RESEARCH METHODOLOGY

To ensure a comprehensive and nuanced understanding of the research topic, the researcher opted for using a mixed methods approach, utilizing both quantitative and qualitative research. Conducting surveys first will provide a broad overview of the topic and enable the researcher to narrow down the problems into more focused problems. The interview will then serve as a means of gaining a deeper understanding of the participants’ perspectives.

Triangulating the data from both methods will enhance the validity and reliability of the findings, which can enable the researcher to draw more accurate and meaningful conclusions.



Figure I. Research Framework

Quantitative Approach

APO evaluates seven different aspects of an organization. For each of these categories, there are six questions that must be answered and scored by respondents on a scale of 1 to 5. A score of 1 indicates that the organization is performing very poorly or not at all on that question, while a score of 5 indicates that is the organization performing very well. In total, there are 42 questions, which means that the maximum KM assessment score is 210 and the lowest is 42. The sum of all scores will be used to determine the organization's KM maturity level.



Qualitative Approach

In order to gain a comprehensive understanding of the experiences, practices, and perceptions of the stakeholders that are involved in knowledge management, an in-depth, semi-structured interview will be conducted with the key person in the field. During the interviews, participants were asked a series of open-ended questions that encouraged them to share their experiences, insights, and perspectives on topics related to knowledge management, while also allowing for the exploration of unexpected themes and issues. However, the survey result will also be used as a guideline and to encourage two-way communication between the researcher and the interviewee.

The choice of interview method was selected by the need for rich, detailed data that could be used to explore the complexities and nuances of knowledge management as a phenomenon that occurs within organizational settings. The participants were chosen by identifying and recruiting individuals with relevant professional backgrounds and expertise and who have a concern about knowledge management.

4. ANALYSIS AND BUSINESS SOLUTION

A. Quantitative Analysis

This research uses two kinds of analysis: quantitative and qualitative. For the quantitative, the researcher uses a survey as a research method and conducts validity and reliability tests to examine the survey results' credibility and reliability. Based on Slovin Formula, the researcher used this formula to determine the sample of the survey:

$$n = \frac{N}{1 + N e^2}$$

n = sample; N = population; e = margin of error (95% or 0.05)

The distribution of the questionnaire was conducted using an online survey platform, Google Form, to ensure widespread accessibility and participation among all employees that were involved in the Limosin Sejahtera's development. In accordance with established statistical principles, the sample size for this research was defined by using Slovin Formula, which was explained in the prior paragraph. The calculated sample size for this study is 33 participants by applying the Slovin Formula:

$$n = 36 / (1 + 36 (0.05^2)) = 33$$

Validity Test Result

The validity test is a critical step in quantitative analysis as it can ensure that the data collected is accurate, and trustworthy and can increase the credibility of the research. For a sample population of 33 with 5% significance, the value of r table is 0.344. The validity of the question is determined if the Pearson value is greater than the r table value. According to the table above, all questions are valid.

Reliability Test Result

A reliability test is conducted to determine the consistency of the data set for each APO category. Using Google Spreadsheet as a tool to find out the Cronbach's Alpha Value for each category, the result can be seen in the table below:

Table I. Reliability Test Results For Seven Category of KM Assessment

Category	Cronbach Alpha Value	N of items	Reliability Result
Leadership	0.817	6	Very Good
Process	0.916	6	Excellent
People	0.867	6	Very Good
Technology	0.878	6	Very Good
Knowledge Process	0.903	6	Excellent
Learning & Innovation	0.826	6	Very Good
KM Outcome	0.835	6	Very Good



According to the table, the reliability testing that was conducted on the survey results indicates that all the category values are above 0.8, which stated that the reliability of this research is very good and excellent.

Knowledge Management Maturity Level

The KM maturity assessment at Limosin Sejahtera was conducted using the APO method, which has 7 categories with each category having 6 questions. Each of the questions is given a score ranging from 1 to 5, therefore the maximum score is 210.

From the survey conducted, the KM maturity level of Limosin Sejahtera is Expansion with a total score of 140.74. Furthermore, the average of 7 categories of APO is 20.11, as stated in the graph below.

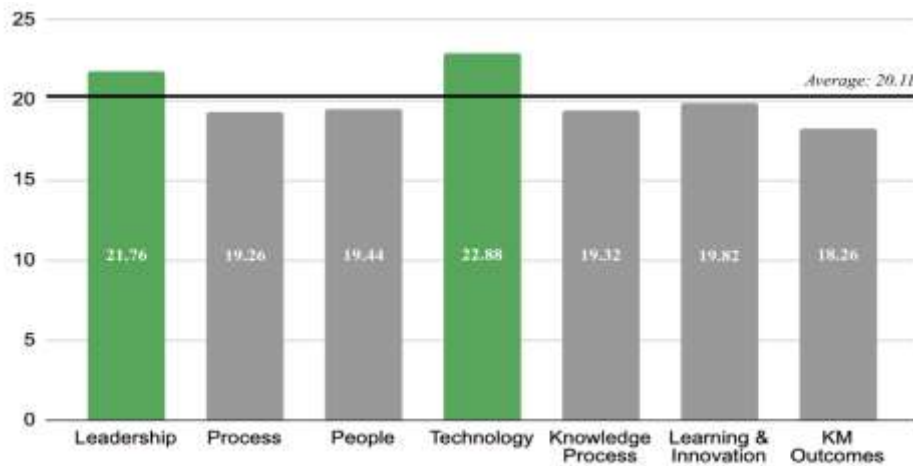


Figure II. KM Maturity Level of Limosin Sejahtera

Table II. The Gap Score for Each Category of KM Maturity Level

Level	Category	Max. Score	Actual Score	Gap Score
Accelerator	Leadership	30	21.76	8.24
	Process	30	19.26	10.74
	People	30	19.44	10.56
	Technology	30	22.88	7.12
Knowledge Process	Knowledge Process	30	19.32	10.68
	Learning and Innovation	30	19.82	10.18
Outcomes	KM Outcomes	30	18.26	11.74
Overall Total		210	140.74	69.26



Based on the survey result using the APO method, technology has the highest score among all categories at 22.88 and KM outcomes have the lowest score of 18.26. There are only two categories which are above the average, Leadership and Technology with scores of 21.76 and 22.88 respectively. The results were followed by the categories that were below the average, Process (19.26), People (19.44), Knowledge Process (19.32), Learning and Innovation (19.82), and KM Outcomes (18.26). Each category and question results are analyzed to understand which areas are already strong and which areas need some improvements.

B. Qualitative Analysis

Besides conducting a survey for the Knowledge Management assessment process, the researcher also employed qualitative research (interview) to get a deeper insight and gain a root cause of the problems. To analyze the data, the researcher uses affinity mapping, a method to identify patterns and themes in the data. This method also allows the researcher to effectively prioritize issues and develop relevant recommendations for knowledge management initiatives.

Based on the analysis using affinity mapping methods, there are five key insights that need to be concentrated on by the management in order to improve the Knowledge Management implementation on Limosin Sejahtera.

1. Seamless and centralized knowledge management centre

Effective knowledge management is essential to ensure seamless operation in any organization. However, Limosin Sejahtera is facing several obstacles and challenges related to the implementation of the knowledge management system.

First, the platform chosen for knowledge sharing has some limitations, which result in difficulties in accessing and sharing vital documentation. This issue not only affects the new joiner but also the current employees are having the struggle to find the relevant information that they need in their daily activities.

Moreover, documentation is scattered across different “databases”, making it challenging to access and update the documentation. This issue is getting exacerbated by the findings that there is still a lack of awareness among the employees about the existence of the “Academy Center” that Limosin Sejahtera has. Although the content is incomplete, the academy team already put some important information in there, which is not well-utilized by the employees.

Additionally, the company also lacks a prevention system to mitigate any adverse situations that may arise. Therefore, there is a critical need for a centralized knowledge management system that can address these issues and streamline the knowledge management process in Limosin Sejahtera.

2. Dedicated team to maintain the KM initiatives

Effective knowledge management requires a dedicated team to maintain the initiatives, and Bluebird is facing several obstacles and challenges related to this issue. Firstly, the previous KM team responsible for maintaining the KM implementation has been dismissed, resulting in no dedicated employees to maintain the knowledge management. As a result, the organization is facing various problems such as improper documentation and handover processes, incomplete knowledge documentation, and the absence of a formal process to measure the impact of knowledge contributions. Moreover, sharing sessions have only happened in some divisions, but not all teams have implemented them yet, leading to inconsistencies and incomplete information sharing.

Secondly, Bluebird's website has many pages that are not found, and customers are not getting relevant information due to the lack of periodic updates. Therefore, it is crucial for Bluebird to establish a dedicated team to maintain KM initiatives to address these issues and ensure a seamless knowledge management process.

3. Leader figure to standardize the SOP (standard operating procedures)

The success of any organization depends on its ability to streamline its operations and standardize its procedures. However, in the case of Limosin Sejahtera, there is a lack of consistency in their development vision, which has resulted in conflicts between sub-divisions.

This is largely due to the absence of a leader figure who can effectively standardize the business processes and provide a clear direction. The lack of a standardized approach has led to confusion and inefficiencies within the company, causing delays and errors in its operations. Therefore, there is a critical need for a strong leader figure who can establish and enforce standard operating procedures and rules, to ensure the company's success and growth.

4. Proper system for talent management

A proper system for talent management is crucial for any organization to optimize the potential of its workforce. However, in Limosin Sejahtera's case, the organization is facing several challenges related to talent management.



Firstly, there is a lack of a formal system for mentoring, coaching, and tutoring. The current process is not standardized so the success of the outcomes largely depends on the capabilities and the willingness of the employees themselves. There are some kinds of informal sessions that are initiated by the employees, but because of no standardization in the process, there is inconsistency in the process and the results.

Secondly, the organization lacks a centralized database on staff competency, making it difficult to identify the strengths and weaknesses of individual employees. Referring to the key stakeholder’s interview results, there is an initiative to assess and develop the employees. The measurements and curriculums are in the process of review by each division’s manager.

To conclude, there is an urgent need for a proper talent management system that can address these issues and help the organization optimize its workforce potential.

5. Cultivating sharing and learning culture

The importance of cultivating a sharing and learning culture cannot be overstated, as it can significantly impact an organization's success. Unfortunately, Limosin Sejahtera is having a struggle with this aspect. First and foremost, management may not be aware of the importance of continuous learning and innovation, which can lead to a lack of investment in these areas.

Moreover, management may not be fostering a culture of empowerment and appreciation for employees, which can lead to a lack of motivation to share knowledge and collaborate. As a result, organizations may face a lack of a reward system for knowledge sharing and collaboration, which can further demotivate employees. Therefore, it is essential to create a culture that values continuous learning, innovation, and collaboration to ensure the long-term success of an organization.

C. KM Strategies’ Implementation Plan and Justification

Limosin Sejahtera possess a comprehensive IT infrastructure that can effectively support implementing knowledge management (KM) initiatives. Therefore, substantial financial investment is not required, but rather minor adjustments to align with specific requirements and ensure a smooth KM system experience.

The following strategies are proposed to increase the KM maturity level of the company and are expected to foster continuous improvement (CI) and enhance its innovation culture (IC).

Table III. Proposed KM Strategies For Limosin Sejahtera

Strategy	Explanation	CI	IC
Strengthen leadership and strategic alignment	The leader plays a crucial role in driving change, establishing a vision, and providing the necessary guidance and support throughout the process	V	V
Create a dedicated KM team to manage KM initiatives	The KM team consists of a group of individuals with specialized knowledge and skills in managing organizational knowledge. They are responsible for overseeing, coordinating, and facilitating various aspects of the knowledge management initiative.	V	V
Mapping the current and necessary knowledge for development	Conduct a comprehensive analysis to map experts, knowledge sources, flows, and constraints within the organization, identify and categorize knowledge assets	V	X
Building targeted talent development	Identifying the competencies and development needs of employees to conduct a targeted training/coaching/tutoring program that can enhance an individual’s performance.	V	V
Build a centralized knowledge management system	Develop and launch a centralized digital platform that serves as a repository of organizational knowledge, best practices, and learning resources. Implement	V	V



	robust search and indexing functionalities for easy access and retrieval of information.		
Encourage a sharing culture among employees	Organize regular knowledge-sharing sessions, workshops, and seminars to facilitate the exchange of knowledge and best practices among employees. Encourage active participation and create a safe space for sharing insights and lessons learned.	V	V
Inaugurate Communities of Practice (CoP)	Establish domain-specific or cross-functional communities of practice where employees with shared interests or expertise can collaborate, share knowledge, and solve problems together. Facilitate regular meetings, discussions, and knowledge exchange activities.	V	V
Measure and evaluate KM initiatives	The evaluation ensures that organizations have a systematic and evidence-based approach to monitor, assess, and enhance the effectiveness of the KM initiatives. It is expected to drive continuous improvement and ultimately lead to improved organizational performance and competitive advantage	V	X

As for the proposed timeframe for the KM implementation at Limosin Sejahtera, it can be depicted in Table IV.

Table IV. Proposed Implementation Plan of KM Strategies

Initiative	2023		2024			
	Q3	Q4	Q1	Q2	Q3	Q4
Phase I						
Strengthen leadership and strategic alignment						
Phase II						
Create a dedicated KM team to manage KM initiatives						
Mapping the current and necessary knowledge for development						
Building targeted talent development						
Phase III						
Encourage a sharing culture among employees						
Build a centralized knowledge management system						
Inaugurate communities of practices (CoP)						
Phase IV						
Measure and evaluate KM initiatives						



5. CONCLUSION

Based on the analysis using the APO KM Assessment Tool, the current KM maturity level of Limosin Sejahtera is at the Expansion Level with a score of 140.74 out of 210. In a competitive business environment like today, Limosin Sejahtera should leverage its knowledge assets to lead the company to its competitive advantage.

However, to fully realize the advantage of knowledge management, Limosin Sejahtera should embark on a long process in order to increase its KM maturity level. By implementing these strategies, Limosin Sejahtera can unlock its potential to the fullest and drive continuous improvement and cultivate innovative culture.

1. Strengthen leadership and strategic alignment.
2. Create a dedicated KM team to manage KM initiatives.
3. Mapping the current and necessary knowledge for development.
4. Building targeted talent development.
5. Executing KM-related programs such as sharing sessions, building a centralized KM system, and inaugurating Communities of Practices
6. Measure and evaluate KM strategies periodically.

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