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Knowledge Management Evaluation in Agile Organization with WFA Way of Working (Case Study: PT DDLI)

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ABSTRACT: The rapid changes in various aspects such as people, process and technology in agile organizations need proper knowledge management. This research analyzed the KM maturity level in PT DDLI, a technology company behind one of Indonesian digital banks. After examining various assessment models, the assessment question that was proposed by KM3 in PBC is the most appropriate model to assess the KM maturity for PT DDLI. This research uses a combination of quantitative and qualitative research methodology. Quantitative by conducting surveys and qualitative by conducting 5 Why RCA and TOWS analysis for identifying the causes of KM issues in PT DDLI. This research helps PT DDLI to identify current KM maturity level, KM issues and offer the recommendation for future improvement. This research can become a starting point for larger scale research in the future specifically to study the KM behavior in agile organizations.

KEYWORDS: Agile, Knowledge Management, KM Maturity Model.

INTRODUCTION

In order to keep relevant with the rapid changes of market needs, organizations which adopt an agile way of working nowadays are emerging. As an agile organization, PT DDLI needs proper knowledge management (KM), especially when it comes to dealing with rapid changes in people, process and technology. Good knowledge management (KM) practices and implementation are necessary for agile organizations to minimize employee time loss resulting from changes in business needs, high staff turnover, new processes, and organizational structure.

PT DDLI is a technology company behind one of Indonesia's well known digital banks, it provides digital product engineering (software development) and data engineering. PT DDLI is collaborating from three hubs around Southeast Asia (Jakarta, Singapore and Pune). Since it was founded in 2019, the number of PT DDLI employees keeps increasing from ± 30 employees to >400 employees.

Despite being established in 2019 during the pandemic, PT DDLI never completely experienced full WFO working arrangement. When the situation of the pandemic became better, many companies started to demand the employees to come back to office. In this transition era from WFH to WFO, PT DDLI enables its talents to work from anywhere (WFA). Talents at PT DDLI are free to work wherever they like—in an office, at home, or even in a coffee shop—as long as they can effectively manage their working hours. Talent from PT DDLI is dispersed over nine countries and more than fifteen nationalities. For PT DDLI, WFA is indeed the ideal working arrangement.

As a company which was just founded in 2019 (3 years ago), PT DDLI is still developing. There is still much room for improvement in the form of transformations of process, procedure, organizational structure and systems. The transformation as part of the organizational learning process. The learning process needs to be well managed to minimize inefficiencies of the implementation. In order for PT DDLI to develop into a more mature organization, KM plays a critical role.

The working environment of PT DDLI is like a startup company. High employee turnover rates are a common occurrence for startups. The attrition rates in startups are around 25%, which is nearly double the U.S. national average at just 13% (Smith, 2023). High attrition will become a major problem if it is not accompanied with proper KM. Employees will experience difficulties while

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taking over job responsibilities which are left behind by resigned employees. It will take time and resources to restore tacit knowledge that was improperly documented by a resigned employee.

The next challenge for KM, particularly knowledge sharing in PT DDLI is WFA, despite the fact that WFA is an excellent perk for PT DDLI's employees. The knowledge sharing is not a simple process, even more challenging in PT DDLI, the process of knowledge sharing is conducted mostly online. Research conducted by Zulaikha et al in 2021 which studies the effectiveness of online learning found that out of 99 respondents, 98% of respondents (n=97) felt that learning face-to-face is more effective than online learning. Thus, it is undeniable that the online knowledge sharing process is more challenging than offline.

In order to address the aforementioned challenges with KM implementation, PT DDLI requires an appropriate KM approach. Understanding the current state of KM implementation in PT DDLI is crucial before planning the implementation so that we can identify areas for future improvement.

There are many studies that have been conducted regarding the KM maturity model. KM3 (Knowledge Management Maturity Model) in PBC (Project Based Company, proposed by Pereira et al in 2021, considered as the most appropriate model to assess the existing condition of KM implementation in PT DDLI. The study of Pereira et al in 2021, analyzed the general maturity level of European project-based organizations. KM3 in PBC divide KM maturity of organization into 7 phases as follows:

1. Recognize
2. Identify/Create
3. Store
4. Share
5. Apply
6. Learn
7. Improve

KM3 in PBC is considered as the most suitable method for KM assessment model in PT DDLI, because of the granularity of the questionnaire and the similarity of organizational structure between project-based organization and agile based organization.

METHOD

This study combines quantitative and qualitative methods. The combination of qualitative and quantitative methods is considered as the best approach in defining KM maturity, KM issues and action plan to improve KM implementation in PT DDLI.

This research begins with the quantitative approach through a structured questionnaire to achieve a better understanding of the current knowledge management (KM) maturity in PT DDLI. The questionnaire consists of 31 multiple choice questions and 1 free text question. For the free text question, the respondents were asked to explain their overall feedback in regard to KM implementation in PT DDLI.

While primary data was gathered through a survey, secondary data was gathered through the company's open publication documents. Researchers apply Cross Sectional studies where the data collection process through survey was conducted in the certain time which was September to November 2023. In terms of sampling methodology, this research implements the central limit theorem, where the minimum sample size is 30.

Following the quantitative results, the qualitative approach is used to analyze the issues that need to be addressed in order to have better KM implementation. The qualitative method employs RCA (Root Cause Analysis) and TOWS (Threat, Opportunity, Weakness, and Strength) analysis.

RESULT

The total respondents of the survey is 33 respondents. On average the KM assessment results in PT DDLI get 2.8 score out of 4. Identify is the phase which has the highest average than the other phases. Meanwhile, Store is the phase which has the lowest average.

The multiple choice questions which generate results below 2.5 are considered as the key problems of KM implementation in PT DDLI. Researchers summarize the problems into 6 main issues, as follows:

1. PT DDLI's employees do not record knowledge in a single platform.
2. Knowledge is not well recorded, organized, structured, evaluated, filtered and improved.

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3. There are no standardized methods/procedures to register all lessons learnt.
4. PT DDLI does not have a record of knowledge that can be consulted.
5. PT DDLI implementation is not part of organization performance.
6. There is no knowledge sharing network in the organization.

Meanwhile, for the free text question, the survey successfully generated fruitful feedback from respondents. Below are some key feedbacks regarding the overall KM implementation in PT DDLI:

1. No proper documentation for knowledge
2. Hard to find documentation
3. No guidance on how to record knowledge properly
4. Updated knowledge only reflected by the code
5. No responsible party for KM.
6. KM needs to be driven by leadership.
7. Managing knowledge is not part of OKR, thus it is not being prioritized.

The issue of source code as the one and only most updated documentation is not yet mentioned nor implied in the issue of multiple choice question, thus researchers choose the issue of source code as the one and only most updated documentation as additional issues to the 6 main issues as previously stated.

DISCUSSION

Researchers conduct RCA using the 5 why method to define the root cause of the 7 main issues aforementioned. The results of the root cause analysis for each issue are mapped to ishikawa diagram as shown in Figure 1.

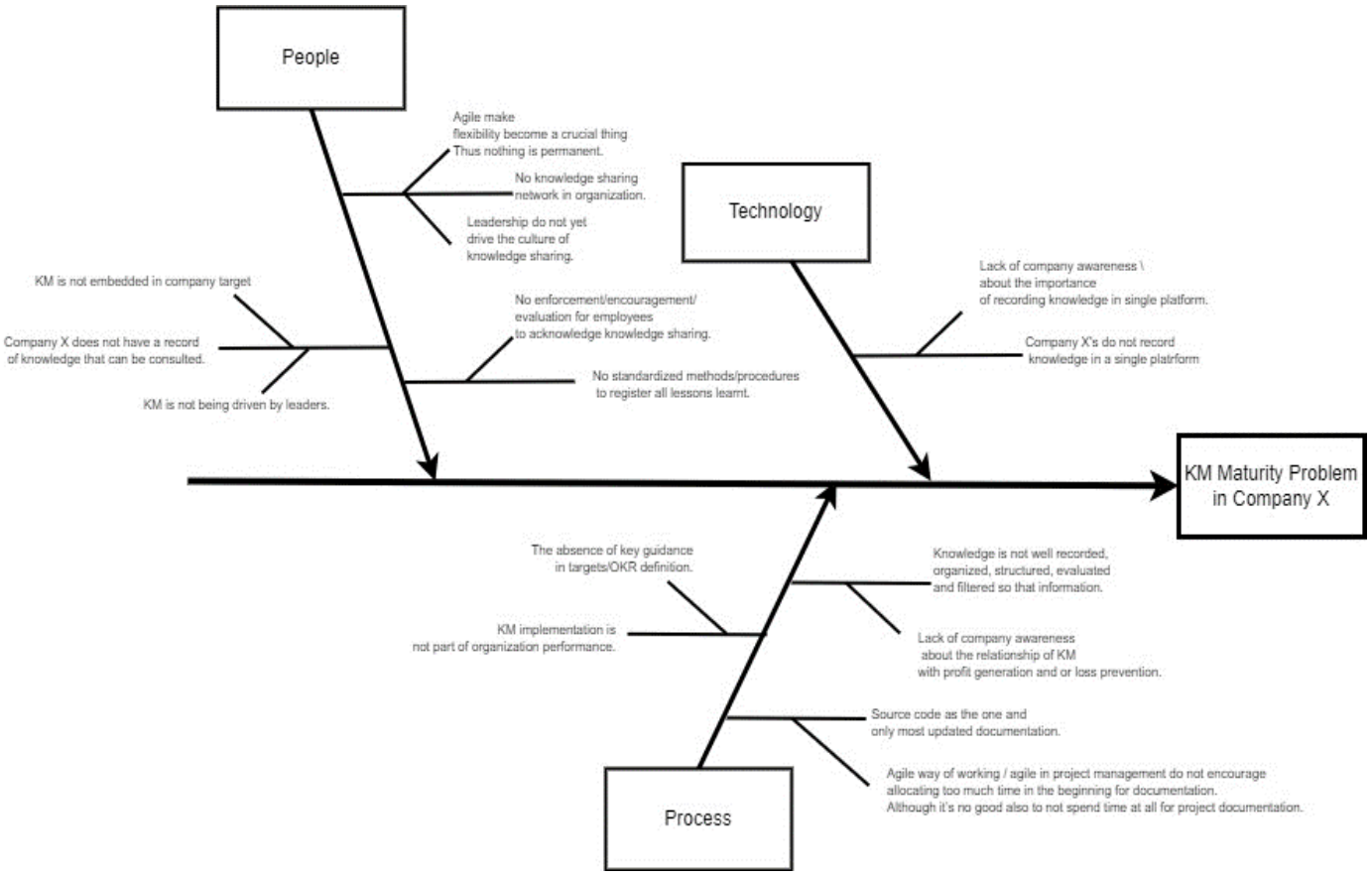

Figure 1. Ishikawa Diagram of RCA Result

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Furthermore, researchers perform TOWS Analysis for better KM implementation in PT DDLI. The TOWS Analysis as shown in Figure 2. Based on the RCA and TOWS, researchers define a set of implementation plans along with the timeline of better KM implementation in PT DDLI. The implementation and timeline as shown in Table 1.

TOWS Analysis	Weakness	Strength
	W.1.KM is not part of OKR. W.2.KM is not yet driven by leader. W.3.Agile way of working tends to set aside documentation. W.4.Culture of knowledge sharing still not yet set. W.5.The absence of KM procedure & guidance. W.6.No dedicated unit/function for organizing and consolidating knowledge. W.7.No evaluation regarding KM.	S.1.Work from Anywhere (WFA) working arrangement is the strength of the company, it makes all employees aware of technologies. Maintaining knowledge in digital form is not a challenge in term of technology for the company. S.2.PT DDLI using slack for day-to- day communication across company wide, which can be very useful for knowledge sharing media, because everyone in PT DDLI is using slack, knowledge sharing via slack will be visible for everyone in company.
Threat W.1.KM is not part of OKR. W.2.KM is not yet driven by leader. W.3.Agile way of working tends to set aside documentation. W.4.Culture of knowledge sharing still not yet set. W.5.The absence of KM procedure & guidance. W.6.No dedicated unit/function for organizing and consolidating knowledge. W.7.No evaluation regarding KM.	T.1. W.1. W.7 Balancing business OKR with KM implementation as part of OKR and make regular evaluation for the KM implementation. T.4. W.3 Implementing better agile way of working then competitor by implementing better documentation by iteration. T.3. W.2 More endorsement from leader for better KM implementation in order to minimize potential knowledge loss by the resignation of key person in company. T.2. W.5 Development of KM procedure to avoid wasting time on identifying unrecorded knowledge. T.3.W.4 Development of knowledge sharing culture in order to minimize potential knowledge loss by the resignation of key person in company.	T.2.S.1 Maintaining knowledge in single platform which link connection to other platform make Knowledge in PT DDLI recorded well in digital form, so knowledge included lesson learn can be well managed, and make PT DDLI winning than the competitor because PT DDLI can minimize potential loss of recurring event.
Opportunities O.1.Growing market of digital banking products in line with the emergence of digital marketplace and cashless society in Indonesia. O.2. Good reputation of PT DDLI as a workplace who enable employee to work from anywhere, while the other company obligate employee to work from office. O.3. PT DDLI as a rapid growing company who begin to receive trust from new customers.	O.3. W.6 Having organize knowledge for their product is one of the way PT DDLI can maintain their customer trust. Organize knowledge can be realized by having dedicated unit/function for organizing and consolidating knowledge.	O.3. S.2. Creating slack channel dedicated to knowledge sharing, encourage employee to share their knowledge in that channel, it will reduce time for the newcomers to find knowledge that they needed. It will make PT DDLI a better WFA workplace, so that it can maintain its reputation as comfortable workplace for WFA, and increasing employee engagement.

Figure 2. TOWS Analysis

In addition, researchers categorize the implementation plan to KPA (Key Process Area) based on the key enablers of GPO KM framework. Based on the categorization of the action plan as shown in Table 1, it can be concluded that the action plans for better KM implementation in PT DDLI are mostly categorized into Organization & Roles. Thus the area of Organization & Roles needs to be prioritized.

Table 1. Action Plan, Categorization and Timeline

No	Action Plan	Key Enabler Category	Timeline (2024)			
			Q1	Q2	Q3	Q4
1	Develop the guidance for making OKR, with documentation become part of it.	Organization & Roles				
2	Make knowledge management as part of team and individual OKR.	Organization & Roles				
3	More knowledge management event/sharing session which invite senior leader on it/endorse by senior leader, in order to send a positive message that KM is part drive by the leader.	Leadership & Strategy				
4	Development of procedure for documentation which iterate along with the project's iterations. It means that the documentation does not need to be perfect in the beginning.	Organization & Roles				

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5	Create a dedicated slack channel as media for knowledge sharing.	Information Technology				
6	Create knowledge sharing day once a month to accommodate knowledge sharing internal team and across teams.	Company Culture				
7	Reward for individual and team for implementing the most effective knowledge sharing.	Human Resource Management				
8	Development of KM procedure & guidance which include how to record, organize, structure, evaluate and filter knowledge. In order to standardize the process of managing knowledge between teams.	Organization & Roles				
9	Development of library which contain all documented knowledge in companywide, of which employees can refer to when trying to find any knowledge they	Information Technology				
10	Designation of unit/function for: - Organizing and consolidating knowledge. - Developing and maintaining KM procedure. - Monitoring and evaluating KM implementation.	Organization & roles				
11	Development of procedure for evaluating KM implementations for each team and individual.	Organization & roles				
12	Yearly evaluation of KM implementation.	Controlling.				

CONCLUSION

Researchers found that the Work from Anywhere (WFA) working arrangement will benefit the company in regard to KM implementation. It makes all employees aware of technologies. Thus, maintaining knowledge in digital form is not a challenge in terms of technology for the company. Furthermore, researchers conclude that PT DDLI already has a sufficient platform for knowledge documentation and knowledge sharing, the utilization of the platform itself which needs to be optimized. Finally, researchers conclude that the main aspect which needs to be addressed by PT DDLI is organization and roles for better KM implementation in the future. The recommendation in the form of action plans for better implementation of KM in PT DDLI hopefully can help PT DDLI in becoming a better organization by overcoming challenges such as staff turnover and implementing an efficient and effective working environment in the WFA way of working. Meanwhile, this research can serve as a starting point for larger studies evaluating KM implementation in various agile organizations or for studying organizations with similar ways of working with PT DDLI which is an agile organization with WFA working arrangement.

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