Evaluating Knowledge Management for Performance: Case Study in Jurnal.id

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Abstract: Managing knowledge has been a strategic move in the knowledge-based economy. PT. Jurnal Consulting Indonesia (Jurnal.id) has been the pioneer in providing cloud-based online accounting software for five years. In delivering the product and service, the company relies on the subscription of the users. Customer success division was formed to deliver product knowledge, ensure smooth implementation, and retain the customer. However, the issue arises when there is unequal knowledge distribution among employees, caused by knowledge share clogging, and the unfair establishment of individual KPI. The study is organized by assessing KM maturity, which then mapped into root cause analysis according to APO and KM framework. This study is resulting recommendation on how to close KM maturity gaps, and how to develop KM strategy maps for improved performance of customer success division.

1 INTRODUCTION

In recent years, Indonesia as an emerging economic country has shown steady and promising economics growth. Despite of the current global economic condition, Indonesia Statistic Bureau recorded that the economic growth rate has reached 5,27% by the second quarter of 2018 (Movanita, 2018). Many sectors have been contributing into the growth itself, most of which is contributed by the service industry by 9.22%, followed by the business service industry 8,89% and transportation and warehousing service by 8,59%. Inside this blooming service industry, Indonesia has also enjoyed the growth of technological startup industry. Digitalization of the industry plays an important role in economic growth. It would bolster industry transparency, accessibility, and reach for a new market. The market readiness itself has been shown from the growth of mobile penetration by 126%, and now Indonesian internet users have reached 51,8% of the total population (Aminudin, 2017). With the recent development in the tech startup industry in Indonesia, there are already three startup unicorns in Indonesia. Those startups are Go-Jek, Tokopedia, and Traveloka (Pratama, 2017). While the market was dominated by the marketplace in the previous years, in the recent

year the acceleration of the fintech industry. Fintech industry does not only consist of banking, peer-to-peer lending, there were also various services in the industry, including software as a service (SAAS). Jurnal.id is known for one of the tech startups which provide online accounting software. As a cloud computing software, rapid flow of data can potentially be the key of improvement and competitiveness.

1.1 Big Data & Challenges in The Start-up Industry

Big data can be described as a large amount of data which can be structured or unstructured. As the existence of such data can affect a business, the main point of managing big data is not how to deal with a large amount of data, but more to how to manage the data which can turn into information or knowledge. Managing big data has been a challenge whether in big companies or in startups. Many companies want to jump into the industry trend, however the capabilities and the tools are quite limited. Four major challenges in big data have been identified as follows (Acharjya & Ahmed, 2016); data storage and analysis, knowledge exploration and complexity management, scalability and visualization of the data, and information security.

As a company who store a large amount of data, managing big data has become one of the business challenges for Jurnal. Knowledge, which is captured from processing the data, and knowledge management play an important role for the success of Jurnal business objective.

1.2 Sales Operation at Jurnal

PT. Jurnal Consulting Indonesia, also known as Jurnal is an Indonesian tech startup company providing online accounting software service. The main product of Jurnal is online cloud-based accounting software. Unlike many of its competitor, Jurnal generates revenue from the subscription of its service. Keeping up with a speedy growth of the company, a set of sales operation team has been formed to foster the market acquisition and retain a current customer. The sales operation divided into several divisions which report directly to COO. One of those divisions is Customer Success which responsible for delivering product knowledge by giving training to customer and ensuring customers are able to adapt Jurnal into the business process smoothly.

1.3 Business Issue

The Customer Success division formed in mid-2017. With aim to ensure the value of Jurnal service is delivered evenly to the customer. The significance of this division highly related to the business model of the company which relies on user monthly subscription for generating revenue. Therefore, how the product knowledge and problem solution being delivered to the customer would be the factor whether the user would adapt the journal and continue the subscription. Based on the observation, in achieving the business strategic and goals, the customer success division is facing several issues which are related to KM system as follows:

- Unequal distribution or product and service knowledge among team member.
- Unclear measurement for the KPI, and some of achieved KPI need further evaluation
- Knowledge captured from business process does not have proper documentation and archiving.
- Knowledge being stored is not easily accessible to customer success division member

Based on these business issues, research objectives are being developed as follows;

- To assess KM Maturity in Customer Success Division of Jurnal.
- To assess the current knowledge management establishment and whether there are any knowledge gaps to be improved in the future KM strategy.
- Provide solution using KM Score Card in Customer Success Division that can be used to improve KM maturity and implementation in the division.

This research is focused on how the company develops a strategy to improve the competency and efficiency of customer success division in Jurnal.id.

2 RESEARCH FRAMEWORK & LITERATURE

Mixed-method between qualitative and quantitative approach is being used in this research. Both methods will help support each other data. Mixed-method assimilates two forms of data to ensure a better understanding of a research problem, compared to using one method only. This approach is being used because KM has a broad understanding and could involve more than one business unit in the company. Thus, a better understanding of the business issue could be get from a qualitative approach and supported the quantitative approach.

2.1 Data, Information, Knowledge

Knowledge is acknowledged as information which able to change something or somebody and enhance a process to be more efficient (Drucker, 1994). In short, it also can define as confirmed faith which able to increase the efficiency of one's action (Nonaka I. , 1994).

In developing a knowledge management strategy, it is important to first define and understand the hierarchy of knowledge. According to Bergeron, 2003, the hierarchy of knowledge from bottom to top is as follows; Data is number or other attributes derived from the observation. Information is data with associated interpretation. Knowledge is information that organized, synthesized, or summarized to enhance comprehension, awareness, or understanding. Instrumental Understanding is the clear and complete idea of the nature, significance, or explanation of something. The visualization of the hierarchy can be seen in figure 1.
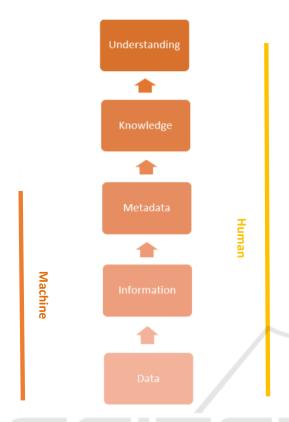
Figure 1: Knowledge Hierarchy (Bergeron, 2003).

2.2 Knowledge Management

Knowledge management is a systematic and organized process which allow someone or an organization to generate, manage, retain, circulate and recreate the knowledge to enhance individual or organization competitiveness and create value (Leidner & Alavi, 2001). Knowledge with proper knowledge management will enable actions and decisions, or information with direction (Green, Liu, & Qi, 2009).

There are four components of knowledge management which will enable an organization to implement and sustain KM practices. Those are people, process, technology, and governance (Tjakraatmadja, 2009).

People are where knowledge management roles need to be established in the business. It could be people with a habit of sharing knowledge in a collaborative environment. Then, the process is a tested and proven process for capturing, distilling, validating, storing, applying, and reusing knowledge and also innovating. Technology is an aid to enable knowledge to be stored, categorized, and accessed for reutilization wherever the knowledge being stored (database, online storage, people's head). Without a

governance system which enables and promote knowledge sharing will be in a struggle to be implemented.

2.3 Knowledge Maturity Assessment Approach

An organization which possesses a higher level of knowledge management maturity has the ability to perform better because it could create value from the knowledge which they acquire from the customer, supplier, and stakeholder to improve its competitiveness in general (Johnson, 2011). To assess the maturity, this study uses KM maturity tool of Asian Productivity Organization (APO) considering the population is limited on several group with member less than 100. There are seven categories in the KM assessment tools based on the key elements of knowledge framework and process, those seven categories are (Young, 2010);

KM Leadership. This category evaluates the organization's leadership capability to respond challenges of a knowledge-based economy.

Process. This category evaluates how knowledge is used in managing, implementing, and improving a business process with a purpose to evaluate, and improve business process for better performance, optimization, efficiency, and added value creation.

People. The people category evaluates the organization's capability to create a sustainable culture of knowledge sharing, learning habit, collaborative environment, and development of knowledge workers.

Technology. This category assesses how the organization is capable in creating and convey knowledge solution such as collaborative tools and content management system. The reliability and accessibility of the tools are also assessed in this aspect.

Learning & Innovation. This category determines the organization's ability to encourage, support, and booster learning and innovation using systematic knowledge process which also related to effort in communicating the value of learning and innovation.

KM Outcomes. This category measures the ability to enhance value through new and improved products and service, to increase productivity, quality, and sustain growth through effective use of resource and as a result of learning and innovation.

There are also five levels in the framework (Young, 2010).

- Level 1: Reaction level. The organization is not aware of what KM is and its importance in enhancing productivity and competitiveness.

- Level 2: Initiation level. The organization starts to realize the importance of knowledge or already initiate a pilot KM project.
- Level 3: Expansion level. KM is already standardized, implemented, and deployed. Most of the KM activity in the organization is how the members are managing KM strategy, processes, and approaches that already identified and defined.
- Level 4: Control/refinement level. Implementation of KM is continually evaluated for continuous improvement. Involves expanding KM initiatives throughout the organization, working together in creating organizational capabilities
- Level 5: Maturity level. KM is fully mainstreamed within the organization. Leaders in the organization are using KM capabilities to support in doing the business process, evaluating, and setup business strategy and business model. KM system supports innovation and continues improvement of the organization.

There are a total 42 questions covering seven categories with a maximum score of 210 points. Each category has a maximum score of 30 points. Each question has the rating scale from 1 (Doing very poorly, or none at all) to 5 (Doing very well) (Young, 2010).

The average score of each category will then be tabulated and presented in the form of a radar chart. The chart will show the actual score obtained from each category versus the maximum score for that category.

There are five levels in the framework proposed by Young (2010) as shown in Table 1.

Table 1: KM Maturity Assessment Level

Level	Score
Maturity	$189 < X \leq 210$
Refinement	$147 < X \leq 189$
Expansion	$126 < X \leq 147$
Initiation	$84 < X \leq 126$
Reaction	$42 < X \leq 84$

2.4 Interview and Survey

The qualitative research is conducted through an in-depth interview in order to get a more empirical information from Key person of KM practice in the Jurnal customer success division, and how the current KM practice related to the business challenge. The interview was conducted to COO, two of Customer

Success team leaders, and one senior member. The interview will be representing three aspects:
- Positioning of the customer success division facing the business challenges
- How knowledge is viewed in the business unit
- Opinion regarding Jurnal's KM initiative and implementation

The survey itself is conducted using a purposive sampling method, also known as judgmental, selective or subjective sampling. Hence the selection of respondent for the survey is based on the researcher's judgment. Usually, the number of samples being assessed is quite small, especially when compared to probability sampling. Purposive sampling itself known for its efficiency when the nature of the sample who provide data is highly related or align with the nature of research design, aim, and objectives (Dudovskiy, 2018). The target is all the customer success division members. The population of sixteen (16) employees. Survey questions are developed based on researcher question to match with APO's maturity assessment as KM maturity assessment tool.

3 ANALYSIS AND BUSINESS SOLUTION

3.1 Interview Data Summary

From the interview response, a summary of highlighted points is made related to the research objectives.

3.1.1 Positioning of Customer Success Division in facing the business challenges

From the interview, it could be concluded that all interviewees have the same view towards the main function and objective of the customer success team. Which is to deliver the service and product knowledge into a customer of Jurnal.

The team members also acknowledge that they have become the first person to be in touch with customers' issue and becoming agents to solve it. Meanwhile, their role is significant in gathering information regarding product feedback and market insight or competitor.

3.1.2 How knowledge is viewed in the business unit

Knowledge in Jurnal and customer success team is acknowledged as an important asset. Knowledge has become the basis of how the service being delivered and employees play an important role in the smooth knowledge management process.

In accordance to the knowledge cycle, interviewee acknowledges the importance of adequate knowledge sharing platform. The team itself has been running the knowledge sharing process in a daily basis. However, the process itself mostly happen in chat application as an informal sharing platform and has not been documented which can be accessed easily by team member for knowledge reuse.

Member of the team sees that knowledge sharing in KM center (event/forum, web, database) itself is both voluntarily to be done. While team leaders view such habit and process to be considered in member performance for personal and team evaluation.

3.1.3 Opinion regarding Jurnal's KM initiative and implementation

Customer success team of Jurnal understands that the existence of KM initiative and program are made for developing people in the purpose of closing knowledge and competency gap in the team which required to do business strategy. Although the IT platform still facing problem in terms of the accessibility, the team see the potential of knowledge sharing and documentation being used for a wider purpose not only for customer success team but also other business unit or even companywide.

3.2 Survey Data Result

All of 16 targeted respondents, coming for customer success division, returned the survey. This indicated that 100% of the population data is collected.

To assess the maturity level from the survey, the answer of all questions was summed up to get the total score of maturity assessment for a single respondent. The total maturity assessment of each respondent was added to get a total score of 16 respondents. That final score was divided by 16 (number of respondents) to get the average score of maturity assessment in this study.

For every category being studied, it could be drawn into a diagram to give a picture on KM situation in Jurnal Customer Success team. Every average value of the category is put against the maximum score and mapped into a radar diagram. Radar diagram will give a visual understanding of how the KM maturity gap appears in each category.
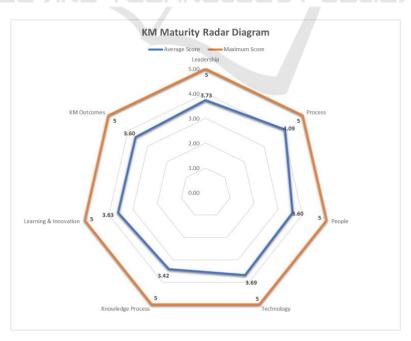

Figure 2: Knowledge Maturity Radar Diagram

Table 2: Key Success Factors to Improve KM maturity

No	Maturity Assessment Category	Related Key Success Factor	Average Score of subcategory	Average score of category	Related KM Framework
1	A. Leadership	Budget on KM	3.38	3.73	Governance
2	B. Process	Routinely Evaluate	4.00	4.09	Process
3	C. People	KM Manager	2.88	3.60	People
4	C. People	KPI in CS	3.00	3.60	People
5	D. Technology	Easily Accesible	3.50	3.69	Technology
6	D. Technology	Measurable	3.06	3.69	Technology
7	D. Technology	High Avaliability and Reliability	3.56	3.69	Technology
8	E. KM Process	Accuracy & Reliability	3.31	3.42	Process
9	E. Learning & Innoavtion	Cross-Unit Teamwork	3.56	3.63	Governance
10	G. KM Outcomes	KM Map & Plan	3.56	3.60	Governance

3.3 Findings and Discussion

A score of each category was tabulated and presented. The Data shows that every category has slightly different maturity gap with the average rating ranging from 3.60 to 4.09 with the maximum average score of 5. This data is presented into the radar diagram to have a better visual understanding of KM maturity in each group, which could be seen in figure 2.

The radar diagram is split into five levels which related to the maturity KM maturity level given in Table 1. The radar diagram shows that score of all category ranging around the same level but has not reached the maximum score. This could be a subject for improvement of KM maturity, and to develop a program in contribution to division's business strategy.

In overall research in related to customer success division, the following points are the main finding to knowledge management in the business unit.

- Maturity level is at the Refinement level according to APO maturity assessment. It means knowledge management has been implemented with continuous evaluation and KM initiatives have run though the organization to create competitiveness.
- However, the result from qualitative and quantitative research shows that there are still gaps of KM which could be improved.

- The results of the interview show that KM culture is adequate.
- Both members and leader have acknowledged the importance of managing knowledge where it requires high accessibility, accuracy, and accountability to the knowledge stored.
- Knowledge initiative and the habit of knowledge sharing has already run the business unit. However, capturing the knowledge process is not supported by proper documentation system.

Whereas, key success factor to improve KM maturity gaps is determined by linking the question answers of KM maturity assessment which scores below average score with the result of the interview. From the method, ten key success factors to improve KM maturity is formulated as in table 2.

4. BUSINESS SOLUTIONS

4.1 Improve KM governance & management support

In Improving KM maturity and awareness in the customer success division, the first aspect that needs to be improved is management support and engagement towards knowledge management. Seeing

Table 3: Key roles and responsibilities for KM activities.

Role	Responsible Position	KM Related Additional Job Description
Chief Knowledge Officer	Chief Operational Officer	- To ensure support from higher management, and company level. - To direct KM initiative to be align with the business objective and strategic
KM Operation Leader	HR Division Head	- Manage overall KM practice - Set KM measurement and monitor the achievement - Report KM activities and achievement to Management (COO)
Knowledge Leader	Customer Success Division Lead	- Managing KM Practice in the division - Become the role-model of KM practice in the division - Act as mentor & facilitator of KM practice in the division - Creating KM program to be implemented in the division
KM Program Support	Learning Development Division (Jurnal University)	- Designing learning curriculum for knowledge management in customer success division - Assist knowledge leader in creating KM program, implementation, and monitor the KM achievement.

this situation, the management could start by making knowledge management as company culture and habit. The management could start making formal knowledge sharing session between customer success division with other related business unit. This action could trigger an employee to think that knowledge sharing and delivering new ideas are important for the innovativeness and adding value to the company. Further support by management could be done by creating a budget for knowledge management. The budget can be used to have certified skill training or developing online learning and evaluation platform to test out the skill and knowledge equality of customer success team members.

4.2 Define role & responsibility for KM in customer success division

To ensure every stakeholder are equally responsible for KM program and implementation, Jurnal needs to define the key roles and responsibilities. However, in the implementation, rather than adding a position to the organization which may become costly and inefficient, it would be better to enrich the job description of key roles to have additional KM related task.
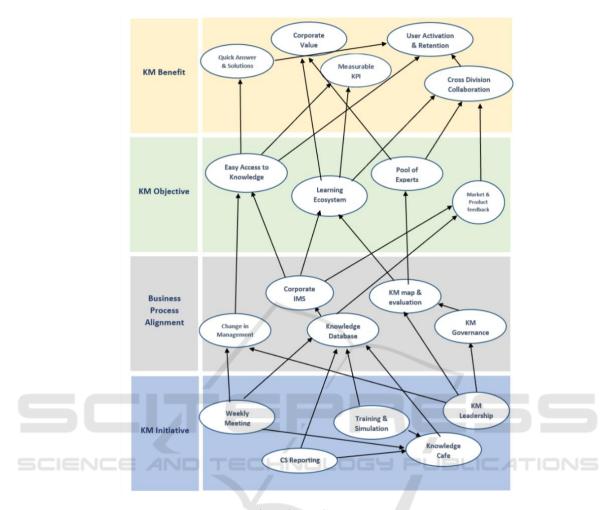
Figure 3: KM Strategy Map.

4.3 Engage employee into KM and KPI development

Through qualitative research and data analysis in Jurnal customer success division, members are aware of the importance of KM. However, the company would need to involve the employee to create, and run the KM initiatives. To motivate the employee and to trigger engagement in the team and process, there should be a clear rewarding process of employee achievement. As KM become one of business strategy enabler, it will also need to be part of Key Performance Indicator in the business unit. As mentioned before, the delegation of KM activity will become an additional job description for key roles in customer success business process. By adding KM related activity into the job description and individual KPI, it will also become a trigger to motivation.

Rewarding itself require a clear measurement which could capture the statistic of KM activity

4.4 Systematic knowledge documentation of improved knowledge sharing

Knowledge accessibility and sharing process have been the main business issue mentioned in the study. The current software database is not capable of having knowledge categorizing and codification. Thus, to overcome the situation additional tools could be used to ease knowledge documentation, archiving, and categorization. The KM tool that could be used is by having Knowledge Café. The utilities of knowledge café could be a workshop on categorizing or codification of knowledge being gathered within a month. The aim of this workshop is to categorize and create coding for each case, experience, and expertise

captured by the customer success to be re-used in the future.

4.5. KM Score Card

KM scorecard shown below, also known as KM strategy map, provides a useful scheme of linking strategy, activities, and knowledge resource (Kaplan & Norton, 2004) KM scorecard being developed is a differential form to give clear correlation between strategy, initiative, objective, and which concerning the KM maturity gap removal in Jurnal. In the development of KM scorecard, the researcher uses the approach of KM planning from (Tjakraatmadja, 2009).

At the end, KM scorecard shows how KM benefit is generated from KM initiative in the company. The process itself will increase company's intangible value, and by actively managing knowledge, it will increase the work efficiency of the team, building learning environment, and booster sharing and collaborative culture which trigger innovation.

5 RECOMMENDATIONS

The lack of KM governance and nonexistence of KM platform have been highlighted as tow of main issues causing unequal knowledge distribution in customer success division. To improve the situation, there should be full support from management. Thus, there are several things that should be considered implemented. First is to identify key stakeholder interest and objectives. This is needed to clarify what are each stakeholder want to achieve in the KM implementation. Then, the company needs to develop KM strategy maps which match the business strategy as KM itself will become the tool to increase work efficiency and effectiveness. In this case, KM strategy implemented should be in line Objective Key Result (OKR) of Jurnal customer success division. The KM strategy map can be seen in figure 3.

In developing KM initiative collaboration with one or more business unit in developing and promoting KM initiative. Collaboration from other business units such as management, IT, and learning development can be done in knowledge café where each business units with same interest could collaboratively develop solutions for problems.

Improvement of procedure and KM tools. Improvement of the procedure could start by better documenting the knowledge gathered. As knowledge sharing habit already running in the division, there should be better documentation to the knowledge has

been shared. In the scale of a start-up company, it could be done by having knowledge archiving and codification workshop and to store the knowledge with available resource.

Periodical evaluation and study should be conducted to assess the statistic of KM program. The metrics could be set by how much knowledge has been shared and documented, how the knowledge affect the speediness of answers and solution to the customer.

Some considerations on developing an implementation plan being noted by the researcher are listed below

- *Current ongoing business process evaluation.* Researcher creates an implementation plan based on current business OKR which evaluated quarterly, and companywide evaluation and rewarding which happens on April and October.
- *Current ongoing KM program.* Researcher understands that there are several KM initiatives has been running in the company. Thus, the implementation plan would not remove the on-going program such but more to adding activities that could improve the current process. Current KM activities such as CS weekly meeting, company meeting, demo simulation, and design thinking training will still be running as it is.
- *Current Resources.* Currently, there is no dedicated personnel for KM process, and looking from the scale of the company it would not be efficient to add into the organization structure. The solution is to add KM related task into the job description with clear KPI, which later can be evaluated and rewarded.
- *Management involvement.* The success of the proposed plan depends heavily whether the management fully engaged into the proposed plan or not. The proposed plan will take multiple iterations on the first phase of implementation; hence it will need strong direction and leadership from all stakeholder involved

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