

MATURITY ASSESSMENT OF KNOWLEDGE MANAGEMENT AT ICT & NAVIGATION BUSINESS UNIT OF PT LEN INDUSTRI (PERSERO)

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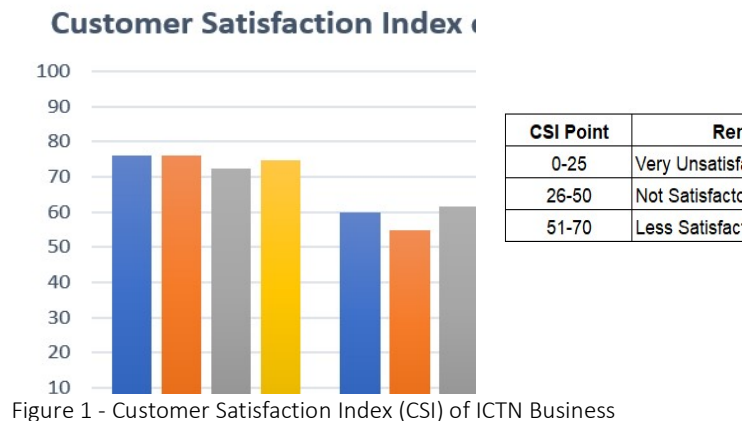
Abstract. PT. Len Industri (Persero) is a state-owned enterprise engaged in the field of industrial electronics. As a System Integrator Company, LEN especially ICTN Business Unit realize that human resources are valuable assets in the company. Research is aimed to get the solution of the problems, is mainly related to quality of work in project implementation, though Knowledge Management approach. The method will used qualitative and quantitative to explore correlation between Project Management and Knowledge Management. The APO KM Assessment is used as questionnaire tool to identifies area of strength and improvement. The qualitative research is done through in-depth interview to gain empirical information from key personalities of ICTN. Based on Interview, ICTN management has implemented KM concept in their respective working units. Researcher found out that KM practice on ICTN was carried out spontaneously and not systematically. From the 7 categories of APO KM Assessment, the lowest scores in Knowledge Process category, it means knowledge management has not become part of the organization's strategy, and is only used as a tool to facilitate the implementation of work. KM Implementation plan is proposed as the business solution.

Keywords: State-owned enterprise; Project Management; Knowledge Management; APO KM Assessment

INTRODUCTION

As explained in Law No.19/2003, State-Owned Enterprises (SOEs) has an important role in the Indonesian economy, the role of the SOEs is divided into 2 main parts, that is as value creation agents and development agents. One of the SOEs is PT Len Industri (Persero) – (LEN). LEN is a state-owned enterprise that have capabilities as system integrator company that engaged in the field of industrial electronics. In order to increase its company performance and business level structure, LEN expanded its business by forming 4 strategic business units (SBU) i.e. SBU of ICT & Navigation, SBU of Transportation System, SBU Defense Electronics, and SBU Energy and Retail Product. In this research, the implementation of Knowledge Management at LEN will be focused on ICT & Navigation Business Unit (ICTN), because in 2018, the achievement of revenue at the ICTN is 22.4%, it has decline if compared to last year. There are not many additional projects from new customers and even some customers no longer use LEN services as a system integrator because the results obtained are not optimal. The business issue in ICTN Business Unit is they have problem with quality of work in project implementation. The impact of this wrong project management greatly affects the company.

Based on Customer Satisfaction Index (CSI) survey, that conducted by the Business Development Division at LEN, the results are as follows



Based on the above data, the customer satisfaction survey team provides analysis and recommendations that need special attention by ICTN. Some of the analyzes and recommendations are:

1. The CSI criteria are not satisfactory ratings because according to the customer, ICTN does not pay attention to the quality of work at the time of project implementation, among others the quality of goods delivered is not in accordance with the offered, inexperienced subcontractor quality and the timing of work that is not in accordance with the project S-Curve. In addition, the customer also gives less point in communication factor of the project executor, both at the project manager level, site manager and technician in the field, which is considered less effective and not communicative.
2. The CSI criteria that get unsatisfactory ratings are appearance, competency in understanding problems, supporting product performance, not fast responding to solve the problems, safety factors, and price compatibility with quality.

The business issue in this research is also supported by data that states in the performance of individuals in the ICTN Business Unit does not describe satisfactory results. The parameters that can be used are Key Performance Indicators (KPI) Score. The data below shows KPI scores from ICTN business units compared to KPI score from other SBU.

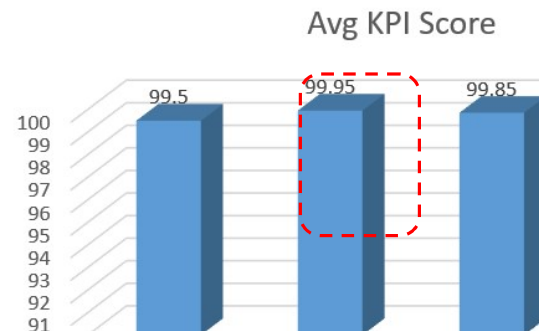


Figure 2 – Average KPI Score for each SBU in LEN

As a system integrator company, the quality of work at the time of project implementation should be immediately overcome by the ICTN, because integrator companies rely heavily on "service" as competitive advantages. Trends of revenue for the past 5 years that have decreased, prove that the ICTN does not learn from the previous conditions, there is no learned lesson for each project activity that is carried out, so it is very possible that there will be repeated errors in the following year if no evaluation. The research is done to get the solution of the business issue, through Knowledge Management approach. In this research the researcher will identify the importance of managing the knowledge possessed by each personnel at ICTN, researchers conducted data analysis from the interview and questionnaire results, to facilitate the knowledge sharing process to increase company effectiveness and support the company's business strategy so that the company has a competitive advantage

Knowledge Management

Knowledge Management (KM) is a process that involves knowledge acquisition, creation, refinement, storage, transfer, sharing and utilization. Function of KM in the organization is systematic effort to enable information and knowledge in organization to grow, flow and participate to create the value and make innovation that can motivates people to participate in them. Nowadays, KM is a key driver for competitive advantage in organization. Knowledge Management in an organization is a system in a company that is interrelated with other systems.

There are four main elements of framework as enabler to sustain Knowledge Management (KM) practice in an organization, which are people, process, technology and governance. It will be correlated to project management implementation that have 10 knowledge area (PMBOK), such as project integration management, scope management, time management, cost management, quality management, HR management, communication management, risk management, procurement management, and stakeholder management. APO KM Framework can be used to assess KM condition in organization for starting KM initiative and can be used to gauge KM level maturity for company who has KM implementation already. The assessment will be carried after implementation of the KM program. After knowing the assessment result, the organization can focus in its KM programs to address the gaps identified through the assessment. there are seven categories in KM assessment tool that become key elements of the knowledge framework and process, seven categories are: Leadership, Process, People, Knowledge Process, Technology, Learning and Innovation, and KM Outcomes.

METHODOLOGY

In this research, the method will used to collect data is the mix-method, which is a method between qualitative and quantitative.

Interview

The qualitative research is done through in-depth interview in order to gain empirical information from key personalities of ICTN Business Unit. Interviewers armed with a set of core questions that can be developed in accordance with the development of the interview process. In the analysis, top management are represented by ICTN Business Unit that will giving us the macro level perspective. Target interviewee are management level in ICTN Business Unit: General Manager, Sales and Marketing Manager, System Engineering Manager, Project Management Manager and Commercial Manager.

Questionnaire

In this questionnaire, researcher is using purposive sampling, which also known as judgmental, selective or subjective sampling. A sampling technique in which researcher relies on his own judgment when choosing members of population to participate in the questionnaire. Quantitative research on measurements of variable and number, that is more applicable to manage a large number of research objects. By adopting questionnaire from APO's Framework because each of the variables is applicable and easier to describe for the company therefor the steps of improvement are clearer and more real.

FINDINGS AND ARGUMENT

KM Initiative of LEN

LEN has procedures related to knowledge management. The procedure was made to identify what types of knowledge became the company's knowledge and how the mechanism of knowledge distribution to stakeholders in the company, including the method of storing that knowledge. The existence of this procedure is intended so that information and knowledge in LEN can be managed more effectively and efficiently in accordance with the targets and targets. Based on the Procedure HOP-603 about Knowledge and Information Management at PT Len Industri (Persero), the first revision, Knowledge Management and Information in LEN is clarified based on the type of knowledge and information that can be distributed and informed to the relevant LEN personnel and outside parties

ICTN KM Perspectives

Based on respondents' responses, basically all ICTN management has implemented the Knowledge Management concept in their respective working units. Although between working units apply different KM activities, but conceptually, ICTN management has realized that knowledge management is a process for managing knowledge that includes activities to collect, store and redistribute that knowledge to accelerate share the information. Researcher found out that KM practice on ICTN was carried out spontaneously and not systematically. KM activities are still at the level of individual awareness and are limited to the work unit level

Table 1 - Proposed Solution between Business Challenge and KM Implementation

Business Challenge	Proposed KM Implementation
1. Lack of communication and sharing between personnel	- Knowledge Sharing between all personnel such as regularly management meeting, using <i>WhatsApp Messaging Group, wiki portal or conference call</i> as an electronic-based knowledge sharing. - Group community or Knowledge Café to storing telling - Using social media to distribute information or knowledge
2. New employees are not provided with sufficient knowledge	- Create special unit for managing KM - Computer-based learning, portal, or repository - Expertise locator and ask the expert program - Training for working knowledge sharing between older member and new member - E-learning - Mentorship & Coaching - Create regulation or rules for task and activity of new employee
3. No Review and Evaluation Meeting to share thoughts and knowledges, and problem in implementation project	- Knowledge Sharing between all personnel such as regularly management meeting, using <i>WhatsApp Messaging Group, wiki portal or conference call</i> as an electronic-based knowledge sharing. - Group community or Knowledge Café to storing telling - Social media to distribute information/knowledge - Documentation such as report update after meeting by email, <i>WhatsApp</i> or paper.
4. There is problem in workload for	Create Standard Operation Procedure

each personnel	▪ Create Methodology: Works sharing to others ▪ Create meeting agenda to share about tasks that can to deliver to others ▪ Workload and Workflow board or application ▪ Make a work template if work often replication
5. Learning Facility is limited, some are still relying on conventional documentation	▪ Developing portal-based application, wiki platform, or search engine ▪ e-Learning system ▪ Buy server as knowledge center ▪ Create social application
6. Using wiki platform is limited to certain work units	▪ Copy paste platform (buy license) from working unit that has already implemented before
7. The lack of culture of writing and documenting each activity	▪ Role-model from ICTN Management (Leadership) ▪ Group Community of practice for writing culture ▪ Training program ▪ Documentation such as report update after meeting by email, <i>WhatsApp</i> or paper. ▪ Make writing culture as parameter in Key Performance Indicator (KPI) for employee
8. No Standardized operational procedure (SOP) or working method	▪ Create Standard Operation Procedure ▪ Learning from past experience and best practice ▪ KM as culture and values of ICTN program

KM Maturity Level

From the survey, researcher found out that the total score for ICTN Business Unit Maturity Level is **133.6**. This total score sits on the **third level – Expansion/Introduction** -, which means that ICTN Business Unit is already have initial knowledge management but the KM Practice in some areas.

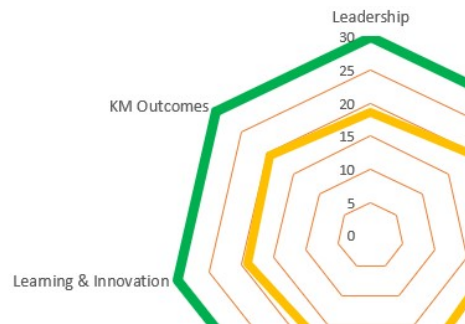


Figure 3 - Radar Chart of KM Maturity Categories

ICTN Business Units have the lowest scores in the Knowledge Process category. Knowledge process is a category to assess whether knowledge has been used in managing, implementing and improving in the business process and organization's key work process. This shows that knowledge management has not become part of the organization's strategy, and is only used as a tool to facilitate the implementation of work, not as a new culture of the organization. The radar chart in figure 3 shows us almost a slightly-equal gap of maturity level on each of maturity category with average score ranging from 17.8 – 19.9 point where the maximum score is 30 point.

CONCLUSIONS

Based on the all information above, that means ICTN needs to raise the maturity level that currently exists, to be a better level. Knowledge management must be carried out systematically involving learning discipline, learning awareness and the impact will be learning habits and generating innovations. Repeated mistakes made at project implementation at the ICTN unit business, nowadays only resolved at the individual or group level, the resolution of these problems should be done at the organizational level. Individual awareness for sharing and evaluating any errors that occur must be fully supported by management, not just as a bad thing that needs to be covered up. This means that culture for sharing and review will become a new culture at the ICTN. In the table below, researcher find out some KM Implementation Strategy that related to support raise the maturity level at ICTN and solved the business issue:

Table 2 - Proposed KM Implementation Strategy

Business Objective	KM Implementation Strategy	
Effective quality of work in project management that reduces recurring errors from previous experience	People	Assign KM Champion to succeed the KM program and create program Reward, Incentives and Benefit.
	Process	Replication best business process and standard operation procedure (best practice) that applied in other business units or other companies
	Technology	Replication platform and the best application to be applied to all work units

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