

Analyzing Calculation of Monitoring and Evaluation Reports on Distribution of Procurement Packages Using the Level 4 Capability Maturity Model at the Unit of Procurement Services of Universitas Terbuka

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Abstract—This study is aimed at analyzing the Calculation of Monitoring & evaluation reports on distribution of procurement packages using the Level 4 Capability Maturity Model (CMM) at the Unit of Procurement Services (ULP) of Universitas Terbuka in 2017-2018. This study found that the level of maturity of organization variable, especially sub-variable of duties and functions, has reached a 'Repeatable' level within two years. This was indicated by the performance of working groups as measured by the monitoring and evaluation of the distribution of goods/services procurement packages at Universitas Terbuka. To improve into the next level, it is necessary to develop a standardized system. This research has some limitations that need to be addressed in future studies for development such as measurement of the maturity level of the three other variables namely, Governance, Human Resources and Management. This becomes a necessity to establish strategic, collaborative, performance-orientated, proactive, and continuously-improved goods and service procurement center of excellence.

Keywords: ULP, CMM, UPBJJ-UT

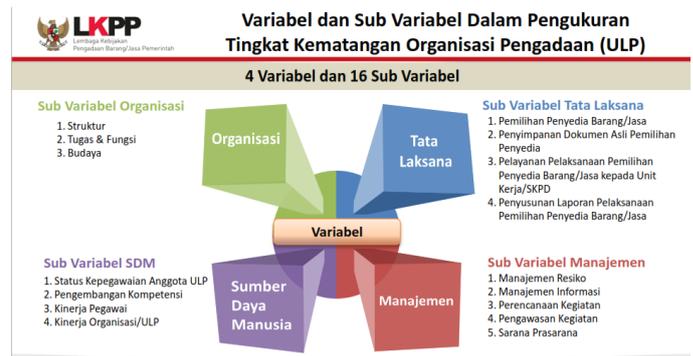
I. INTRODUCTION

A. Background

To measure maturity procurement organization 4 variables were used, namely:

- Organization
- Governance
- Human Resources
- Management

These variables are taken from instruments for procurement organization maturity provided by The National Public Procurement Agency or Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah (LKPP) as stated in the Procurement Service Unit Information System (SIULP) at the following website www.siulp.lkpp.go.id [1].



Source: www.lkpp.go.id

Fig. 1. Variable of the maturity of a procurement organization.

Figure 1 indicates the map of measurement of organizational maturity level with 4 variables that are specified into a total of 16 sub-variables. Of the 4 main variables, the key variable that largely determines the maturity level of the other variables is the organization.

Within an organization, 3 sub-variables can be measured for its maturity, namely:

- Organizational structure
- Duties and functions
- Organizational culture

Organizational structure is used to measure whether the organization already has regulations on organizational structure and whether an organizational structure evaluation report has existed.

The organizational culture sub-variable requires documentation about organizational values and demands the ULP to have a program on organizational culture internalization.

Meanwhile, duties and functions require regulations on the formation of ULP to conform to Presidential Regulation Number 16 of 2018 [2]. Additionally, this sub-variable also requires the recapitulation of package distribution to ULP working group personnel in the current year, and finally and most importantly this sub-variable obliges quarterly monitoring and evaluation reports on the distribution of work.

The present study will contribute to the preparation of monitoring and evaluation report documents on the distribution of work packages at Universitas Terbuka where the results of ongoing monitoring will be able to foster the development of work package distribution and can assess the performance of working group selection. Completion of monitoring document is expected to help the sub variable of duties and functions reaching level 4.

Therefore, the author conduct research **on the Calculation Analysis of Monitoring & Evaluation Reports on Distribution of Procurement Packages with the Level 4 Capability Maturity Model (CMM) at the Unit of Procurement Service Unit (ULP) of Universitas Terbuka in 2017 – 2018.**

B. Research Problems

From the above backgrounds, research questions that are addressed in this study are the followings:

- How is the result of measurement on the level of organization maturity of ULP of Organization variable at Universitas Terbuka?
- How is preparation of quarterly monitoring and evaluation report during the period of 2017-2018?
- What conclusion can be drawn from preparation of monitoring and evaluation report during the two years?

C. Research Objectives

The objectives of this study are:

- To find out the level of the organization maturity of the ULP on variable of Organization at Universitas Terbuka;
- To prepare quarterly monitoring and evaluation report in the period of 2017-2018;
- To provide a recommendation on the sub-variable of duties and functions of procurement.

D. Implication of the Study

This study can be a primary consideration for the Unit of Procurement Services at Universitas Terbuka to conduct evaluations and follow-up on the distribution of work packaging policies from 2017 to 2018.

II. THEORETICAL FRAMEWORK AND HYPOTHESIS FORMULATION

A. The Theory of Organization Maturity

The theory of organizational maturity that is used as an instrument in this study is the Capability Maturity Model (CMM) Theory. CMM is a model that describes the process of defining and understanding the processes of an organization.

CMM was originally intended as a tool to objectively assess the ability of government contractors to handle software projects. Although it was originally for software development, this model is ultimately used as a general model to help understanding and measuring the maturity level of organizational process capacity in various fields, including in this area the procurement of goods/services.

In general, the maturity model usually has the following characteristics.

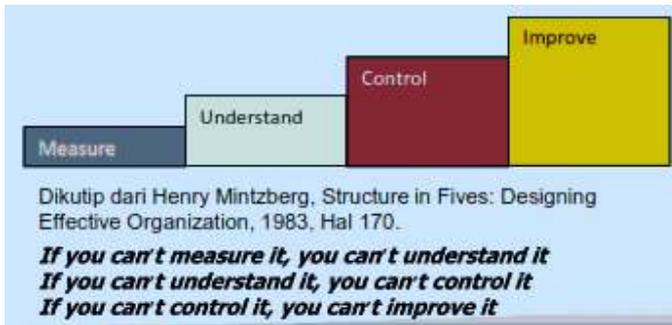
- The process of development of an organization is simplified and described in terms of a certain level of maturity (usually four to six levels).
- This level of maturity is characterized by certain conditions that must be fulfilled.
- The levels are stratified, starting from the bottom to the top level (the last level is the level of perfection).
- During development, the entity moves forward from one level to the next without missing one of them, but in stages.

The National Public Procurement Agency (LKPP), through its scientific study in the framework of compiling indicators for measuring the level of maturity, defines CMM as a description of the level of maturity of the process of carrying out activities in organizations aimed at measuring the ability of an organization to carry out the production process.

This model is proposed as a road map or framework that serves as a reference for achieving a goal and also serves as a measure of system development. The CMM was first developed by the Software Engineering Institute at the request of the US Department of Defense (DOD) to make an entrance screening test for contractors who register themselves to become DOD consultants. Capability is translated as means latent ability which more emphasizes on integrity than capability itself. Integrity is defined as the ability to be reliable. Maturity means maturity or adulthood. Maturity is the result of the process, while adulthood is the result of growth.

A model is a representative simplification of the real world situation. Thus, overall the CMM can be defined as a representative simplification (model) that is used to measure the level of maturity (maturity) of a collection of software (software development house) in presenting/creating/developing identified software. Understanding the ability maturity model refers to a road map or framework that becomes a reference, in order to achieve a goal, in software development.

The measure of maturity can also be a measure of system development. Based on that understanding, basically the maturity model is "A roadmap for organizational improvement", through which the processes in the organization are measured. Measurement of the processes in this organization is important and must be done; otherwise we cannot understand these processes, and if we do not understand them, we cannot control them, and if we cannot control them, we cannot improve them (see Figure 2).



Source: Henry Mintzberg [3].

Fig. 2. Improvement process.

CMM can be divided into two models, namely the staged model and the continuous model. The multilevel model emphasizes measurement in a collection of organizational processes that indicate the level of "maturity" of the organization, while the continuous model emphasizes the approach by determining the starting point and then determining the next point of change in the process. This approach emphasizes more on the "capability" of the organization in each organizational process. The multilevel CMM provides a road map for organizations to achieve organizational maturity by determining organizational process areas to work on at each level. This multilevel CMM is an approach to improve processes within the organization in order to improve the quality, quantity, efficiency, and effectiveness of the organization in achieving its goals. The keyword for CMM is measuring, which is defined as a process for mapping a condition into a scale.

A stratified presentation is a systematic and measurable method by providing step by step and defining each condition that must be fulfilled in each of these steps. In a multilevel model, each step is carried out in stages. Each level is achieved once the characteristics of the organizational process of the level below it have been carried out. There are 5 levels of organizational maturity explained in the Figure 3.



Source: www.lkpp.go.id.

Fig. 3. Level of organization maturity.

Each level of organizational maturity consists of indicators or characteristics of organizational processes that occur within an organization. The indicators or characteristics at each level are described as follows.

1) *Initial level:* At this level, project management, quality assurance, and a change management mechanism or documentation have not existed. More details will be discussed later in this research.

2) *Repeatable level:* At this level, the quality of the software starts to depend on the process instead of people, the project management also exists, and there are a simple documentation and knowledge management. More details will be discussed later in this study.

3) *Defined level:* At this level, the system development process has been created and standardized, and already has a commitment to follow the system development process standard under any circumstances. However, Activity by Costing and standard feedback mechanisms have not been implemented. More details will be discussed in later research.

4) *Managed level:* At this level, the organization already has Activity by Costing which is used to estimate the next project. The process of software quality evaluation and activities is qualitative but still does not have quality control.

5) *Optimized level:* At this level, all data collection is performed automatically using a system, which allows a mechanism of damage and fault prevention, the existence of a very good feedback mechanism, as well as an increase in the quality of human resources and improvement in the quality of the process. More details will be discussed in the study (see Figure 4).



Source: www.lkpp.go.id.

Fig. 4. Level of organization maturity of ULP.

B. Sub Variable of Duties and Functions

Measurement of organizational maturity involves a measurement of the quality of organizational management processes. The measurement variable of organizational maturity is the management process which is manifested in the activity of the organization. To determine the activity process area in an organization, the services or products of the organization must be identified in advance. The process area is the area of activities carried out by the organization to create its products.

Organizational maturity is the quality of the activities / management processes carried out to produce perfect or high quality products. Organizational maturity is also related to the organization's ability to maintain its existence in following changes in both internal and external environment. Good quality of management processes and excellent products at one time may be left behind at another. Therefore, the ability of an organization to grow in response to changing challenges becomes an essential part of organizational maturity.

The sub-variable of duties and functions of 5 levels determined through the following indicators:

LKPP Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah					
Pengukuran Level dan Bukti Dukung Indikator Sub Variabel – Tugas dan Fungsi					
LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	Checklist (V)
Belum ada struktur dan uraian tugas dan fungsi	Tugas dan fungsi sudah didefinisikan, namun belum berbasis beban kerja dan belum sesuai peraturan** Sudah ada pembagian tugas dan fungsi antar unit kerja, namun belum seimbang.	Tugas dan fungsi sudah didefinisikan dan sudah berbasis beban kerja serta sudah sesuai peraturan. Sudah ada pembagian tugas dan fungsi antar unit kerja secara seimbang.	Tugas dan fungsi sudah didefinisikan dan sudah berbasis beban kerja serta sudah sesuai peraturan. Sudah ada pembagian tugas dan fungsi antar unit kerja secara seimbang. Ditambah pekerjaan sudah sesuai dengan tugas dan fungsi masing-masing. Diakui pelaksanaan dan monitoring/evaluasi sudah dilakukan secara manual (tidak berbasis teknologi informasi).	Tugas dan fungsi sudah didefinisikan dan sudah berbasis beban kerja serta sudah sesuai peraturan. Sudah ada pembagian tugas dan fungsi antar unit kerja secara seimbang. Pelaksanaan ditinjau pekerjaan sudah sesuai tugas dan fungsi masing-masing. Diakui pelaksanaan dan monitoring/evaluasi dilakukan berbasis teknologi informasi.	
1	2	3	4	5	

Source: www.lkpp.go.id.

Fig. 5. Measurement level and evidences for the sub-variable of duties and functions.

Figure 5 showed that at level 1 the ULP still does not have the structure and description of tasks and functions, while level

2 indicates that duties and functions have been clearly defined but have not been work-based and complied with regulations. At level 2 this division of duties and functions among work units has been determined but it has not been proportional. Increasing to level 3, duties and functions have been defined, based on workloads, and complied with regulations. At level 3, the division of duties and functions between work units has been balanced.

At level 4 the required indicators are clearly-defined duties and functions based on workloads and in compliance with regulations. At level 4 the distribution of duties and functions has been carried out equally among work units and then the distribution of work is in accordance with their respective duties and functions. Distribution of works and evaluation monitoring are still done manually. At level 5 all of the above explanation is done using information systems.

III. METHODS

A. Research Design

This study employed a descriptive qualitative method using the CMM analysis to obtain a description of the document evidence of 16 sub-variables. To obtain research data, a survey method was employed using a questionnaire as a data collection tool. Furthermore, this study uses a cross-sectional design with a one-shot time range with cross-section data types, i.e., data collected at the time of a selected sample. The respondents of this study were the personnel of the Unit of Procurement Services of Universitas Terbuka.

B. Data and Data Sources

To conduct this study, data were collected in two ways as follows.

1) *Secondary data:* Secondary data include reports and documents related to institutions, human resources, governance in procurement of goods/ services at Universitas Terbuka

2) *Primary data:* Primary data was obtained through interviews with some interviewees, including the Head of the Unit of Procurement Services Unit of Universitas Terbuka, the Election Working Group on ULP.

C. Method of Data Analysis

This study uses descriptive analysis by providing a review or interpretation of such obtained data that it becomes clearer and more meaningful than just numbers. The steps of data analysis in this study are as follows.

1) *Data tabulation:* In this stage the researcher search for all primary and secondary data related to the issues raised in the study in general, both qualitative and quantitative data, such as data on the number of workforce requests in the logistics, labor profiles working in logistics and warehousing, and another supporting data. The data was collected through observations, interviews, and questionnaires related to this study.

2) *Data reduction*: At this stage, the researcher focus on reducing the data that has been obtained, where the data is re-evaluated to reduce the less important one. Subsequently, the incorrect data is removed.

3) *Data categorization*: The reduced data is categorized again according to the described problem. The data obtained from the field through observation and interviews are categorized in order to answer the research questions.

4) *Data presentation*: After categorization, the data is described and analyzed using a descriptive-qualitative analysis. First, the researcher presents the information through the narrative. Subsequently, the results of the narrative text are summarized in the form of a chart that illustrates the flow of the change process. Each component in the chart is an abstraction from the narrative text of the data from the field. Afterward, the research information is presented based on the composition that has been abstracted in the chart.

After the data is obtained, the data is processed to determine the level of maturity and then prepare the Roadmap for the Unit of Procurement Service Unit for the period 2019 to 2020, based on the baseline results of maturity level measurement in each sub-variable.

IV. RESULTS AND DISCUSSION

The results of this study showed that the maturity level of Procurement Organization at Universitas Terbuka on the Organizational variable was at level 1, which means the Initial level. This means that in general, of the 10 samples available at that time, they did not have project management, there was no quality assurance, and they did not have a change management mechanism or documentation. In 2018, the level increased to Repeatable. It means that from the existing samples, the procurement organization has such the quality of the software starting to rely on the process instead of people, establishment of project management, the presence of simple documentation, and knowledge management.

Furthermore, with regards to the results of the measurement of organization maturity in 2017 and 2018 above, this study provides recommendations in the form of sample of applicable document templates related to procurement organizations, namely:

- Reports on evaluation of the procurement organization structure
- Recapitulation of distribution of procurement packages

- Distribution of procurement packages on the member of working group
- Monitoring and evaluation on distribution of procurement packages
- Documents on the organization's values and cultures
- Documents of an internalization program
- Evaluation reports and follow up of implementation of procurement organization's cultures

And finally, as part of the implementation of the follow-up, this study produced worksheet data for monitoring and evaluation on distribution of personnel-based work that was filled by several procurement organizations within Universitas Terbuka. This document is expectedly able to be used continuously as a medium for monitoring and evaluation on distribution of goods/services procurement packages at Universitas Terbuka.

V. CONCLUSION

The results showed that the maturity level of the organization variable, especially the sub-variable of duties and functions has reached the Repeatable level within 2 (two) years. This can be seen from the performance of working groups as measured by the monitoring and evaluation of the distribution of goods/services procurement packages at Universitas Terbuka. To reach the next level, it is necessary to develop a standardized system. This research still has some limitations that need to be overcome in further research such as measurement of the level of maturity of the other three variables namely, Governance, Human Resources, and Management. This is needed to establish strategic, collaborative, performance-orientated, proactive, and continuously-improved goods and service procurement center of excellence.

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