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Lean Government Applied Concept in Mutation Service over Land and Building Tax at *Badan Pendapatan Daerah* (Bapenda) South Tangerang, West Java, Indonesia

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Public service over Regional Government in Indonesia is considered doesn't good enough. The lean government programs is used to improve public services in Tangerang, West Java, Indonesia. In this study, we analyse the mutation services for object/subject on Land and Building Taxes over *Badan Pendapatan Daerah* (Bapenda) using lean government concept. The lean government concept is uses the DMAIC mechanism (Define, Measure, Analyze, Improve, and Control). In order to obtain failure mode, we use Failure Mode and Effect Analysis (FMEA) method to improve mutation process service for object/subject on land and building tax. In this study we uses qualitative research method to take the data observation based on interview also documents and records from 30 correspondence. The results showed the applied concept of lean government programs could be increase the submission process of mutation services for object/subjects of Land and Building Taxes to 28.6% with average time reduced 8 days (from 28 days to 20 days).

Keywords: Public Services, Land and Building Tax, and Lean Government.

1. INTRODUCTION

The different problem from bureaucratic government environment is related to bureaucracy performance. Here, the professionalism of regional government officers who are efficient, productive, not corruption, transparent, accountable still requires a separate solution. Here, related to the worse image and performance bureaucracy and at low level of public confidence in administration of the government level. The low quality of public services it's highlighted by government bureaucracy in providing services to the public. The government public service provider needed community to responsible and provide the best service for the improvement of public services. In the other hand, the successful of community satisfaction is a tool to measure the government public services provide the service. Therefore, the public services must be focus on maximizing by terms of quality and quantity.

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Ombudsman of Republic of Indonesia (ORI) is issued a report from assessment, competence, and compliance of Regional Government service standard and competencies of public service providers in accordance with law regulation No. 25, 2009 in concerning Public Services. In this report Ombudsman divides level of compliance of Regional Government into three levels e.g. green, yellow, and red zones. The green zone means that the level of compliance is high, yellow zone means the level of compliance is moderate and red zone is the level of compliance is low. Based ORI observation, the Regional Government over South Tangerang in yellow zone. Based regional conditions, South Tangerang need to improve public services to the community with applying the lean six sigma concept. Here, Lean Six Sigma are consisting of two important concepts such as lean concepts and six sigma.

Here, the Lean concepts are a principle to focus on increasing the efficiency of resource value. The basic concept of lean concept is used to continuous effort and eliminate waste of added value goods or services to provide customers value (customer value). While, Six Sigma is a quality control process through a structured method to improve the process towards a goal with 3.4 failures from one million products or services produce. Lean Six Sigma can be defined as a management system based on systematic approach to identifying and eliminating activities through to continuous improvement. In order to achieve the performance of six-sigma or six-sigma, the lean concepts can be applied in the service industry to improve product quality and company profits in the business world, respectively [1]. Many researchers study the quality of product to increase customer satisfaction using qualitative method [2]. However, this method is very poor due to validated the data observation. Thus, the google trends proposed to improve qualitative the data in oil and gas application over Riau, Indonesia [3]. The disadvantages google trends data to improve qualitative data doesn't capable to validate the data. Thus, we propose lean six sigma to deep analyze quality product combined lean government applied concept. Based our study, the lean government applied concept is very good to analyze qualitative method and improve the customer satisfaction in near future.

2. METHODOLOGY

2.1 Lend Government Concept

The lean government concept is uses to extract DMAIC method (Define, Measure, Analyze, Improve, and Control) to obtain quality product. Here, in first step is Define means to measure of level success in the implementation process also limitations. The second step, is Measure means to determine the problem by understanding process with help and Map Process from Cross Functional Flowchart, Flow Chart, LCM and VAS. Furthermore, in third steps Analyze means validation and determines of problems that directly have an impact on the problem form FMEA. Forth steps is Improve means determining of proposed improvements for each problem by potential improvements with IEM, LCM, VAS and Time Series Plot tools. Last steps is Control means to determine to Improve positive influence in continuously maintained and consistently also carried out with SOP tools, Changed Management Plan, and Out of Control Action Plan (OCAP).

2.2 Cross Functional Flowchart (CFF)

Flowchart is graphical depictions to showed existing processes or proposed model using simple symbols, lines and words to display activities and sequences in the process. The standardization of flowcharts is encountering the ability to show responsible a stage in the process or be able to show the relevance of the parties involved in the process. The visualization of flowchart is showed the relationship between business processes and functions of each unit or department responsible for the process over economy or management study. The Cross Functional Flowchart (CFF) is a tool to show the clearly process to identify delay times, repetitive steps (reworks), excessive inspections and stages the potential in failure system. CFFs can be made vertically by horizontally depending focus on description in process to be displayed [4].

2.3 Lean Consumption Map (LCM)

Lean Consumption Map (LCM) is a tool to assess service industry over administration system [5]. Here, LCM based on five simple principles are very closely related to Lean Manufacturing concept. Here, mapping steps is very important to see opportunities for improvement over Lean Manufacturing concept. This map can be revealing how the process over customers to increase time and money. Thus, in the first step is drawing consumption map, the second step to determine the time value and time at each stage and process to customer side. The third step is determining perceptual time at each stage on customer side. The fourth step is drawing a provision map, the fifth step to determine time value and time over each process at company side. The last step to determine perceptual time at each stage of process on company side [6, 7].

2.4 Failure Mode Effect and Analysis (FMEA)

FMEA is one of tool to identifies the consequences or consequences from system or process failures, and eliminates opportunities for failure rate. FMEA is applied to labeling the method to assist process used for identify potential failure modes. FMEA is a technique for evaluating the reliability from system to determine impact effect of a failure system. Failures are classified based on the impact given to the success from a mission and system or process [8, 9].

2.5 Impact and Effort Matrix (IEM)

IEM is a technique for selecting priorities of improvement proposals or activities and assessed in terms of their influence in the desired results from business side or costs to carrying out the selected proposals. Here, the proposed proposals for improvement or activities in Zone I must be prioritized due to large impact and effort to spent the minimal time. Zone II and Zone III can be considered as a next priority after Zone I while the Zone IV is recommended not to be implemented because have a small impact to requires effort or large costs [10, 11].

2.6 Out of Control Action Plan (OCAP)

OCAP is one of flowchart to guide employees for respond as well if have uncontrolled situations beyond of the process. OCAP consists of activators, namely certain out of control events, checkpoints or possibilities that the

cause, and terminator which is have guidance contain in actions to immediately to stop the event beyond of control. OCAP is certainly very dynamic and will changed from a day which is accordance with response from out of control events. The benefits of OCAP are giving the employees to take the action from problem and get solution as a mentioned over ombudsman regulation [12].

3. RESULT AND DISCUSSION

In this study, we use research framework to relies DMAIC cycle (Define, Measure, Analyze, Improve and Control) with the Lean Government method. Here, DMAIC was chosen due to have framework to analyze the problem and considered to suitable and implementing of improvement projects. Figure 1 shows framework DMAIC was used in this study.

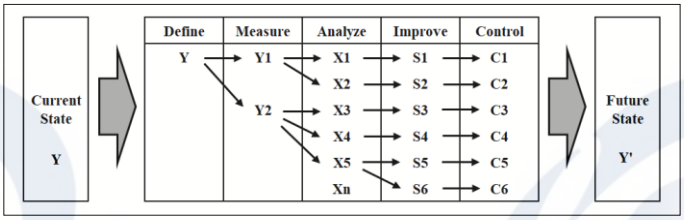

Figure 1. DMAIC framework

As can be seen in Figure 1, the Y as a current state of problem will be extracted to Y product (Y') or future state using DMAIC. Here, the lean government can be applied in the process of mutation services of Land and Building Tax in order to improve the efficiency and completion of the mutation process in the object/subject of Land also Building Tax based on saving time from the consumer side namely public/taxpayer while the saving time from the service prove by Regional Income over South Tangerang, West Java, Indonesia over current state (Y). Then the proposition DMAIC was used to appropriate and structured method in this study from lean government concept.

Furthermore, the various types in public services over South Tangerang is realated Land and Building Tax service from *Badan Pendapatan Daerah* (Bapenda). Here, the lean government application is used to analyze mutation service on Land and Building Tax. As a motioned from previous findings in section two, the interview results obtained that the observations is identified problem to increasing speed of document process in mutation service objects/subjects a Land and Building Tax over Bapenda, South Tangerang, West Java, Indonesia. In order to achieve the study, we use primary and secondary data from direct observation over Bapenda, South Tangerang based on interview with correspondent from employees and taxpayer community who use these services at June to December 2017.

This observation is carried out during office hours over 09.00 to 14.00 Indonesia local time. Here, we choose random sampling technique with certain considerations and carried out the several times to avoid bias in this study.

After the interview process, we determine diagram SIPOC to define the limits parties involved the six-sigma improvement method. The manufacturing and services sectors can be applied to service of mutations object/subject from Bapenda, South Tangerang, West Java, Indonesia. Thus, the purpose in this study is implemented government lean concepts to enhancing the speed of administration process. Table I shows the value of assessment before lean government applied over Bapenda, South Tangerang, West Java, Indonesia.

Table I. Assessment Value Before Lean Government Applied Over Bapenda, South Tangerang, West Java, Indonesia

		Customer (Consumption Time)	Provider (Provision Time)
Total Time	(a)	2566	5640
Value Added	(b)	445	530
Non value Added	(c)	2121	5110
% VA	= (b) / (a) * 100%	17,3%	9,4%
% NVA	= (c) / (a) * 100%	82,7%	90,6%
Value to Waste Rasio	= (b) / (c) * 100%	21,0%	10,4%

As can be seen in Table I, the activities of mutation services object/subject of Land and Building Tax starting from the taxpayer ongoing to submit until the *Surat Pemberitahuan Pajak Terutang* (SPPT) of Land and Building Tax has been issued. Then proceed the Lean Consumption Map to identify activities to added value after obtaining the Lean Consumption and Value Assessment. Furthermore, we analyze the administration service using FMEA method. Here, FMEA was designed to get value of severity occurrence and detection to assesses activity of mutation services of objects/Land and Building Taxes so that the value of Risk Priority Number (RPN) is obtained. Table II shows list of proposed improvements from FMEA.

Table II. List Proposed Improvement from FMEA

LIST OF PROPOSED REPAIRS	CODE OF PROPOSED REPAIR
Providing a portal for media consultations, with a service desk and forms that can be downloaded according to the services chosen with interactive guides with videos	S 1
Make quarterly maintenance contracts with the provider	S 2
Provides an SMS gateway service for making backup copies of Proof of File Submission (BPB) through digital media (SMS or WA)	S 3
place officers who are trained and understand the terms and processes of object / subject subject matter of the United Nations through selection of qualified staff recruitment and have undergone a series of training and technical guidance on object mutation / UN subject services	S 4
conduct training / technical guidance on file / document storage in the 5S / 5R program and apply it to daily work activities	S 5
converting paper / hardcopy media into digital media by making digital assignment and reporting applications including e-approvals in stages from file / field researchers to Bapenda leaders	S 6
Prepare a new SOP to eliminate this process	S 7
Conduct training education / technical guidance on how to input data and apply it in daily work activities carefully	S 8
Subscribe to more than one internet provider	S 9
Provides several printer machines	S 10

As can be seen in Table II, the ten proposed corrective actions have been obtained used as an input to make the Impact and Effort Matrix diagram. The proposed improvement was tested with Effort Matrix to allocated each proposed corrective action in zone I, zone II, zone III or zone IV. The placement of proposed corrective actions in zones I to zone IV will be very helpful in determining the priority of actions to carried out corrective actions more systematic and structured.

The first priority is Zone I or short term, then Zone II as a medium term and followed by Zone III and the last Zone IV is not recommended to continue. Here, we propose throughout the proposed improvements to be implemented in Bapenda, South Tangerang, West Java, Indonesia to increasing added value process to run across both sides from the Customer or Provider. To estimate proposed improvements, we carried out the estimate result over value added assessment after repairing Lean Consumption Map (After Lean Government). All the data displayed based on simulation and observations from correspondent. However, the overview of improvements proposed activities by implemented over Bapenda, South Tangerang, West Java, Indonesia. Here, the Lean Consumption Results was improved for 1390 minutes total time from 2566 minutes (reduced to 1176 minutes) or equivalent to 54.2%. The proportion for added value is increased to 13.3% (17.3% of proportion to 30.6%) while the Non-Value-Added Time decreased by 13.3% (82.7% to 69.4%) and Value to Waste Ratio increased to 23.1% (21.0% to 44.1%).

Likewise, the Provider's side, we calculate total improvement 3967 minutes from 5460 minutes and decreased to 1673 minutes or equivalent to 70.3%. Then the proportion of Value-Added Time is increased by 20.7% (9.4% to 30.1%) while the Non-Value-Added Time reduced to 20.7% (90.6% to 69.9%) and Value to Waste Ratio increased to 32.7% (which initially increased 10.4% to 43.1%) based on simulation result. A matrix Diagram in Bapenda, South Tangerang, West Java, Indonesia (see Figure 2).

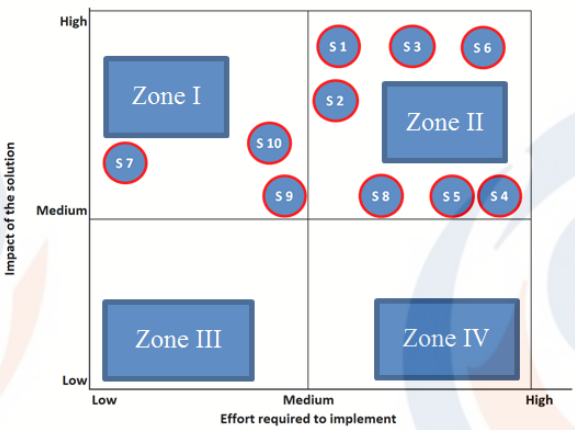

Figure 2. Impact and Effort Matrix Diagram

As can be seen in Figure 2, the positive result from proposed improvements has large impact on improving the time from Customer side and Provider side. Thus, the plotting with four zone is very effective to extract the information. Based on simulation result, compared the result before and after Lean Government Over Bapenda, South Tangerang, West Java, Indonesia (see Table III).

Table III. Comparison result of Value-Added Assessment Before and After Lean Government Over Bapenda, South Tangerang, West Java, Indonesia

		Customer (Consumption Time)			Provider (Provision Time)		
		Before	After	Result	Before	After	Result
Total Time (minutes)	(a)	2566	1176	-1390	5640	1673	-3967
Value Added (minutes)	(b)	445	360	-85	530	504	-26
Non value Added (minutes)	(c)	2121	816	-1305	5110	1169	-3941
% VA	= (b) / (a) * 100%	17,3%	30,6%	13,3%	9,4%	30,1%	20,7%
% NVA	= (c) / (a) * 100%	82,7%	69,4%	-13,3%	90,6%	69,9%	-20,7%
Value to Waste Rasio	= (b) / (c) * 100%	21,0%	44,1%	23,1%	10,4%	43,1%	32,7%

Based on simulation result, we obtain the decreased value of each parameter over costumer and provide side, respectively. Here, we obtain that improvement day from 28 days to 20 days or a decrease of 8 days or 28.6%. The comparison with calculation improvement target in Define phase reached 20 days. This result is proposed to improve positive impact on mutation process over object/subject land and building in Bapenda, South Tangerang, West Java, Indonesia. Figure 3 shows time series plot Before and After Lean Government Over Bapenda, South Tangerang, West Java, Indonesia.

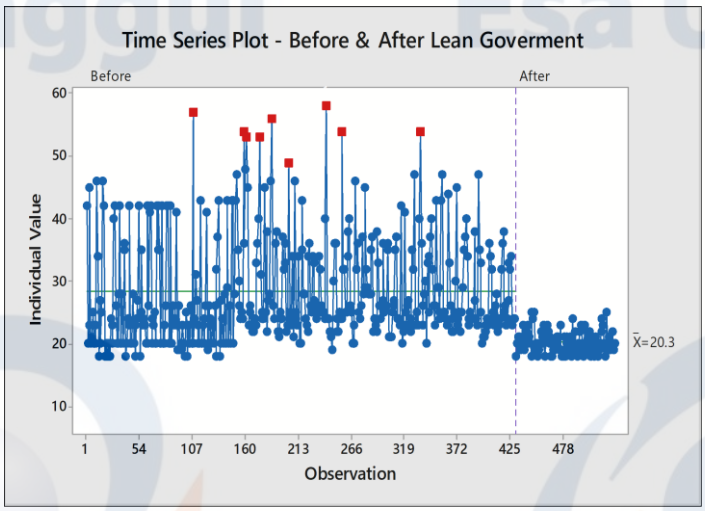

Figure 3. Time series plot Before and After Lean Government Over Bapenda, South Tangerang, West Java, Indonesia

As can be seen in Figure 3, the decreasing administration service in Bapenda, South Tangerang, West Java, Indonesia due to FMEA technique. Here, the individual value of 425 to 478 observation is decreased after lean government while in 1 to 420 observation, the individual value is increased, respectively. We also found the highest individual value increased more than 50 individual value at > 107 data observation to < 372. Thus, the customer or provider is disappointed due to wasting the time during get the result.

4. CONCLUSION

The concept of lean government can be applied to the service process mutation of objects/subjects of Land and Building Tax over Bapenda, South Tangerang, West Java, Indonesia using DMAIC method. The application of lean government concept can be increased administration document also submission in mutation services for objects/subjects of Land and Building Taxes by 28.6%. Based on Customer/taxpayer side, we obtained total improvement in time 1390 minutes or equivalent to 54.2%. Furthermore, the proportion for Value Added Time increased to 13.3% while the Non-Value-Added Time is decreased to 13.3%. Here, the Value to Waste Ratio increased to 23.1% from the Provider or Bapenda side which is have total improvement of time around 3967 minutes or equivalent to 70.3% with Value Added Time is increased 20.7%. Furthermore, we obtained Non-Value-Added Time decreased to 20.7% while the Value to Waste Ratio increased to 32.7%. It is suggested that the implementation DMAIC has been successful to applied lean government over Bapenda, South Tangerang, West Java, Indonesia. The highly commitment from all elements (employee leadership) to improve public services can be implemented in near future. Thus, this method is proposed to corrective action as a ideal solution over implementation in organization's ability where the existence and innovations have willingness from organization to improve services over taxpayers. Finally, based our study this method is very good to increase the trust of taxpayers in fulfilling their obligations as a citizen over South Tangerang, West Java, Indonesia.

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