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The Lean Government Development on Public Services over Publishing Letter Police Record at State Police Office, Indonesian Republic

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Lean is part of a growing management trend and designed to reduce administration costs also operating efficiency at companies or government sectors. Lean has a consideration concept to implement properly in public service. Thus, in this study, we analyze Lean Government in the public service sector for issuing *Surat Keterangan Catatan Kepolisian* (SKCK) in Indonesian police. Here, we use qualitative methods to obtained data observation based on field shots, documents analysis, and notes or reports. The results showed that Lean Six Sigma be able to applied with LCM to improving the SKCK request service process by reducing the total time of service completion both from the service provider side, from 185 minutes to 30 minutes and from the service user side from 171 minutes to 40 minutes. Therefore, the percentage of value-added also increased from the service provider side from 36.8% to 40% and on the service user side the value-added percentage increased from 21.6% to 32.5%.

Keywords: Lean government, waste, value, Indonesian Police Department.

1. INTRODUCTION

Public service it's one of the important in every country especially in Indonesia. In many public services are the responsibility of the Ministry / Institution must be behavior implementation on public service. Here, the Police Record Certificate (SKCK) is one of the tasks for community in the Security Intelligence function both at the level of the Sectorial Police, POLRES and Police Headquarters. SKCK is a Police public service consisting of self-identity in the form of name, address, date of birth, occupation, religion, fingerprints, and criminal history of the applicant for issuing SKCK as stipulated in National Police Chief Regulation Number 18 Year 2015 concerning Procedures for the Issuance of Police Records. In issuing SKCK is carried out at all levels of the organization in the National Police by the allotment proposed by the applicant or the general public. Furthermore, on sector Police / Sector issues SKCK for use as a requirement for applying for Non-Civil Servant jobs such as private companies except SOE companies.

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The issuance of SKCK in the Polres is as an entry requirement for Civil Servants (PNS) within the scope of the CPNS file complement or similar, Village Head, DPRD and Regional Head / Regent, requirements for applying for prospective non-PNS SOE employees and as a condition for marriage with a member of the TNI or Polri. In Polda level, the issuance of SKCK become to prospective employees or prospective members in government institutions/agencies and vital companies determined by the Government, obtain passports/visas, Indonesian citizens who will work abroad, carry out activities in the scope of the Province, namely as public officials, notary public and continuing school. Finally, at the Headquarters level the issuance of the SKCK is for the benefit of being a state official (executive, legislative, judicial and government institution), a citizen going abroad for school/visit and / or for issuing visas, and a citizen and foreigner who will carry out activities or certain needs in the national and or international scope include: permit to stay abroad, naturalization of citizenship and adoption of children for foreigners.

So that all levels of the National Police organization issue SKCK by the designation at each level. Requirements for obtaining SKCK for Indonesian citizens include a photocopy of Indonesian ID (KTP) and photocopies of family cards, photocopies of birth certificates or acquaintances at each level. The photocopy of other identity cards for those who do not meet the requirements for obtaining a KTP; and 6 (six) pieces of 4 x 6 cm color photographs. After the requirements are complete, complete the document, then fill out the form prepared by the officer, or register online by filling out the form on the website (<http://www.skckonline.com>). In 2018 the request for issuance of SKCK at the Baintelkam Counter reached 14,897 sheets in 1 effective 219 days. In the process of publishing through the following stages, first the applicant registers himself by filling out both manual and electronic forms (SKCK Online). The SKCK Online concept does not yet support good queue management because it is only for taking queue numbers in a manual process. So that, this stage takes 10 to 15 minutes which has an impact on queue waste. After completing the form, all the required documents are submitted to the ticket window clerk and then forwarded to the research officer, this stage takes 15 to 20 minutes in the course of the study. Officers' mobility impacts the waste of time needed in the flow of the publishing process. After the file is complete and following the provisions, the manual registration process and database input with an estimated time of 10 to 15 minutes, then proceed to the typing and printing process carried out by one SKCK officer who has been certified in the estimated time of 15 to 20 minutes. So that if the officer is unable to attend, typing and printing is carried out by other employees who are not certified. The latter is the process of signing the SKCK by an official appointed in this case the Head of Subdistrict Giat Mas who is responsible and given the authority to sign the SKCK and permission for community activities. The problem is seen in the initial observation that on an effective day from 08.00 WIB with 53 queue numbers published and at 15.00 WIB when the counter is closed there are only 40 SKCK sheets that can be published. Thus, the officers need additional time to complete the files that have been registered. This is a condition that is contrary to the Standard Operating Procedure for the issuance of SKCK and the provision of service standards within the Baintelkam Polri number: Kep 03 / I / 2013 that the service time of SKCK is 1 workday / 2 hours and the availability of queuing services and facilities for applicants. This study aims to explore the problems in the issuance of SKCK at the National Police Headquarters level and implement the Lean concept in the field of Government, especially public services. Based on PP No.50 of 2016 concerning Types and Rates of Non-Tax State Revenue Types that apply to the National Police that related to the issuance of SKCK costs Rp. 30,000 per share. As is known, the Lean concept is more intensely applied to the manufacturing sector, several other

Lean concepts in the non-manufacturing sector include Lean Hospital, Lean Service and Lean Government. This is a consideration whether the Lean concept is implemented in sectors other than manufacturing, especially the government.

2. METHODOLOGY

Lean's research has been carried out in various countries including America, Canada, Brazil including in Indonesia where an identity is known in the manufacturing world. Lean is a continuous and systematic effort to identify and eliminate waste or non-value adding activities through continuous improvement [1, 2]. The development of the Lean concept originated from the Toyota Production System (TPS), which originated in Japan after the Second World War developed [3]. Lean's basic idea is to focus on flow efficiency rather than resource efficiency and to focus on customers, only produce what the customer wants, according to the customer's wishes, and when the customer wants it [3, 4]. Overall Lean applied to all aspects is called Lean Enterprise while for certain aspects, Lean implemented in public services is called Lean Government. With the application of several sectors, there has been a transfer from Lean Manufacturing to Lean Government [4]. Lean Government is part of a growing management translate designed to reduce costs and improve the efficiency of government operations. However, the transfer of lean techniques from the private sector to the public sector requires a balance of administrative law, management-labor relations to realize this efficiency and increase costs. The Lean Government metric for public services is not far from other industry metrics, which are divided into two namely process metrics and organizational metrics. This Lean Government research serves to analyze and enrich research discussions related to the Lean Government [5]. In this study, included five results of previous international research related to the concept of research on the Lean Government (attached). Whereas the previous research has identified the process of problems that are rife in the Government system, especially public services, which has an impact on public confidence in the performance of the Government, especially in the current state. Some indications of public service problems, one of which is the Ombudsman press conference on March 20, 2018, which stated the increasing public complaints about SKCK public services. In this study, we use qualitative research methods with data obtained based on observations with interviews, results of field shots, analysis of documents, and notes or reports. A qualitative research is inductive because a start with the data in the field, namely empirical data. Researchers investigate, discover, describe, and explain the quality or features of social influence that cannot be explained, measured or illustrated through a quantitative approach. A qualitative methods are easier when dealing with multiple realities, this method presents directly the nature of the relationship

between researchers and respondents, and this method is more sensitive and adapts to the management of shared influence on the value patterns encountered.

Based on data observation and data analysis, the SKCK service officers and SKCK applicants both new and new SKCK extensions. This research was conducted to exploit deeply the problems that hamper the operational flow of SKCK public services. From the problems found, an analysis was made to make recommendations for improving the quality of public service quality. Informants and the public, in this case, applicants with the concept of a Lean Government, will be known to measure the improvement in the quality of SKCK publishing services. The researcher tries to compare the system/target of public service issuance of SKCK from time to time carried out with the first step to make observations on the object of research services. From the comparative concept made then the researcher determines the right problem patterns to be developed in the research proposition. Then, by applying an action guide that bases on supporting theory, as a result, it will be known whether the proposition can be applied or not so that it will be a conclusion and subsequent recommendations. Stages - the stages carried out in the study can be described in the following flow chart in Figure 1.

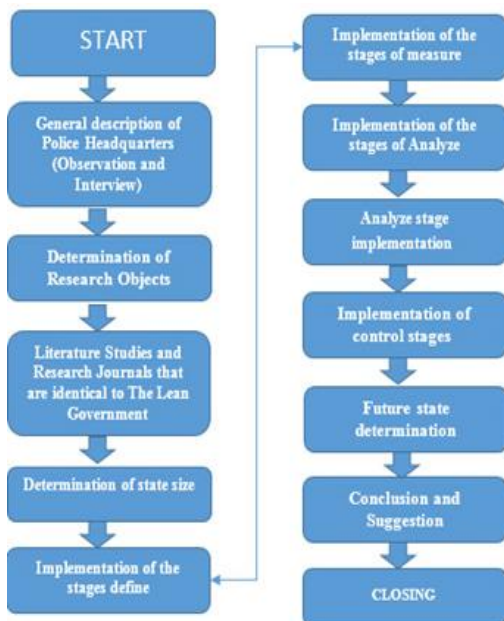


Figure 1. Research Flow chart

Based on Figure 1 shows the research Flow Chart the data obtained from the initial observations of the public service issuance of SKCK in Baintelkam Polri are divided into two parts, namely primary data and secondary data. Primary data is data created by researchers for the specific purpose of solving the problem that is being handled. Data is collected by the researcher directly from the first source or the place of the research object. Secondary data is data that has been collected for purposes other than solving the problem being faced

A. Sampling and Population

Primary data were obtained from direct observations on the SKCK public service process with 50 informants as SKCK applicants, 5 service officers, and 5 service controllers. Other informants who are sources of information are informants who are considered to be able to provide qualified information in research. This data can be found quickly. In this research, the secondary data sources are literature, articles, journals and websites on the internet regarding the research conducted and other important notes in the observation process. From the results of initial observations (attached) to the object of the study and interviews with the ticket window staff that the SKCK issuance process was carried out based on the SOP of SKCK issuance as stated in Perkap No. 18 of 2014. So that for further research researchers will make the basis of the process of activities by applicable SOPs, including local officers' performance in providing excellent service to the community. Some activities/process flow of the SKCK issuance requires time to be completed, so this activity needs to be measured to define waste time which has an impact on the declining quality of public services. The Define stage of the research is based on the finding that the issuance of SKCK is not completed at exactly 15:00 WIB following the issuance of the queue file at 08:00 WIB. To determine the size of the success of a public service process through completion time, check the list and further research documents. In this process, the Time Plot Series. Measure is used to find out more about the condition of the phases per stage which causes problems with the output in the form of Process Map Diagrams. Analyze is by further analyzing the details of the problems of each stage that hinder the publishing process by interviewing. Improve is to provide proposals to authorized officials and an introduction to the Lean concept that can be used in SKCK public services. And control to control determines control measures for the implementation of public services issuing SKCK.

During the study, interviews and discussions were conducted by researchers to find possible detailed problems not included in the list of questions that have been compiled, attached to the list of interview questions. From observations to interviews, researchers will obtain data and be associated with phenomena during the course of the study. The research was carried out at the SKCK Bid counter for Yanmas Baintelkam Polri Jl. Trunojoyo No. 3 Keb Baru South Jakarta, researching from July to September 2019.

B. Measurement Tools

The implementation of Lean in various sectors is inseparable from Six Sigma, where research states that Lean is often misunderstood and is usually used in a limited way [6]. Six Sigma has a holistic approach to problem-solving and process improvement through the DMAIC phase (Define, Measure, Analyze, Improve, Control). DMAIC is the heart of a six-sigma analysis that guarantees the voice of customers running throughout the

process so that the product produced satisfies the customer. By using the Lean Consumption Map (LCM) tool, the researcher will do the mapping so that the performance of total consumer time (total customer time) and total provider time can be measured [7]. Tools in the Lean government at the Define stage are Time Plot Series and SIPOC tools, measure steps with Process Map and Flow Diagram tools, the next step Analyze uses your Failure Mode Effect Analysis. Continue to improve the stage using Impact and Effort Matrix tools, Lean Consumption Map, Value Added Assessment and Time Series Plot. At the Control stage using new standard tools, Change Management and Out of Control Action Plan

C. Research Proposition

Based on previous research related to the application of Lean Thinking in the industrial sector as evidenced by the decrease in the amount of waste and ineffectiveness with the concept of Lean Government, implications for the possibilities of Lean Thinking counseling can be applied to the SKCK issuance process to increase efficiency and effectiveness [8]. For example, Six Sigma Water Permit Project conducted by the Minnesota Pollution Water Permit Project conducted by the Minnesota Pollution Control Agency (USA) and Alexandra Hospital in Singapore that applies Six Sigma to measure the length of time a patient takes to obtain service (turn around time), then try to reduce the turn around time. The research composition is arranged by the results of research that are relevant to the concept of the Lean Government in public sector services. Universities in Canada that have implemented the Lean Government method have succeeded in increasing the efficiency and quality of the administrative processes felt by their students [9].

This proves the existence of a basic difference between the application of Lean Thinking in the manufacturing industry, government services, and public services. The use of methods and tools in each sector also determines the success of the Lean concept to improve process capability towards the targets of Six Sigma. Based on existing Lean research (attached), the concept of Lean Thinking in the government sector / Lean Government can be applied in various sectors including public services in the issuance of SKCK in Baintelkam Polri that can support government management in general.

3. RESULTS AND DISCUSSION

In this study the completion time data from the start of the activity, i.e. the applicant registers online until the SKCK legalization process is collected. Based on these data, it is known that the completion time based on interviews and recording can reach almost 250 minutes. This study determines the improvement target for services by 75 minutes referring to the time that is considered reasonable by the applicant or service user. In this study, the applicant or service user should not be as long as it is on the data collected. To explore these problems and achieve the

above improvement targets, this study determines the focus of the problem by understanding the current process map (Current Process Map) based on Interview Guidelines, Observation Guidelines, Document Guidelines, and other Tools. By using the Lean Consumption Map (LCM) tool, the mapping will be carried out so that the total consumer time (total customer time) and total provider time (total service provider) performance can be measured. The steps taken are mapping the Lean Consumption Mapping. It aims to determine and assess activities with added value (Value Added) and activities without added value (Non-Value Added). This Lean Consumption Mapping analysis is useful to find out waste in every activity both in terms of service users and service providers so that later improvements can be made to activities that lack value-added (see Table I).

Table I. Value Added Before Lean

Item	Customer	Provider
	(Consumption Time)	(Provision Time)
Total Time	171	185
Value Added	37	68
Non-Value Added	134	117
% Value Added	21.6%	36.8%
% Non-Value Added	78.4%	63.2%
Value to Waste Ratio	27.6%	58.1%

Based on the results of the Lean Consumption Mapping, it can be seen that in terms of service users the total time needed to complete the process is 171 minutes with a total value added of 37 minutes or 21.6% while the total non-value added is 134 minutes or 78.4%. Here, in terms of service providers the total time needed to complete the process is 185 minutes with a total value added of 78 minutes or 36.8% while the total non-value added is 117 minutes or 63.2%. In addition to the fact that high levels of non-value-added activity were found, it was also found that many activities were less efficient, causing time wastage. What's more, the length of the service process turns out to be dominated by the process of waiting or waiting in line by service users. To solve this problem, this research uses the next tool, namely FMEA. FMEA aims to find the root problems of the work process. Besides, FMEA can also be used to predict a process failure so that improvements can be made. The first step in the analysis uses FMEA, which is to look for a process with a high-Risk Priority Number (RPN) with a general standard of > 100 then it is considered a high RPN and needs improvement. Next, look at the Severity value if the high severity value can be considered as a process improvement. Based on the results of the PFMEA analysis, it can be seen that there are some high RPN values. Based on the FMEA analysis, the proposed corrective action was adopted. These proposals, among others, aim to create an efficient process. One proposal made is the creation of a portal for the process of filling and uploading identification data.

This needs to be done to reduce paper files and speed up the process by eliminating data entry and typing by manual officers. The following is a complete list of proposed improvements.

Table II. Proposed Improvements

No	PROPOSED REPAIR	Code
1	Making an integrated information system portal	S1
2	making rules for filling out ICT forms and uploading files online	S2
3	PC provisioning for applicants who cannot fill out online forms from personal device	S3
4	Making visual information boards	S4
5	Provision of SKCK and legalized copies of SKCK	S5
6	The electronic signature of the Head of Subdivision of Giat Mas	S6

The proposed improvements above are then mapped on the Impact-Effort Matrix diagram to find out how much effort is being made to make improvements and the results or effects obtained. The proposals are separated according to their zones. Zone I means the priority of the proposed improvement with minimal effort and maximum results. Furthermore, the proposals are respectively in Zone II and Zone III to be done next. In Zone IV, it is expected that there will be no proposals due to large business considerations while minimal results [10]. Proposals that are considered to have a large influence with minimal effort will receive priority in their application (see Figure 2).

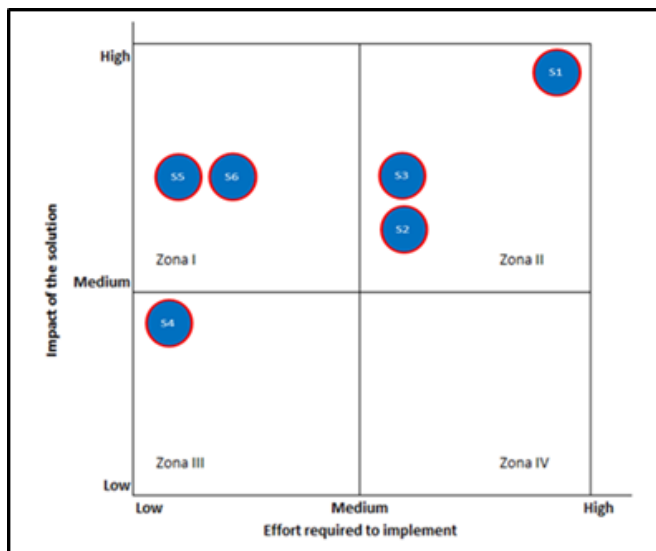


Figure 2. Impact-Effort Matrix

After repairs were made, the mapping of Lean Consumption Mapping was carried out again. The results of Lean Consumption Mapping after repairs show that the total time required is reduced both from the service provider side, from 185 minutes to 68 minutes and from the service user side, from 171 minutes to 63 minutes. The value-added value also increased from 36.8% to 48.5% from the service provider side and from 21.6% to 33.3% from the service user side (see Table III).

Table III. Value-Added Assessment After Lean

Item	Customer	Provider
	(Consumption Time)	(Provision Time)
Total Time	40	30
Value Added	13	12
Non-Value Added	27	18
% Value Added	32.5%	40%
% Non-Value Added	67.5%	60%
Value to waste Ratio	48.1%	66.7%

The next step is to estimate if all proposed improvements are then carried out to estimate the value of the Value-Added Assessment after repairs are carried out with the help of the Lean Consumption Map After Lean Government. All data displayed are estimates or simulations based on observations and in-depth interviews with informants. However, this will provide an overview of the estimated improvements that will be obtained before all proposed improvement activities. As mentioned earlier based on the simulation carried out, the Time Series Plot is then presented after the repair. The Time Series plot shows that there was a decrease in service completion time with a service completion time of 65 minutes (see Figure 3)

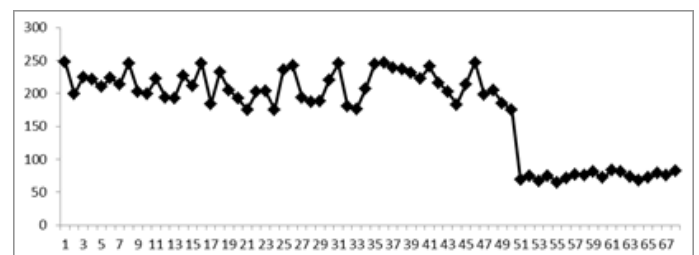


Figure 3. Time for Completion of SKCK Services Before and After Lean

The final step is Control by maintaining what has been done and implementing continuous improvement. After a service/agency / agency has completed a Lean project, it is important to think strategically about how to maintain improvements and, if desired, spread Lean's enthusiasm throughout the organization. Therefore, it is important to make a new SOP (Standard Operating Procedure) following the improvements that have been made to keep the improvements to continue. Besides, it is necessary to hold a refreshing training that is sustainable. In this study, researchers tried to minimize, substitute even eliminate activities that do not add value to the service. Activities that need to be minimized or eliminated are database entry activities, manual typing, waiting for signatures, and waiting in line. In this case, the first step taken is to map the sources of process inputs and the outputs of the process using the SIPOC Diagram (Supplier, Input, Process, Output, Customer). By mapping the process's input sources and the outputs of the process, the boundaries of a process will be known. This SIPOC diagram limits the parties and processes that occur in the SKCK service process. The next important step is to map the process using the Lean Consumption Map (LCM). The concept of the Lean Consumption Map (LCM) is a very

suitable tool for the service industry. To describe the Lean Consumption Map, we have recommend six main steps. The first step is to draw a consumption map that is by making a list of stages of the process on the customer side (Consumer Processes). One stage contains one time. The second step is to determine the valuable time and time of waste at each stage of the process on the customer side. The third step is to determine the perceptual time at each stage of the process on the customer side, namely determining whether the customer is happy or not happy by waiting. The fourth step is to draw a provision map that is by making a list of the stages of the process on the side of the company or provider organization that empties into providing services or services to customers. One stage contains one time. Next, the fifth step is to determine the valuable time and time of waste in each process on the company's side. The final step is to determine the perceptual time at each stage of the process on the company side, namely determining whether employees are happy or not happy with the stages of the process.

Based on the mapping of Lean Consumption Mapping, an ineffective process can be seen from starting to fill ICT forms. The queue registration/withdrawal process is done online but the form filling is done manually at the service counter. The next waste is the collection and transfer of files that occur between service sections. Often, files are simply stacked and wait for new lots to be moved to the next process. Waste is identified again when entering the database entry and typing stages, the files that have been collected are then manually inputted into the database system. Next, a retype is made for the SKCK to be issued. This typing is then printed and given to the applicant to check whether the data entered is correct. There have been several typos that have to be re-typed. This is considered less effective and efficient because it does not add value to the service process. The process continues and in the signing of the SKCK section in the Head of Sub-Section Giat Mas, activities with non-value added are found. Many SKCK documents are waiting for signatures. This process takes a long time because Kasubbid Giat Mas is often absent / not in place so the documents have to wait. In the SKCK handover process, several inefficient activities were also found. When submitting SKCK, applicants often ask for a photocopy of SKCK legalization. Applicants who submit this matter add to the queue which should have been completed but instead make additional work The steps of improvement analysis are based on analysis using FMEA (Failure Mode and Effect Analysis). In this study, several informants were involved in the preparation of FMEA to provide recommendations for accurate improvement by the existing problems. The steps taken in FMEA are to conduct brainstorming related to potential failures at each stage of the process activities, then give a rating of Severity (the level of serious impact on the failure of the process), determine the potential causes of failure and give an Occurrence rating (level of frequency of failure) , determine the detection method in the ongoing

process and determine the Detection rating (the level of detection in the process), discuss recommendations for further action for future improvement and predict the RPN level before and after the recommendation is carried out. Analysis of potential failures outlined in the FMEA illustrates the Customer and Provider sides, the intended failure is based on completion the first method is to identify Severity and Detection ratings that have a value equal to one. If the Severity rating value is equal to one then there is no impact on the completion of the file if there is a failure to process it. Furthermore, if the Detection rating value is equal to one, the process has been able to prevent failure to pass to the next process. Thus, if there is a condition that the Severity and Detection rating values are equal to one then the process will not be discussed further at the Analyze stage. The second method is to identify the highest RPN value. RPN value indicates how far the seriousness of the failure to be processed will have an impact on the final results of the whole process. During the research process, there were no recommendations on what the minimum RPN value should be discussed, but the researcher would take all RPN values that had a minimum of fifteen rating value. The third method is to identify the processes contained in the FMEA compared to the most time on the Lean Consumption Map from the viewpoint of the Customer and Provider side. For this research, identification will be carried out for the three most times in the Lean Consumption Map with the process contained in FMEA. If it turns out that the process at FMEA has become part of the process identified in the first method and the second method then no further identification will be made for the third method [11].

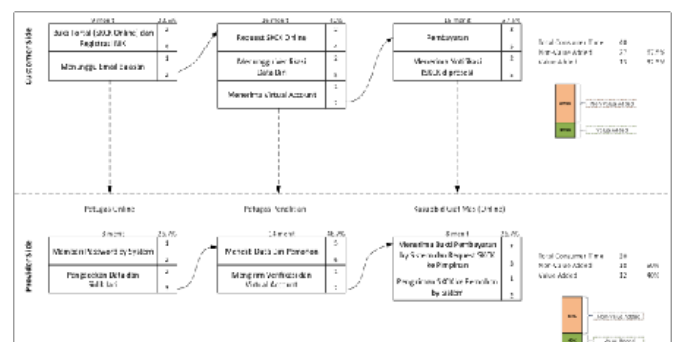


Figure 4. Lean Mapping after Lean

The improvement solution proposed in this study based on an analysis using FMEA is to create an online portal system. An integrated online system was filling out ICT forms that can be done at home using the applicant's device. As for applicants who cannot access the private device can come and will be provided with a computer at the service counter. Later the data filled in by the user directly enters the police database so there is no need to re-enter the database and SKCK. The service officer only needs to examine the applicant's police records and then

print the SKCK. Furthermore, for signatures, electronic signatures can be made so that when the Head of Sub district Giat Mas is unable to interrupt the service process. Then the service officer also provides a photocopy of SKCK which has been legalized as a form of excellent service where the applicant does not need to photocopy it first and directly provide it. This can speed up the service process. The final step is to estimate if all proposed improvements are then carried out to estimate the value of the Value Added Assessment after repairs are carried out with the help of the Lean Consumption Map After Lean Government. All data displayed are estimates or simulations based on observations and in-depth interviews with informants. However, this will provide an overview of the estimated improvements that will be obtained before all proposed improvement activities are implemented. By minimizing activities that have less value-added and only trying to provide core activities, the process will run effectively with the aim of customer-oriented. Waste will be reduced and faster completion time. The better the process the service users will be satisfied so that more service users will use the service. Lean Consumption Mapping After Improving the SKCK Service Process, where on the provider or service provider side has a value-added percentage of 40% increase from the LCM before any improvement. Likewise, with the customer side, the value-added percentage of 32.5% increased from LCM before any improvement. With innovation in the service system being online, the whole process involves an information technology system that can streamline time from the customer and service provider side.

4. CONCLUSION

The Lean Six Sigma concept is a method of improvement that is often used in the manufacturing sector and can also be applied to other sectors such as the service sector. Lean Six Sigma can be applied with LCM tools in improving the SKCK request service process by reducing the total time of service completion both from the service provider side, from 185 minutes to 30 minutes and from the service user side, from 171 minutes to 40 minutes.

Therefore, the percentage of value-added also increased from the service provider side from 36.8% to 40% and on the service user side the value-added percentage increased from 21.6% to 32.5%. It can be concluded that the existence of lean, the process of serving SKCK requests with LCM tools can be effective and efficient.

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