

Approach lean service on halal certification service system using cost integrated value stream mapping

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Abstract. Along with the increasing needs of the community will be halal, kosher certification agencies and the clergy Indonesia is required to be able to do the certification, monitoring and handling of halal products which consist of food, beverages and goods for consumption by the public, especially in this case is the public Moslem . The demand of halal products, especially in the province of north Sumatra is very high and the potential for halal products market as an area with a lot of resources and a high number of applicants who want to get the halal certification of halal assurance of the clergy Indonesia. But in its application, the length of the certification process becomes a major problem because it lost the opportunity to gain new customers. Lean service used to eliminate wasteful activities or no value-added activities of all the halal certification process flow, thereby reducing lead time and activities that do not provide added value. Having obtained the conditions for companies using value stream mapping, classification activity indicates that the Value Added Activity at 18% with the Non-Value Added Activity by 82%. The result of the lengthy process of identifying root causes of the highest certification by using Root Cause Analysis and FMEA found is awaiting action. This study recommends a design of new business processes by reducing from 30 events to 28 events and reduces processing time from 92 days to 36 days.

1. Introduction

LPPOM MUI North Sumatra Province became one of the Halal Certification Bodies representing the Indonesian halal certification in a special area of North Sumatra province which is now closely associated with the growing market competition toward global halal competition. Halal certificate is a written fatwa Indonesian Ulema Council who stated about the product in accordance with the Shari'ah. MUI Halal Certificate is a requirement for obtaining halal labelling on the packaging of the product from government authorities. Challenges to be faced by the service industry are customer demand (customer) that every company will do anything to create satisfaction (satisfaction).

The demands for high quality standards that ensure product safety and origin of the product into the high attention of the international community at this time, including the Muslim community is increasingly critical and requires a guarantee of high quality to be halal or product to be consumed. Consumer perceptions of the current legal conception not only consider the purely religious issue, but rather as kosher has become a symbol also for quality assurance and lifestyle choices. Halal market was later developed into a promising arena of profit and the effect on competition of products that can be seen from the forecasted demand for halal products in Figure 1.



Figure 1. Projected Demand Product Halal

Failure on services occurs when the customer does not get the service as expected. Some of the factors that led to the failure of a service results from its human resources, environment, equipment, methods, and management is an important factor in running the service itself. So it is necessary to find how to reduce the failure of service is an important issue for a business. It is important for designer's services to identify potential failure modes and take appropriate action to prevent such failures. With limited resources, the manager or head of the company should be able to prioritize potential failure mode in the service and provide repair services before the services are rendered.

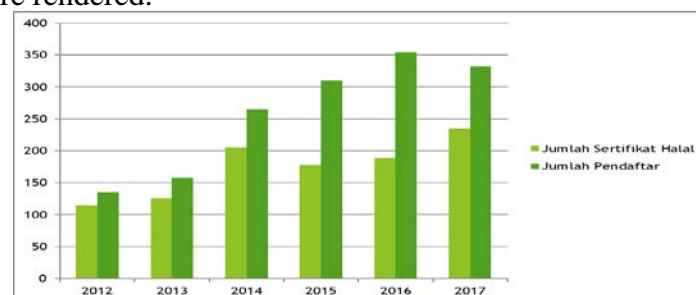


Figure 2. Data Certification LPPOM MUI SUMUT Period 2012-2017

Based on the above data, the number of applicants in each year is always higher than the number of halal certificate that comes out, it is believed to be due to low levels of capability services to serve the applicants in the process of certification so the target must realized that has not been achieved and the impact on the accumulated number of enrolls in the year next. By the middle of this period is beginning in the certification process should be set using the online system in some provinces, including northern Sumatra. The certification process was conducted LPPOM MUI certification completion SU set standards for one to three months later than the certification process to be completed. The time span is too long because the certification process is already using Cerol SS-23000 in mid-2016. It became a new challenge for LPPOM MUI SU considering the applicant or stakeholder mixed with a small industry that is still lack of human resources capacity to use cerol SS-23000. it means that the online system is still not able to fully realized to stakeholders. This sort of communication failure and lead to a longer and repeatedly, resulting in a delay of performance LPPOM MUI halal certification at SU.

The reason the above background to analyze what factors that influence the effectiveness of the halal certification process. Lean service approach is used to design the process in order to eliminate waste in processes that do not provide added value (non-value added activity). Lean principles have also been applied more widely in services firms to improve customer services by eliminating waste as well as on research and Youngdahl Bowen (1998). In addition, research in the field of services that apply lean concepts also include the areas of information management (Hicks, 2007), health (Radnor et al., 2011) and call service center (Piercy et al., 2008). Maleyeff Research (2006), where lean service is used as an approach to create an effective system of internal service so that we can be sure important information can get to consumers quickly and with an effective ministry. In the lean concepts, standardization of procedures and continuous improvement become essential in the continuity of the service process to improve the quality of service and performance of a company.

2. Research Methodology

This study included the analysis of research work and activity (job and activity analysis), because it is intended to investigate in detail the activities and work of a person or group of people at the companies studied to get the design of business process improvement. The collected data were then carried out data processing with the following steps:

1. Processing Value Stream Mapping (VSM)
Value stream mapping is a visual representation of products / services such as information on value-added activities and non-value-added to identify the waste that occurs in the current value.
2. Treatment Process Activity Mapping (PAM)
Process activity mapping used to know all the activities that take place during the service process then classify these activities based on the type of its waste. It aims to eliminate unnecessary activities, identify whether a process can be streamlined further, and seek improvements to reduce waste
3. Processing Activity Based Costing (ABC).
Activity Based Costing System as a cost calculation system that implements the search costs of activities required to produce the output (output) more thoroughly (Carter 2009)
4. Processing of Root Cause Analysis (RCA)
Root Cause Analysis (RCA) is a method used to find the root cause of the problem. Where in this study RCA used to find the root cause of the occurrence of critical waste in the company.
5. Treatment Failure Mode and Effect Analysis (FMEA)
Failure Mode and Effect Analysis (FMEA) is used to evaluate the potential failure in a process or activity and identify activities that provide opportunities of potential failure.

3. Results and Discussion

After the identification of waste, then measuring the most common waste and affect the service process in LPPOM MUI SU based on the results of questionnaires. The questionnaire was conducted to determine the level of frequency of waste occurs in the service process in the company. The questionnaire was conducted by calculating the weight and do the rankings so we get a percentage of each type of waste most often occur in the process of certification services. The results of the cost analysis calculation on each result of the design value stream mapping, we can see the difference in the fees charged ratio of each process of the existing conditions and at the conditions that will come in Table 1.

Table 1. Cost Comparison VSM

Cost breakdown	<i>Current Cost VSM</i>	<i>Future Cost VSM</i>	Difference	Ket
total Cost	Rp91,346,002	Rp59,399,398	Rp31,946,604	Saving
VA	Rp49,646,552	Rp52,409,285	Rp 2,762,733	Enhancement
NVA	Rp41,699,450	Rp 6,990,113	Rp34,709,337	reduction

Based on the analysis above that the halal certification process on the existing condition that is integrated with the cost at the time of current with future experience or benefit cost savings amounting to Rp31,946,604 to increase value added activities amounted Rp2,762,733 and managed to reduce non-value added activities amounting to Rp34,709,337 , With the design of this activity is expected to be LPPOM MUI consistently able to run the service process like this in the future. Here are the results of the design can be seen when current and future in Figure 3 and Figure 4.

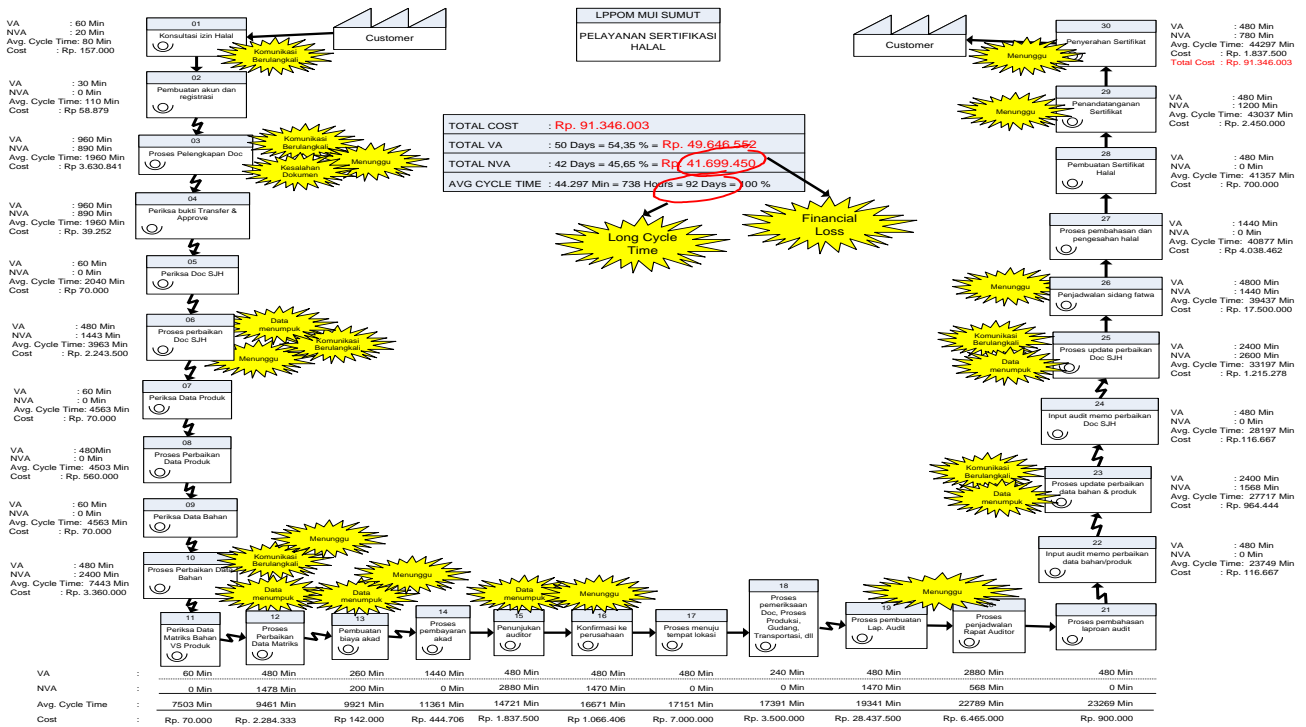


Figure 3.Current Cost Integrated Value Stream Mapping

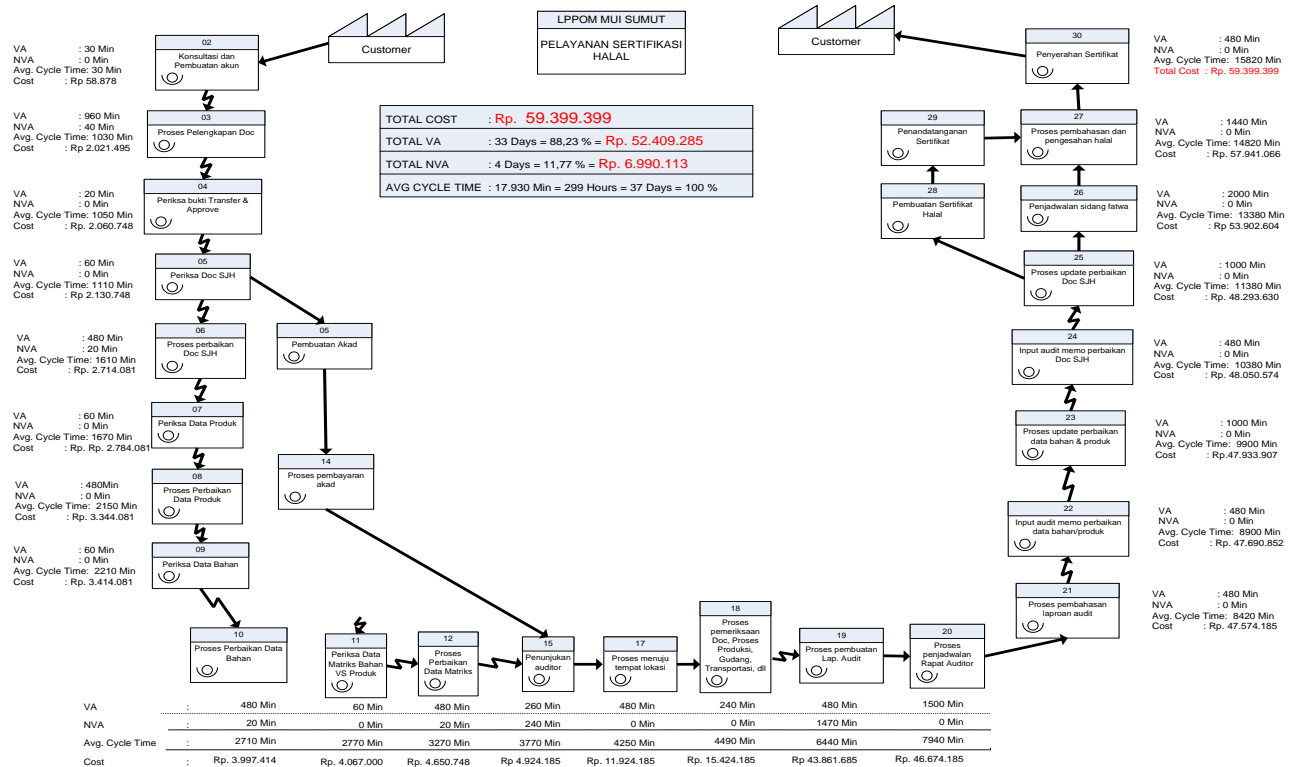


Figure 4. Future Cost Integrated Value Stream Mapping

4. Conclusions

The conclusion drawn from the results of the identification of the most critical waste on the length of the halal certification process in measurement through a questionnaire that was kind of a waste of waiting that affect the length of the halal certification process. Based on the measured time to the process of halal certification process from 35 companies sampled, then by integrating cost with vsm can be calculated the cost of value-added and non-value added current (Current) and will come (Future) with a total cost of Rp. 91,346,002 (Current) and Rp. 59,399,398 (Future) by a margin decline in the cost of Rp. 31,946,604. The cause of the length of the highest certification process by using Root Cause Analysis and FMEA found is awaiting action.

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