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IMPLEMENTATION OF LEAN SERVICE FOR IMPROVING SERVICE QUALITY IN THE VILLAGE GOVERNMENT OF SUKAMAJU KIBIN, SERANG REGENCY

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ABSTRACT

Public services at the village government level often face challenges stemming from inefficient bureaucracy, such as long wait times and the accumulation of paperwork. This study aims to identify forms of waste within the administrative service workflow at the Sukamaju Village Government (Kibin District, Serang Regency) and to formulate improvement recommendations based on the Lean Service approach to enhance the quality of public services. A descriptive qualitative method was employed, with data collected through observation, in-depth interviews, and document analysis. Data analysis utilized Value Stream Mapping (VSM) to map both the current state (Current State Map) and the proposed future state (Future State Map), alongside Process Activity Mapping (PAM) to categorize service-related activities. The findings reveal that the most significant forms of waste are waiting time, overprocessing (redundant processes), and unnecessary physical motion. Implementing the proposed improvements—specifically by eliminating non-value-adding activities and standardizing procedures through a one-stop service system reduced the number of process steps by 50% (from 18 to 9 steps) and decreased the total service cycle time by 63.6% (from 55 minutes to 20 minutes). This study concludes that the consistent application of Lean Service principles can foster a leaner, faster, and more responsive village administrative governance system, capable of meeting community needs without requiring costly infrastructure investments.
Keywords: Lean Service, Service Quality, Village Government, Value Stream Mapping.

INTRODUCTION

Public service is a constitutional obligation of the government and serves as a primary benchmark for the success of good governance. In this modern era, public expectations regarding the quality of services provided by government agencies have continued to rise (Widanti, 2022). Citizens no longer desire merely procedural services; rather, they demand transparency, predictable timelines, and ease of access in all administrative matters. Consequently, the modernization and reform of bureaucracy at every level of government have become essential to optimally fulfill the civil rights of the public (Dewi & Suparno, 2022).

As the smallest unit of government, the village administration plays a strategic role, serving as both the frontline and the primary gateway for public services. Most basic administrative needs ranging from the issuance of official certificates and civil registration to initial licensing originate at the village level (Supriadi et al., 2026). The effectiveness of services at this level significantly shapes public perception regarding the overall credibility of the government. When services at the village level function well, public satisfaction with the

performance of the state bureaucracy as a whole also tends to increase (Mohi & Mahmud, 2018).

In reality, however, public services at the village level are often hindered by various classic obstacles that impede efficiency (Goeyardi et al., 2026). A rigid bureaucracy, lengthy coordination chains, an accumulation of manual paperwork, and long waiting times are common occurrences (Minan et al., 2026). These issues lead to inefficiencies that not only impose costs in terms of both time and money—on the public, but also place a heavy burden on village officials managing their daily workloads. Such traditional, non-adaptive working patterns create a significant gap in public satisfaction (Ali & Saputra, 2020). To address these issues, the public sector has begun adopting various modern operational management concepts that have been successfully implemented in the industrial sector—one of which is the Lean principle (Haikal & Abdulloh, 2025). The Lean Service approach is a managerial strategy focused on reducing or eliminating activities that do not add value—collectively referred to as waste—within the service delivery process. Through this philosophy, service systems are comprehensively analyzed to remove redundant bureaucratic steps, resulting in a leaner, faster workflow that is entirely oriented toward the needs of service users (Ginanjar & Syah, 2019).

Implementing Lean Service within village government settings offers a systematic approach to shifting the work paradigm from one based on quantity to one based on the quality of value (Nugroho et al., 2025). In the context of administrative services, various forms of waste such as waiting times, repetitive verification processes (overprocessing), and inefficient physical movement of documents (motion) can be accurately identified. By eliminating such waste, government agencies can optimize their limited human resources and facilities to produce significantly higher-quality service outputs (Nasori et al., 2026).

This study was conducted to analyze, in depth, the administrative service workflows within the Village Government of Sukamaju, located in Kibin District, Serang Regency. This location was selected due to the dynamic nature of the area, which necessitates a rapid and efficient public service response. Workflows were identified by mapping each stage of activity using Value Stream Mapping (VSM) and Process Activity Mapping (PAM) instruments, allowing for the differentiation between value-adding activities and those that result in waste.

Through this Lean Service-based analysis, the study aims to provide significant theoretical and practical contributions to the development of village administrative governance. Theoretically, this research enriches the literature on the application of lean manufacturing concepts within the micro-scale public service sector. Practically, the findings offer concrete recommendations and a strategic guide for village officials to re-engineer public service processes, ultimately fostering the delivery of services that are fast, accurate, and responsive.

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METHOD

This study employs a qualitative descriptive approach, focusing on the application of Lean Service principles to evaluate and improve the quality of public services (Yulianah, 2022). The research was conducted at the Sukamaju Village Government Office, located in Kibin District, Serang Regency. This site was selected purposively, given the urgent need to enhance the efficiency of administrative services in the area. The study utilizes both primary and secondary data. Primary data were gathered directly through participatory observation of actual service workflows, in-depth interviews with village officials (as service providers) and resident representatives (as service users), and the measurement of operational cycle times. Secondary data were obtained through a review of existing standard operating procedures (SOPs), service archive reports, and the village profile.

The data analysis process was conducted systematically, following the problem-solving cycle inherent in Lean Service. The initial step involved identifying various forms of waste within the current administrative service workflow, using Value Stream Mapping (VSM) to create a Current State Map. Subsequently, each service activity was examined in detail and classified at a micro-level using Process Activity Mapping (PAM) into three categories: value-adding (VA) activities; necessary but non-value-adding (NNVA) activities; and non-value-adding (NVA) activities. Once the root causes of the NVA activities were identified, the final step involved formulating recommendations for improvement and developing a Future State Map a visualization of the workflow with waste eliminated—to ensure a leaner and higher-quality service process.

RESULTS AND DISCUSSION

The village government of Sukamaju, located in Kibin District, Serang Regency, possesses highly dynamic sociodemographic characteristics. Situated within an active industrial corridor, the village experiences a high intensity of population movement and a significant demand for public administrative services. On any given day, the village office is crowded with residents seeking various essential documents—ranging from business registration certificates (SKU) and certificates of domicile to civil registration documents, such as referral letters for national identity cards (KTP) and family registration cards (Kartu Keluarga). This heavy administrative workload necessitates an operational service system that is both agile and responsive.

However, preliminary observations indicate that the existing organizational structure and service management remain conventional and linear. Village staff tasked with service

delivery are frequently overwhelmed by unpredictable fluctuations in the number of residents arriving. A limited number of frontline personnel—those who interact directly with the public—exacerbates the issue, leading to long queues during peak hours. This lack of an integrated workflow results in staff burnout and persistent complaints from the community.

To analyze the complexity of these challenges, a comprehensive mapping exercise was conducted using the Lean Service cycle. The initial phase of the study focused on gathering empirical data regarding the actual time a resident spends from the moment they enter the village office until they leave with their processed documents. Cycle time measurements were taken repeatedly across various working hours to derive a valid average figure that accurately represents daily operational conditions.

The data collected was then translated into a Current State Map using the Value Stream Mapping (VSM) framework. This map provides a visual confirmation that the administrative service workflow in Sukamaju Village is excessively long and convoluted. The standard procedure a resident must navigate involves at least 18 physical and bureaucratic steps, spread across several separate workspaces. The complexity of this workflow serves as an initial indicator of systemic inefficiency in the internal governance of the village administration.

In general, the process of obtaining a document begins with the submission of required paperwork at an information desk, followed by manual recording in a ledger, verification by staff from the relevant section, drafting of the document, multi-level reviews, and finally, signing by the village head or the village secretary. Each transition from one desk to another entails a waiting period that varies based on the presence of village officials at their workstations. Furthermore, micro-geographical obstacles—such as the office layout—contribute to an increase in the total time required to complete a document.

Mathematical analysis of the Current State Map data reveals that the total lead time for a resident to obtain a single official letter ranges from 45 to 60 minutes. This duration is considered excessive for a standard administrative document with a fixed, pre-established format. Notably, only a very small fraction of this total time is actually spent on the physical or digital processing of the document. This phenomenon highlights a significant imbalance between waiting time and actual processing time.

This substantial time gap was examined quantitatively using a Process Activity Mapping (PAM) instrument. Based on the PAM analysis of the 18 existing steps, activities were rigorously classified to identify which ones provide direct value to the residents. This classification is crucial within the Lean methodology, as it forms the foundation for determining strategies to eliminate or simplify processes during subsequent intervention phases.

The categorization results indicate that activities classified as Value-Adding (VA) account for only 25% of the entire service process. This VA activity consists purely of entering residents' personal information into the system, printing documents, and affixing official signatures. The low percentage value for this VA activity serves as concrete evidence that a significant portion of the time residents spend at the village office is wasted on tasks that are not essential to the completion of their documents.

On the other hand, activities categorized as Necessary but Non-Value-Adding (NNVA) those that do not add value but remain required by regulation account for 30% of the total. Such NNVA activities include verifying the consistency between original documents (e.g., national ID cards or family registration cards) and their photocopies, as well as the physical filing of documents into cabinets. Theoretically, these steps neither alter the form of the document nor accelerate its completion; however, they are mandatory for legal compliance and administrative order.

The largest and most critical portion identified in the PAM analysis consists of activities that provide no value whatsoever—classified as Non-Value-Adding (NVA) which make up 45% of the entire process. These NVA activities represent hidden waste embedded within the service system of Sukamaju Village. Examples include residents having to move between rooms to locate an official with a stamp, files piling up on the village secretary's desk while awaiting signatures, and the redundant re-typing of existing data.

To provide a clear visualization of the efficiency improvements within the service workflow, Table 1 below summarizes the transformation of activity stages—comparing the existing state with the proposed state following interventions based on the Lean Service approach.

Table 1. Summary Comparison of Existing Service Flow and Proposed Lean Service

No	Analysis Parameters	Condition Existing (Before Lean)	Condition Proposal (After Lean)	Percentage Change
1	Amount Process Stages	18 Steps	9 Steps	Reduce 50% of stages
2	Value-Adding Activity (VA) Time	12 Minutes	12 Minutes	Fixed (Optimal)
3	Necessary but NVA Activity Time	15 minutes	5 minutes	Reduce 66.7% of time
4	Non-Value-Adding Activity Time	28 Minutes	3 Minutes	Reduce 89.2% of time
5	Cycle Time (Lead Time)	55 Minutes	20 Minutes	Reduce 63.6% of time

The high level of non-value-added (NVA) activity amounting to 28 minutes under current conditions has prompted the identification of specific types of waste. The first and most prominent form of waste, directly experienced by the public, is the waste of waiting. This occurs

in several stages: from queuing to submit documents, waiting for draft letters to be corrected, to waiting for an authorized official to return to their office often because they are attending an internal meeting or are away on official business. Such waiting times lead to a negative perception among residents, who view the staff's performance as slow.

The second identified form of waste is the waste of overprocessing. This is evident in the policy of repeatedly reviewing required documents at three different stations: the reception staff conducts an initial check, the documents are then passed to a section head for a second review, and finally, the village secretary performs another check before adding a coordination initial. This multi-layered verification process, lacking clear, standardized parameters, fails to improve data accuracy; instead, it merely extends internal bureaucracy.

The third form of waste is the waste of motion—unnecessary movement by both residents and village staff. The current layout of the service area places the official stamp desk quite far away, in a separate, enclosed inner room. Consequently, every time a letter is signed, a staff member must physically walk back and forth just to retrieve the stamp. When accumulated over the course of a workday, these repetitive movements consume a significant amount of energy and productive time.

Furthermore, the waste of defects (errors or flaws in documents) frequently arises due to a data-entry process that remains manual and rushed. Errors such as typos in a resident's name, national identification number (NIK), or address on a draft letter force staff to reprint the documents. These flawed documents not only result in a waste of paper and ink, but also force the service cycle to restart from the initial typing stage effectively doubling the waiting time for residents.

Another significant form of waste is the waste of unutilized talent. Some village officials with strong digital competencies are assigned only repetitive tasks, such as manually transcribing document reference numbers into a logbook. This uneven distribution of workload leads to burnout among some staff due to an excessive burden, while others experience long periods of idleness during active working hours.

To identify the root causes of these accumulated inefficiencies, a causal analysis was conducted using the 5-Whys method. The in-depth analysis concluded that the core of these inefficiencies lies in the absence of Standard Operating Procedures (SOPs) focused on time efficiency, combined with a bureaucratic mindset that prioritizes formal procedure over the quality of output. Historically, operational procedures have been followed based solely on long-standing habits, without any evaluation of their workflow effectiveness.

Based on these critical findings, a Future State Map was developed to outline a path forward. This workflow reconstruction is built on a radical principle: the total elimination of all

Non-Value-Added (NVA) activities and the streamlining of Necessary-but-Non-Value-Added (NNVA) activities to the absolute minimum. The primary focus of this Future State Map is to shift the service system from a linear, multi-desk process to a One-Stop Service model.

In the proposed integrated service model, residents only need to interact with a single staff member at the front desk. This staff member is granted full authority and equipped with the necessary tools to instantly verify documents, input data, and print documents on-site. Through this mechanism, the 18 complex service stages previously required have been drastically reduced to just 9 essential steps, without compromising the legal validity of the issued documents.

A key innovation to eliminate the waste of waiting specifically the wait for the village head's signature is the implementation of a structured delegation-of-authority system. Whenever the Head of Sukamaju Village must attend a regency-level meeting or handle urgent external matters, the authority to sign routine administrative documents is automatically delegated to the Village Secretary or the Head of the Government Section via a standing power of attorney. This measure has proven highly effective in preventing the accumulation of paperwork on the village head's desk.

Furthermore, issues related to unnecessary movement have been addressed by reconfiguring the layout of the public service area. The official stamp and supporting equipment, such as document scanners, have been relocated to be within easy reach of the front-desk staff. This more ergonomic spatial arrangement minimizes the need for village personnel to walk back and forth between rooms, allowing them to remain fully focused on serving residents at the counter.

The application of this Lean Service concept has brought about a significant improvement in the operational performance of the Sukamaju Village Government. As summarized in Table 1, the total cycle time for document processing has been reduced from 55 minutes to just 20 minutes an efficiency gain of 63.6%. This increased speed has transformed the atmosphere in the village office waiting area, making it far more conducive and free from overcrowding. Theoretically, the results of this study make a significant contribution by dispelling the myth that Lean methodology is only relevant to the large-scale manufacturing sector. The successful transformation of workflows in Sukamaju Village clearly demonstrates that Lean Service principles possess a high degree of flexibility and adaptability, making them applicable to the public sector even within the most micro-level bureaucratic settings, such as a village government, which often faces severe constraints in terms of budget and facilities.

The improvement in service quality achieved through this Lean Service approach directly addresses the dimensions of reliability and responsiveness within the theory of public

service quality. When a bureaucracy succeeds in eliminating time-wasting inefficiencies and establishing transparent processes, public trust in the village government's capacity naturally follows. This streamlined governance model serves as a solid foundation for Sukamaju Village to realize a modern, well-governed administration—one that is fully oriented toward the well-being of the residents of Serang Regency through the provision of high-quality public services.

CONCLUSION

The application of Lean Service principles in the Village Government of Sukamaju, Kibin District, Serang Regency, has empirically demonstrated that bureaucratic reform at the micro-governance level can be achieved through the systematic restructuring of workflows. The core finding of this research asserts that the root cause of poor quality and slow administrative service often attributed to a lack of human resources actually stems from the accumulation of various forms of waste within traditional operational systems. By utilizing Value Stream Mapping (VSM) for workflow visualization and Process Activity Mapping (PAM) for granular classification, the study reveals that non-value-adding activities which frequently dominate service processes can be radically eliminated without compromising the legal validity of village administrative documents.

Reconstructing the service workflow into a Future State Map centered on a One-Stop Service model has yielded a highly significant, transformative impact. Consolidating service counters, ergonomically reconfiguring the operational layout, and implementing a structured delegation of signing authority have successfully reduced the bureaucratic process from 18 steps to just 9 essential ones. This efficiency has directly cut the total cycle time for completing administrative documents by 63.6%, reducing the average processing time from 55 minutes to just 20 minutes per file. The reduction in waiting times, redundant processes (overprocessing), and unnecessary physical movement serves as concrete evidence of the success of Lean Service interventions in creating a lean, responsive, and effective village administrative system.

Both theoretically and practically, this research offers a significant contribution by providing a blueprint for adapting manufacturing methodologies to a micro-scale public service ecosystem. The successful transformation in Sukamaju Village dispels the stigma that improving the quality of public services always requires costly investments in information technology or massive infrastructure overhauls. The key to enhancing public service quality lies in shifting the operational mindset of village officials toward a consistent focus on creating value for the community. This model characterized by efficient and transparent workflows not only boosts local resident satisfaction but also holds significant potential for replication by other village administrations across Serang Regency, ultimately fostering good governance.

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