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Business Processes Improvement of Connection Service to Reduce Complaint Ratio Using the Kaizen Method

(Case Study in Pt PLN (Persero) ULP Cilegon)

Syafaat Pradipta
Master of Manajemen,
Mercu Buana University,
Tangerang, Indonesia

Dr. Ir. Antonius Setyadi, MBA
Lecturer of Postgraduate,
Mercu Buana University,
Jakarta, Indonesia

Abstract:- In the period July 2020 to July 2021, 33% of all reports were about consumer concerns about the connection process. The goal of this study is to use the Kaizen approach to create changes to the PT PLN (Persero) ULP Cilegon electricity connection business process. In the customer connection business process, researchers employ primary data by speaking with the appropriate officers directly and making on-the-ground observations. The PDCA method was used to assess the research findings. The fishbone and 5why approaches were initially utilized by the researcher to identify the fundamental reasons why clients weren't receiving same-day service. Three initiatives were implemented to address the root of the issue with same-day service connection services: outreach to connection officers regarding the target same-day service; adding location coordinates to the connection application file; and implementing simultaneous equipment titles to guarantee that all vendors complete their equipment and work equipment. The 5W1H technique is used to arrange these three objectives in an action plan. The success rate of the same-day service increased to 97% as a result of deploying the repair solution.

Keywords:- *Kaizen, fishbone diagram, 5why, 5W1H, business process improvement, customer complaints.*

I. INTRODUCTION

PT PLN (Persero), also known as PLN, is now the only state-owned electrical utility with the authority to operate electricity in Indonesia. The largest BUMN in Indonesia at the moment, PLN has total assets of Rp. 1,589 trillion in semester 1 of 2021 that run from Sabang to Merauke. PLN is anticipated to be able to meet the community's complete demand for power thanks to its vast asset base. The government's announcement of a 100% electrification rate by 2022 through the Ministry of Energy and Mineral Resources presents both a problem and an opportunity that must be taken advantage of. Several strategies were put into place to achieve this goal, including expanding the network (grid expansion) and boosting connection speeds to nearby villages or residences. [6].

PLN received a variety of complaints when carrying out community service business procedures, ranging from explanations of the flow of the customer registration administration process to reports of disruptions and the necessity for speed in administrative services. All PLN clients can use a variety of media, including Call Center 123, the New PLN Mobile application service, which can be obtained from the PlayStore, as well as the business's official social media accounts on Facebook and Instagram, to make complaints and requests. Through the main application known as AP2T (Integrated Customer Service Application), these complaints are systematically logged. PLN then sends this recording to each unit so that the appropriate police can follow it up right away. The reports of customer complaints are summarized here.

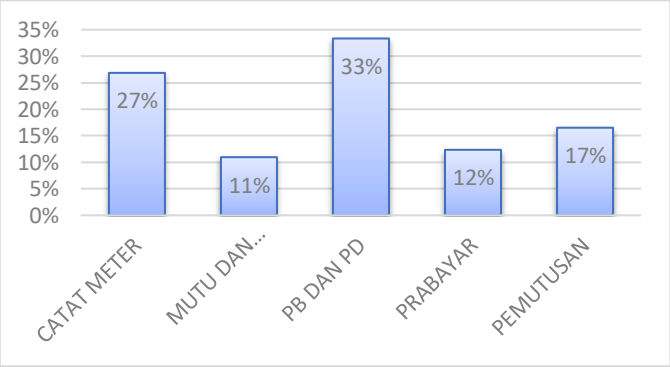

Fig. 1 Customer Complaint Ratio
Source: Customer Application Data 2021.

Figure 1 shows the ratio of customer complaints, and it shows that 33% of all reports for the time period July 2020 to July 2021 are complaints about the connection process. This indicates that there is a disconnect between the clients' perceptions of these two services and their expectations. The PLN social media promotions and advertising campaigns touting the simplicity of new installation services and increased customer control do not accurately reflect how customers actually feel.

According to customer connection speed statistics processed between June 2020 and June 2021, certain clients are still not given same-day service. Sales prospects may

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potentially rise depending on the service connection's speed. The timeline for customer service from June 2020 to June 2021 is shown in Table 1.

Table 1 Service Duration

NO	NUMBER OF SERVICE DAYS	CUSTOMERS
1	0	10264
2	1	1281
3	2	235
4	3	60
5	4	95
6	5	46
7	> 5	76

Source: Customer Application Data 2021.

The table displays the total number of consumers who obtained new installation services and more electricity at PT PLN (Persero) Cilegon Customer Service Unit, which totaled 12,507 customers. 10,264 consumers out of the total, or 85% of them, were served the same day. This figure shows a 15% improvement potential, or 1,793 clients, who have not received same-day service.

The goal of this study is to use the Kaizen approach to develop an improvement in the business process of adding power and connecting new electricity to consumers at PT PLN (Persero) Cilegon Customer Service Unit. It is necessary to conduct research in order to offer same-day service to all customers. It is envisaged that by using the Kaizen approach, it will be possible to enhance all business operations and increase the number of consumers who receive same-day service.

II. METHODOLOGY

A. Research Method

The study's research strategy was a qualitative descriptive research strategy. A methodical, factual, and accurate description of the facts, traits, and connections between the things being examined is the goal of descriptive research. [5]. Qualitative research is a method used to examine the condition of natural objects [10].

The case study method was utilized in this study to examine what happened when additional pairs were connected and more customers were added to the PT PLN (Persero) Cilegon Customer Service Unit between July 2020 and July 2021. The PDCA method was used to analyze the study's findings. [7].

B. Operational Variables

In this study, operational variables—including dimensions, indicators, and data types—will be discussed. The following table includes information on other factors and dimensional measurement points.

Table 2 Research Variables

No	Research Variables	Dimensions	Indicator	Data Type
1	Sameday Service Success Rate	Man	Number of Workers	Primary
			Knowledge and Skills	
		Method	Standard Operation and Procedure	Primary; Secondary
			Business Process	
		Machine	Equipment and tools support	Primary
		Material	Materials Stock	Primary; Secondary
		Management	*Key Performance Indicator* for new construction	Primary; Secondary
		Environment	The distance between one request and another	Primary
2	Reduced Number of Complaints	Complain Report	Monthly Customer Complain	Secondary

Source: Author Analysis 2022

C. Population, Sample and Key Informants

This study was carried out at the PT PLN (Persero) Cilegon Customer Service Unit (hereafter ULP Cilegon). PLN ULP Cilegon's primary activity is establishing connections with 220 low- Voltage clients. Because it is one of the top units that directly serves clients from administration to connection, the PLN ULP Cilegon office was chosen for this investigation. Additionally, researchers can communicate directly with field implementers to gather phenomena and learn about practical limitations when installing real links.

In this study, the population consists of all customers who receive same-day service for new installation and added electricity at PT PLN (Persero) ULP Cilegon. Researchers tallied the duration of each application for new installations and additional electricity at PT PLN (Persero) ULP Cilegon from June 2020 to June 2021 in order to calculate the population. In order to make the research more focused and precise, the sample was determined. The sample is a representation of the size and makeup of the population. [10]. According to the available sample data, 15% of all customer requests for new installations and additional power at PT PLN

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(Persero) ULP Cilegon from June 2020 to June 2021 did not obtain same-day service.

All individuals involved in the implementation of the connection, including both employee and non-employee aspects, were interviewed by researchers. Four important informants were interviewed for this study: the Connection Vendor Coordinator, the Energy Transaction Supervisor, the Customer Service Supervisor, and the Customer Service Staff. These four key informants were chosen because they were suited for their different positions in a business process involving consumer connections.

D. Data Collection and Analysis

Researchers employed a variety of techniques to gather field data, including: (1) observation, which involves close observation of phenomena in the field [4]. From the time clients came to the front desk to request new installations until the officers completed the connection in the field, the researchers closely observed the connection operations. (2) The researcher collected the visual data through observations and interviews with individuals participating in the grafting procedure. (3) In-depth interviews with the individual in charge of carrying out the connection, both administratively and practically. Four key informants, including Supervisor Transaksi Energy, Supervisor Pelayanan Pelanggan, Staf Pelayanan Pelanggan, and Koordinator Penyambungan, were included in this study, and their information was obtained through in-depth interviews.

Data analysis is the process of systematically compiling information from interviews, field notes, and documentation by classifying the information into different categories, conducting analysis, compiling it into patterns, selecting which information is significant and will be studied, and drawing conclusions that are simple for students to understand [10]. In this study, the data analysis process was divided into multiple stages, including (1) Root Cause Analysis (Plan), which involved observation and interviews with everyone involved in the connection process. In order to identify gaps and opportunities between the observed and anticipated conditions, the findings of the observation and interview activities were examined. In order to identify the source of the issue in terms of six aspects, or 5M + 1L, namely Humans, Materials, Methods, Machinery, Management, and Environment, this condition analysis employs the fishbone approach [1]. The researcher not only conducted a root-cause analysis but also created a plan for addressing the problem's root cause. An action plan table contains the strategy for putting fix solutions into practice. (2) Putting an action plan's Improvement Solutions (Do) into practice. This plan includes a time frame, who will be in charge, and how it will be carried out. The 5W+1H technique was employed by the researcher when creating the action plan. The What, Why, Where, When, Who, and How questions make up the 5W + 1H technique. [8]. (3) Evaluation of Implementation of Improvement Solutions (Check) is done to determine how repair activities affect how successful same-day service is and how many customer complaints are generated.

III. RESULTS AND DISCUSSION

A. Root Cause Analysis of Connection Business Processes

Fishbone diagrams [9] and 5whys [3] were created using the findings of interviews with key informants who were actively involved in the grafting process. These two diagrams represent a technique for identifying the cause of the issue and resolving the symptoms of why certain customers still do not receive same-day connection service.

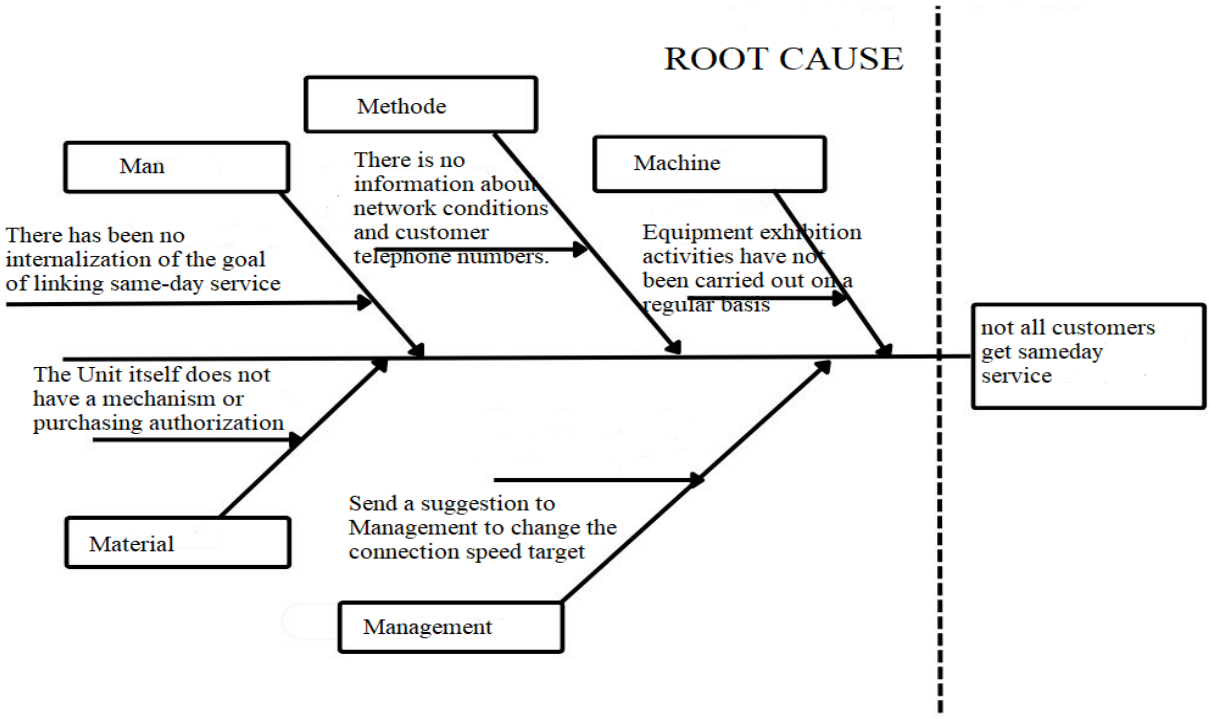

Fig. 2 Fishbone Diagram of Interview Results
Source: Author Analysis 2022

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Following a fishbone and 5why analysis, it was discovered that there are a number of factors that prevent customers from receiving same-day service for electricity connections, including the following: (1) Officers do not understand that the connection duration is one day; (2) Application files are not detailed; (3) Vendors do not provide working tools for connecting officers; (4) Material conditions are not always available; (5) There is no adjustment to the connection speed to allow for peak demand.

B. Solutions Analysis of Connection Business Process

There are five fundamental reasons that were shown to be the cause of not meeting the same-day service target. A method is required to implement the improvement plan and make sure that all parties are aware of their roles, duties, time constraints, and expected outcomes [2]. Action plans are the name given to all of these monitoring controls. The creation of an action plan is the next step in the process of implementing the activity plan as a means of streamlining business operations. The 5W1H technique is employed in the creation of the action plan [8].

Table 3 Action Plan for Implementing Improvements

No	Root Cause (What)	Solution (How)	Purpose (Why)	PIC (Who)	Position (Where)	Time (When)	Go / No Go
1	There has been no internalization of the goal of linking same-day service.	Internalization with the officers regarding the goal of same-day service.	To ensure that every officer is aware of the connection goals that must be met.	SPV Transaksi Energi	Transaksi energi.	November 2022	GO, solutions can be implemented.
2	There is no information about network conditions and customer telephone numbers.	Added detailed description of network conditions and customer telephone numbers.	Field officers must execute all requests as promptly as possible.	SPV Pelayanan Pelanggan.	Loket Pelayanan Pelanggan	November 2022	GO, solutions can be implemented.
3	Equipment exhibition activities have not been carried out on a regular basis.	Equipment deployment activities have not been implemented on a regular basis.	So that all officers can be equipped with equipment.	SPV Transaksi Energi	Transaksi Energi	Desember 2022	GO, solutions can be implemented.
4	The Unit itself does not have a mechanism or purchasing authorization.	Send proposals for authorizations to purchase items on behalf of the Unit.	So that all materials can be completed more rapidly using the self-buying process.	Manajer UP3 Banten Utara	Manajer Unit	Desember 2022.	NO GO, tidak bisa dilakukan.
5	Send a suggestion to Management to change the connection speed target.	Suggestions for changing the connection speed objective.	So that there is a change in the connection speed target.	Manajer UP3 Banten Utara	Manajer Unit	Desember 2022.	NO GO, target kinerja merupakan turunan dari PLN Pusat sehingga tidak bisa diubah.

Source: Interview Data 2022

C. Impact Analysis of Business Process Improvements

After the repair process was completed, the improvement in connecting the same-day service was measured. The following table illustrates how repair actions affect the success of connecting the same-day service. Before and after conditions, namely the connection period from 2020 to November 2022. Every year, there has been an increase in the proportion of successful same-day service connections. Even while the success rate for same-day service connections was only 81% at the start of the data investigation in 2020, by 2023 it had increased to 97%. According to this table, the number of clients who are connected to same-day service has increased by 16%. With this growth, improvement operations in the same day service connection service were fairly successful.

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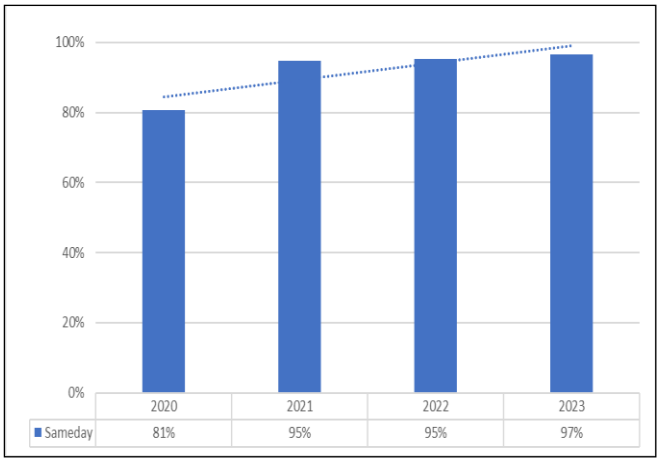

Fig. 3 Percentage of Sameday Service Success
Source: Author Analysis 2023

IV. RESULTS, IMPLICATION AND CONCLUSION

A. Results

After conducting research on improving the sameday service business process on new installations and adding power for the Kaizen Method at PT PLN (Persero) Cilegon Customer Service Unit, it was determined that the root of the problem that becomes an obstacle in the sameday service connection service is that the officer does not understand that the connection duration is one day, the application file is not detailed, and the vendor does not complete the work tool for the connection.

B. Implication

The impact of applying repair solutions includes boosting the success rate of establishing same-day service from 81% in 2020 to 97% in 2023.

C. Conclusion

The goal of this study was to use the Kaizen method to enhance the connecting business process. The fishbone and 5why approaches are used by researchers to examine the underlying causes of a business process. The following analysis focuses on putting a solution into practice by developing an action plan utilizing the 5W1H methodology. This approach works incredibly well for mapping out a repair execution strategy. The effectiveness of this research is demonstrated by an increase in the success rate of clients who receive same-day service from pre-2020 conditions, namely 81% to 97% in 2023.

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