

# The Implementation of Quality Function Deployment (QFD) In Increasing Customer Satisfaction in PT PLN (Persero) Unit Induk Distribusi (UID) Jakarta Raya UP3 Menteng

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**Abstract:-** This study aims to determine the service quality of PT PLN (Persero) Unit Induk Distribusi (UID) Jakarta Raya UP3 Menteng on customer satisfaction of household units and this research is a descriptive study with a total of 100 respondents. The analysis method uses Service Quality (SERVQUAL), Importance Performance Analysis (IPA), and Quality Function Development (QFD) methods with House of Quality (HOQ). The results of data analysis using the SERVQUAL method show that the overall level of customer satisfaction is 78.4%. This means that there are many improvements that need to be made by the management of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng to be able to increase customer satisfaction. Then, in the IPA method, there are 7 service quality attributes that must be improved. While in the QFD method, the results of data analysis show that the action of “Procurement of Officer Training with Maximum Improvements” is the top priority.

**Keywords:-** Service Quality, Customer Satisfaction, SERVQUAL, IPA, QFD, HOQ

## I. INTRODUCTION

PT PLN is broadly divided into three main business processes, namely the generation, transmission and distribution of electricity, which stretches from Sabang to Meuroke. Electrical energy from generation sources is channeled through the Extra High Voltage Air Line transmission to the Substation, from the Electrical Energy Substation it is channeled back to the Distribution Substation, from this Distribution Substation it is distributed to customers, the distribution of Electrical Energy in Greater Jakarta is handled by PT PLN (Persero) Unit Induk Distribusi (UID) Jakarta Raya UP3 Menteng, and is the Main Unit of PLN which concentrates on electricity distribution business processes and customer service that serves customers - Social (S), Household (R), Business (B), Industrial (I) Customers and Government (P).

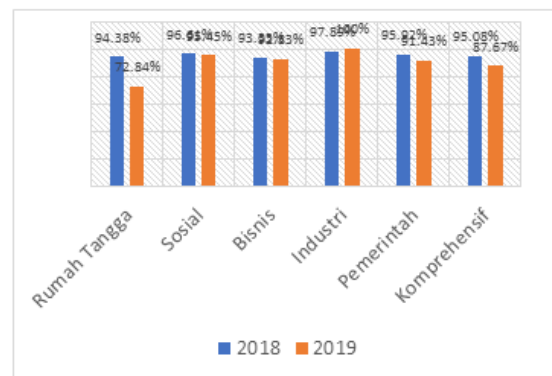
At the beginning of its establishment until 2015, PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng was an extension of the Greater Jakarta and

Tangerang Distribution. Then in 2015, a new UID Banten Unit was formed so that the city of Tangerang was separated from the work area of the Greater Jakarta UID and joined UID Banten.

This organizational change is stated in the Board of Directors Regulation No. 005.P/DIR/2015 dated in December 18, 2015 regarding the Organization and Work Procedure of PT PLN and the Board of Directors Regulation No. 0078.P/DIR/2015.

In 2019 a customer satisfaction survey was conducted for household customers, social customers, business customers, industrial customers and government customers, attached to the Customer Satisfaction Index (IKP).

**Table 1**  
**Customer Satisfaction Index 2018 – 2019**



Source: PLN Customer Satisfaction Survey 2018 – 2019

From table 1.1 above, the overall Customer Satisfaction Index (IKP) in 2019 decreased 7.40% compared to 2018, in 2018 the customer satisfaction index could achieve 95.08% while in 2019 it achieved 87.67%, from the target set by PLN Central, 95%.

The highest decrease in the customer satisfaction index was for household customers at -21.54%, followed by Government customers at -4.49%, then Industrial customers at 2.11%, social at -1.16% and business customers at -0.51%.

Therefore, the main object of this research or those who will be used as a sample is the PLN household unit customers. Household tariff customers are individual customers or social entities whose electricity is used for household purposes.

In this study, researchers uses the QFD method. The Quality Function Deployment (QFD) method is to find out the needs that customers want, by using and collecting customer voices into requirements in product manufacture and product characteristics. Each data collected is converted into a graph called the House of Quality (HoQ). This graph contains information about what the company should do in relation to customer needs and how or how much engagement customer needs related to product manufacturing requirements (Heizer, Render & Mundson, 2016).

Customer satisfaction arises through a process that arises through the best / excellent service between customers and the company, creating service satisfaction in the eyes of customers, because customers believe that the company can provide the best / excellent service in accordance with the wishes and expectations of customers.

Customer satisfaction is one of the company's goals, from customer satisfaction the company has been concerned with the voice of the customer so as to allow companies to get feedback on the experience they feel when using the company's products or services, so this can lead to loyalty and a positive impression, good for the company. Based on the description of the background above, in this study the researchers take the title: "The Implementation of Quality Function Deployment (QFD) in Increasing Customer Satisfaction in PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng".

**II. THEORETICAL REVIEW**

**Service Quality**

According to Wijaya (2018), product and service quality is the overall combination of product and service characteristics resulted from marketing, engineering, production and maintenance that makes these products and services usable to meet customer expectations.

According to Kotler and Keller (2016), the definition of service is any action or activity that can be offered by one party to another, which is essentially intangible and does not result in any ownership.

**Customer satisfaction**

According to Kotler and Keller (2016), consumer satisfaction is a person's feeling of pleasure or disappointment that arises after comparing the performance (outcome) of the product thought to the expected performance (result).

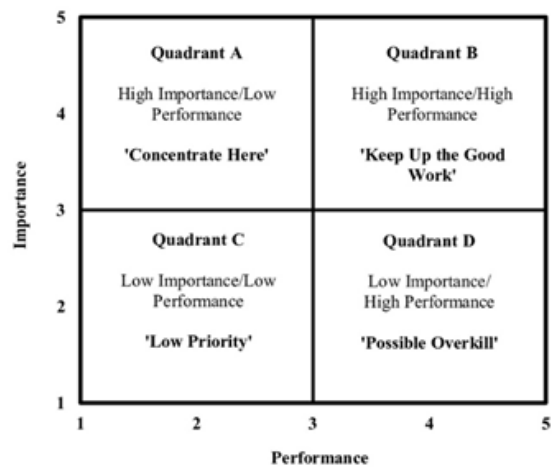
According to Yamit (2013), traditionally customers can be interpreted as people who buy and use products. In companies engaged in services, customers are those who use services.

**Importance Performance Analysis (IPA)**

Importance performance analysis (IPA) is a series of service attributes related to specific services evaluated based on the level of importance of each attribute according to consumers and how the service perceived performance is relative to each attribute (Muluk, 2008).

This analysis is used to compare the consumer's assessment of the importance of service quality (importance) with the level of service quality performance (performance). It is divided into four quadrants or area graphs, namely:

- 1) Quadrant A (Concentrate Here)
- 2) Quadrant B (Keep Up The Good Work)
- 3) Quadrant C (Low Priority)
- 4) Quadrant D (Possible Overkill)



**Figure 1**

**Importance Performance Matrix**

**Quality Function Deployment (QFD)**

Quality Function Deployment (QFD) is a systematic approach that determines the demands or demands of consumers and then translates these demands accurately into technical design, manufacturing, and appropriate production planning. In principle, QFD helps the companies listen to the voices or wishes of consumers and is useful for brainstorming sessions for the development team in determining the best way to meet consumer desires (Wijaya, 2018).

QFD is a systematic process that helps companies quickly understand and integrate client needs into their goods or services (ASI, in Wijaya, 2018). According to Akao in Wijaya (2018), QFD is a method for developing design quality aimed at satisfying consumers and then translating consumer demands into design targets and key quality assurance points that can be used in the production stage.

**QFD and SERVQUAL**

Quality Function Deployment and Service quality are different but related things. Servqual is useful for analyzing the difference between customer perceptions and expectations. While QFD is used to design service quality improvements in accordance with the needs desired by customers and the ability of the company's management. So it can be said that Servqual is one of the important steps in the QFD process. The following is a detailed explanation of the differentiating points between QFD and Servqual:

**Table 2**  
**Difference between QFD and Servqual**

Point	QFD	Servqual
Data processing output visualization	Can be visualized with the house of quality	Can't be visualized with house of quality
Results of data processing	Able to explain priority customer needs per dimension and per characteristic	Only able to explain the priority of customer needs per characteristic
Types of data and calculations	Using ordinal data	Using the average data of respondents' answers

Source: Literature Data (2020)

**House of Quality (HOQ)**

Matrix House of Quality (HOQ) is the most familiar form of QFD representation. This matrix consists of two main parts, namely the horizontal part of the matrix containing information related to consumers and called the customer table, the vertical part and the matrix containing technical information in response to consumer input and called the technical table. Presented in the form of an image as follows:

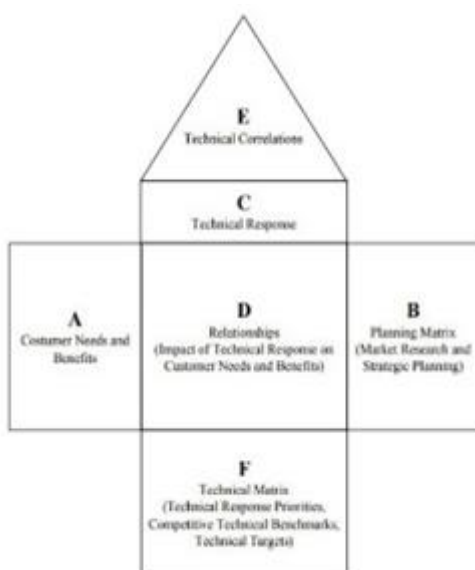


Figure 2

**House of Quality**

The explanation of the House of Quality model above is described as follows:

- 1) Part A, consists of a number of consumer needs and desires obtained from market research.
- 2) Part B, consists of three types of information, namely:
  - a. The weight of the interests of consumer needs.
  - b. The level of customer satisfaction with the product or service.
  - c. The level of customer satisfaction with similar products or services from competing companies.
- 3) Part C, contains technical requirements for new products or services to be developed. This data is derived based on the information obtained regarding the needs and desires of consumers (Part A).
- 4) Part D, consists of management research on the strength of the relationship between the elements contained in the technical requirements section (Section and consumer needs (Section A) that it affects. The strength of the relationship is determined by certain symbols.
- 5) Part E, shows the correlation between one technical requirement and the other requirements contained in Part C. The correlation between the two technical requirements is shown using certain symbols.
- 6) Part F, consists of three types of information:
  - a. Order of importance (rank) of technical requirements.
  - b. Information to compare the technical performance of a product or service resulting from the performance of a competitor's product or service.
  - c. Performance targets for newly developed product or service technical requirements

**III. RESEARCH METHOD**

**Research Time and Place**

The research was conducted in December 2020 – June 2021 at PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng located at Jalan MH Ridwan Rais No. 1 Central Jakarta.

**Research design**

The type of research is descriptive research. According to Hidayat (2010), descriptive research is a research method used to find the broadest knowledge of the object of research at a certain time. Meanwhile, according to Punaji (2010) descriptive research is research whose purpose is to explain or describe an event, situation, object, whether person, or everything is related to variables that can be explained using either numbers or words.

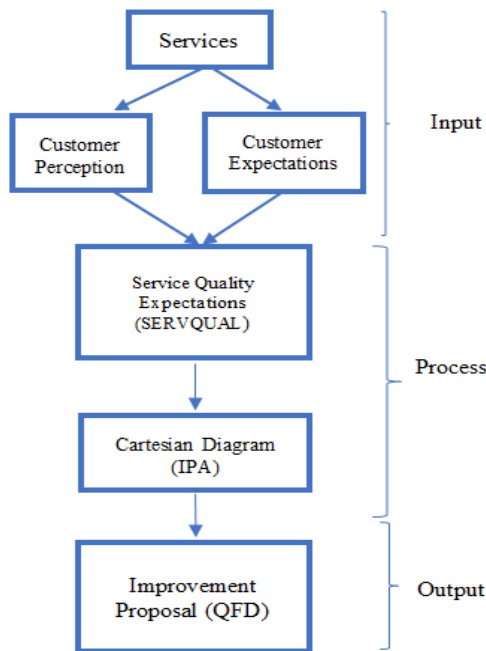


Figure 3

**Research Design**

**Variable Operational Definition**

The operational definition of variables in this study, using a Likert scale and the details, is as follows:

- 1) *Tangible*
  - a. What is your level of satisfaction with PLN services?
  - b. Placement of forms, brochures and banners Install new (PB) and add power (PD) is interesting.
  - c. The services provided by PLN are in line with expectations.
  - d. Ease of obtaining service information.
- 2) *Reliability*
  - a. Calculation of PB/PD costs is in accordance with applicable regulations.
  - b. PB/PD payment transactions are easy to do.
  - c. Easy to understand electricity bill calculation.
  - d. Information and services are delivered according to the promised time.
- 3) *Responsiveness*
  - a. Officers receive complaints about responding to customers well and politely.
  - b. Officers are always ready to provide service.
  - c. Staffs are quick to help customers.
  - d. Explain the power requirements requested by the customer.
- 4) *Assurance*
  - a. Trustworthy officer.
  - b. The staff is always polite.
  - c. The officer gave a very detailed explanation regarding the electrical installation.
  - d. Voltage stability at your place.
- 5) *Empathy*
  - a. The clerk understands the power requirements of the customer.
  - b. PB/PD service information is easily accessible.

- c. Officers are able to listen, understand the intentions, desires and needs of customers
- d. PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng is very concerned about the interests of customers.

**Research Sample**

The sample of the study comprises of 100 respondents with the following criteria:

- a. Respondents are customers of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng Area;
- b. Each respondent has the only one opportunity to fill out the questionnaire;
- c. Each respondent is free to accept or reject the survey, and there is no kinship, intimidation or gifts of any kind that can reduce the degree of confidence in the quality of the data obtained.

**Data Analysis Method**

The data analysis method in this study uses validity and reliability tests for each indicator that is processed with the SPSS 25 application. Then, it is analyzed using service quality (servqual) tests, importance performance analysis (IPA), and Quality Function Development (QFD) with House of Quality (HOQ); processed with Microsoft Excel application.

**IV. RESULTS AND DISCUSSIONS**

**Characteristics of Respondents**

*Gender*

**Table  
Respondent's Gender**

		Frequency	Percent
Valid	Man	38	38.0
	Woman	62	62.0
	Total	100	100.0

Source: Processed Data 2021

Based on the results of data processing in table 4.1 above, it shows that out of 100 respondents, there are 62 respondents or 62% are female. Meanwhile, 38 respondents or 38% are male. So, the majority of respondents are women.

**Age  
Table 4  
Respondent Age**

		Frequency	Percent
Valid	17 - 25	9	9.0
	26 - 45	80	80.0
	46 - 55	11	11.0
	Total	100	100.0

Source: Processed Data 2021

Based on the results of data processing in table 4.2 above, it shows that out of 100 respondents; 9 respondents or 9% aged 17-25 years, 80 respondents or 80% aged 26-45



years, and 11 respondents or 11% aged 46-55 years. So, the majority of respondents in this study are aged 26-45 years.

**Profession**

**Table 5  
Respondent's Job**

		Frequency	Percent
Valid	Businessman	29	29.0
	Private employees	8	8.0
	Civil Servants	8	8.0
	BUMN employee	5	5.0
	Housewife	30	30.0
	Student	7	7.0
	Retired	8	8.0
	Does not work	5	5.0
	Total	100	100.0

Source: Processed Data 2021

Based on the results of data processing in table 4.3 above, it shows that out of 100 respondents; 29 respondents or 29% work as Entrepreneurs, 8 respondents or 8% work as Private Employees, 8 respondents or 8% work as Civil Servants, 5 respondents or 5% work as BUMN employees, 30 respondents or 30% work as housewives, 7 respondents or 7% work as students, 8 respondents or 8% work as retirees, and 5 respondents or 5% do not work. So, the majority of respondents in this study work as housewives.

**Data Quality Test**

**Validity test**

**Table 6  
Indicator Validity Test**

Indicator	Criteria	Value	Conclusion
Your level of satisfaction with PLN services.	0.257	0.912	VALID
Placement of forms, brochures, and banners for New Connections (PB) and Power Additions (PD).	0.257	0.938	VALID
The services provided by PLN are as expected.	0.257	0.962	VALID
Ease of obtaining service information.	0.257	0.870	VALID
The calculation of PB/PD is in accordance with applicable regulations.	0.257	0.829	VALID
PB/PD payment transactions are easy to do.	0.257	0.825	VALID
Electricity bill calculation is easy to understand.	0.257	0.617	VALID
Information and services are delivered in accordance with the promised time.	0.257	0.765	VALID
The staff receives complaints about respond to customers well and	0.257	0.803	VALID

politely.			
The staff is quick to help customers.	0.257	0.902	VALID
The staff is always ready to provide service.	0.257	0.826	VALID
The clerk is able to explain the power requirements requested by the customer.	0.257	0.830	VALID
Trustworthy officers.	0.257	0.829	VALID
The staff is always polite.	0.257	0.825	VALID
The staff gave a very detailed explanation regarding the electrical installation.	0.257	0.602	VALID
Voltage stability at your place.	0.257	0.723	VALID
The staff understands the power requirements of the customer.	0.257	0.715	VALID
Information on PB/PD services is easily accessible.	0.257	0.922	VALID
The staff are able to listen and understand the intentions and needs of customers.	0.257	0.964	VALID
PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng is very concerned about the interests of customers.	0.257	0.921	VALID

Source: Processed Data 2021

From Table 4.4 above, it can be seen that all indicators of each dimension have exceeded the criteria. So overall, this validity test is feasible to define each dimension of service quality.

**Reliability Test**

**Table 7  
Dimensional Reliability Test**

No	Dimension	Cronbach's Alpha	Criteria	Conclusion
1.	Tangible	0.939	≥ 0.60	Reliable
2.	Reliability	0.756		Reliable
3.	Responsiveness	0.860		Reliable
4.	Assurance	0.777		Reliable
5.	Empathy	0.919		Reliable

Source: Processed Data 2021

Based on Table 4.5, it can be seen that the Cronbach's Alpha value for each dimension is 0.60. Thus, the results of the study are said to be reliable. A questionnaire is said to be reliable if the respondent questions in the questionnaire are consistent or stable from time to time.

**Results**

**Service Quality (SERVQUAL)**

**Table 8  
SERVQUAL Test Results**

Statement	Perception	Hope	SERVQUAL
Your level of satisfaction with PLN services.	3.21	4.55	0.705
Placement of forms, brochures, and banners for New Connections (PB) and Power Additions (PD).	3.24	4.35	0.745
The services provided by PLN are as expected.	3.28	4.43	0.740
Ease of obtaining service information.	3.26	4.45	0.733
The calculation of PB/PD is in accordance with applicable regulations.	3.33	4.33	0.769
PB/PD payment transactions are easy to do.	4.05	4.25	0.953
Electricity bill calculation is easy to understand.	3.49	4.21	0.829
Information and services are delivered in accordance with the promised time.	3.31	4.22	0.784
The staff receive complaints about respond to customers well and politely.	3.57	4.19	0.852
The staff is quick to help customers.	3.17	4.19	0.757
The staff is always ready to provide service.	3.34	4.50	0.742
The staff is able to explain the power requirements requested by the customer.	3.53	4.47	0.790
Trustworthy officers.	3.70	4.57	0.810
The staff is always polite.	3.83	4.37	0.876
The staff gave a very detailed explanation regarding the electrical installation.	3.40	4.19	0.811
Voltage stability at your place.	3.78	4.22	0.896
The staff understands the power requirements of the customer.	3.30	4.61	0.716
Information on PB/PD services is easily accessible.	3.66	4.60	0.796
The staff are able to	3.04	4.66	0.652

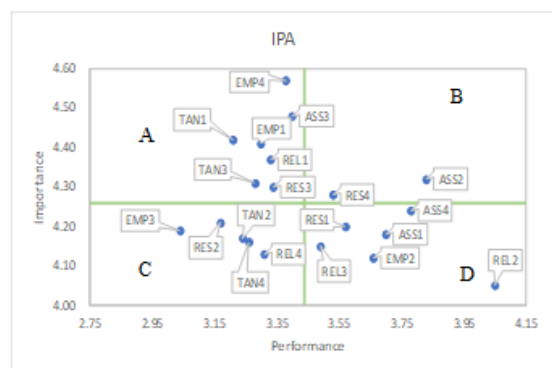
listen and understand the intentions and needs of customers.			
PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng is very concerned about the interests of customers.	3.38	4.70	0.719

Source: Processed Data 2021

From the results of table 4.6 above, the results of the SERVQUAL calculation of each indicator indicate that customer perceptions regarding service quality are still below expectations or not in line with expectations. Of the twenty indicators, there are three indicators with the lowest SERVQUAL, namely:

1. EMP1 (officers are able to listen and understand the intent of the customer's wants and needs) with a SERVQUAL score of 0.652.
2. TAN1 (your level of satisfaction with PLN services) with a SERVQUAL score of 0.705.
3. EMP1 (employees understand the customer's desired power requirements) with a SERVQUAL score of 0.716.

**Importance Performance Analysis (IPA)**



**Figure 4  
Importance Performance Analysis (IPA) Graph**

The results of the Importance Performance Analysis (IPA) graph above are summarized in a table which is divided into four quadrants as follows:

**Table 9  
Results of Importance Performance Analysis (IPA)**

Quadrant	Attribute	Description
Quadrant A (High Importance/Low Performance, Concentrate Here)	TAN1	Your level of satisfaction with PLN services.
	TAN3	The services provided by PLN are as expected.
	REL1	The calculation of PB/PD is in accordance with applicable regulations.
	RES3	The staff is always

		ready to provide service.
	ASS3	The staff gave a very detailed explanation regarding the electrical installation.
	EMP1	The staff understands the power requirements of the customer.
Quadrant B (High Importance/High Performance, Keep Up the Good Work)	RES4	The staff is able to explain the power requirements requested by the customer.
	ASS2	The staff is always polite.
Quadrant C (Low Importance/Low Performance, Low Priority)	TAN2	Placement of forms, brochures, and banners for New Connections (PB) and Power Additions (PD).
	TAN4	Ease of obtaining service information.
	REL4	Information and services are delivered in accordance with the promised time.
	RES2	The staff is quick to help customers.
	EMP3	The staff are able to listen and understand the intentions and needs of customers.
	Quadrant D (Low Importance/High Performance, Possible Overkill)	REL2
REL3		Electricity bill calculation is easy to understand.
RES1		The staff receive complaints respond to customers well and politely.
ASS1		Trustworthy officers.
ASS4		Voltage stability at your place.
EMP2		Information on PB/PD services is easily accessible.

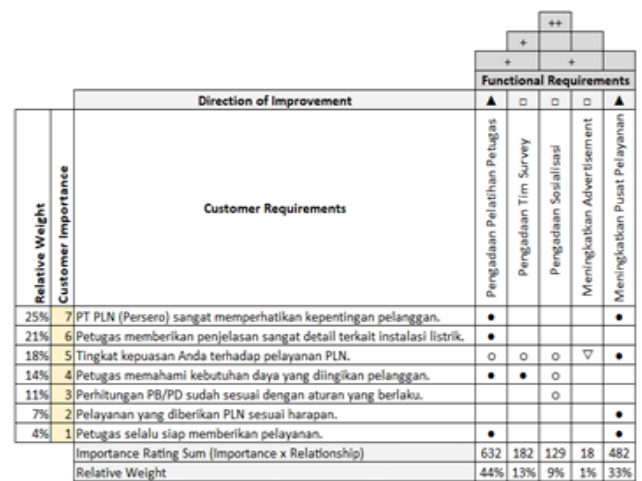
Source: Processed Data 2021

From the results of the table above, 7 of the 20 service quality indicators are in quadrant A (High Importance/Low Performance, Concentrate Here), namely:

1. Your level of satisfaction with PLN services. (TAN1)
2. The services provided by PLN are as expected. (TAN3)
3. The staff are always ready to provide services. (REL1)
4. The staff are always ready to provide services. (RES3)
5. The staff gave a very detailed explanation regarding the electrical installation. (ASS3)
6. The staff understands the power requirements of the customer. (EMP1)
7. PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng is very concerned about the interests of customers. (EMP4)

That is, the seven indicators are in a very important condition. However, it has low performance. Therefore, PLN must focus on improving services on these seven indicators.

**Quality Function Development (QFD)**



From the HOQ image above (Hous of Quality) the following information can be taken:

1. The first Customer Requirement (“PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng is very concerned about customer interests”) has a strong relationship (●) with the first Functional Requirement (“Procurement of Officer Training”) and the fifth Functional Requirement (“Improving Service Centers”).
2. The second Customer Requirement (“The staff provides a very detailed explanation regarding electrical installations”) has a strong relationship (●) with the first Functional Requirement (“Procurement of Officer Training”) and the fifth Functional Requirement (“Improving Service Centers”).
3. The third Customer Requirement (“Your Satisfaction Level with PLN services”) has a moderate relationship (○) with the first Functional Requirement (“Procurement of Officer Training”), second (“Procurement of Survey Team”), and third (“Procurement of Socialization”). Then, it has a weak relationship (▽) with the fourth Functional Requirement (“Increase Advertisement”) and

- a strong relationship with the fifth Functional Requirement (“Improve Service Center”).
- The fourth Customer Requirement (“The staff understands the power requirements desired by the customer”) has a strong relationship (●) with the first Functional Requirement (“Procurement of Officer Training”) and the second (“Procurement of Survey Team”). Then, having a moderate relationship (○) with the third Functional Requirement (“Procurement of Socialization”).
  - The fifth Customer Requirement (“PB/PD calculation is in accordance with applicable regulations”) has a moderate relationship (○) with the third Functional Requirement (“Procurement of Socialization”).
  - The sixth Customer Requirement (“Services provided by PLN as expected”) has a strong relationship (●) with the fifth Functional Requirement (“Improving Service Centers”).
  - The seventh Customer Requirement (“The staff are always ready to provide services”) has a strong relationship (●) with the first Functional Requirement (“Procurement of the Staff Training”) and the fifth Functional Requirement (“Improving Service Centers”).

Then, from the results of the HOQ calculation above, the order of priority for PLN's activities in improving services is as follows:

- Procurement of the Staff Training (Score: 632) with maximum improvement (▲).
- Improving Service Centers (Score: 482) with improvements made according to the target (□).
- Procurement of the Survey Team (Score: 182) with improvements made according to the target (□).
- Procurement of socialization (Score: 129) with improvements made according to the target (□).
- Increase Advertisement (Score: 18) with maximum improvements (▲).

## Discussion

### *Customer Satisfaction Level of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng*

Based on the results of the SERVQUAL (Service Quality) calculation, the overall level of customer satisfaction with the services of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng from 100 respondents is 0.784 or 78.4%. This means that there are many improvements that need to be made by the management of PLN to be able to increase customer satisfaction. Although on the one hand, PLN has relatively no competitors and customers tend to be loyal to PLN. However, PLN has one mission that is oriented to customer satisfaction. Especially in the household sector.

With increasing customer satisfaction, of course, customer attachment and convenience to PLN will increase. The PLN management also hopes that consumers feel proud to have used PLN's services, not only from the quality of the products that have been provided but also from the quality of service that continues to be improved..

### *Priority Indicators for Service Improvement of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng*

Improvements that can be made by PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng, based on calculations from the results of the research above are as follows (ordered by priority):

- Attention from PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng to the interests of customers. An institution that does not pay attention to customers, tends to have high complaints. Handling and completion is also relatively slow. Delays in handling complaints will be increasingly problematic and have a wide impact. The more PLN pays attention, the more customers feel comfortable and confident. This can be done by visiting the customer's house or communicating by telephone. To get input or listen to complaints that are being experienced by customers.
- The ability of the staff to provide explanations related to electrical installations in detail. The clearer and more detailed the officer explains, the better the customer understands the electrical installation. Of course, this will reduce the workload of PLN staffs in the future.
- The level of satisfaction with the service of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng. The level of customer satisfaction is seen from how PLN provides its services not only from the products provided. Personal attention to customers can have a significant impact than generalized attention.
- Understanding of the staff regarding the power requirements desired by the customer. The easier it is for the staffs to understand the customer's power needs, the easier it is to find solutions that are given to customers, related to the type of electrical installation that suits the customer.
- Calculation of PB/PD is in accordance with applicable regulations.
- PLN staffs who meet expectations. To meet customer expectations and by adapting to today's digital era. PLN can certainly approach customers from various social media (facebook, twitter, instagram, whatsapp, telegram, etc.). This also requires the quantity and quality of staffs who are qualified in handling social media.
- Readiness of the staffs in providing services. In line with previous improvement priorities, with the availability of various media or hotlines and staffs who are always on stand-by in handling customer complaints. Of course, customers have very high appreciation for PLN's hard work in providing excellent service.

### *PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng Service Repair Operational Design*

The operational design for the improvement of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng services based on the results of the study is as follows (based on QFD priorities):

- Procurement of Staffs Training (Score: 632) with maximum improvement (▲). Staffs training plays an important role for the development of every PLN HR, both in the field and in the office. The services provided by PLN are not only from staffs in the field, but also



from staffs who handle hotlines and social media. Broadly speaking, their task is to accommodate aspirations and complaints from customers or the public. Either directly or indirectly. The training held is related to technical, administrative, and operational matters. The readiness of staffs when there are complaints or calls from customers, how to deal with and resolve customer complaints, good and polite grammar to customers, and the attitude of post-handling staffs. If this training is held properly, the performance of staffs will improve and the quality of PLN's services will also be better.

2. Improving Service Centers (Score: 482) with improvements made according to the target (□). Improving service centers is to add corridors that do not yet exist, so that customers can contact PLN through alternative channels and maintain or innovate existing corridors.
3. Procurement of a Survey Team (Score: 182) with repairs carried out according to the target (□). The survey team is needed to monitor the level of customer satisfaction on a monthly basis. This needs to be done to accommodate customer complaints and aspirations as a commitment of PLN to pay attention to its consumers. Surveys can be done door to door, by telephone, or whatsapp and social media.
4. Procurement of socialization (Score: 129) with improvements made according to the target (□). Socialization is held so that people are more literate or understand household electricity. In addition, socialization is also a form of PLN's CSR (Corporate Social Responsibility) to the community.
5. Increase Advertisement (Score: 18) with maximum improvements (▲). Advertising is a form of indirect teaching by PLN to the community or it can also be a reminder and an invitation to the public to be smart in using electricity every day.

## V. CONCLUSIONS AND SUGGESTIONS

### Conclusions

After the researchers conducted research and discussions in the previous chapter regarding customer satisfaction with the quality of PLN service and priority indicators for improvement, the following conclusions can be drawn:

1. Based on the results of the SERVQUAL (Service Quality) calculation, the overall level of customer satisfaction with the services of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng from 100 respondents is 0.784 or 78.4%. This means that there are many improvements that need to be made by the management of PLN to be able to increase customer satisfaction. Although on the one hand, PLN has relatively no competitors and customers tend to be loyal to PLN. However, PLN has one mission that is oriented to customer satisfaction. Especially in the household sector.
2. Improvements that can be made by PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng, based on calculations from the results of the research above are as follows (ordered by priority):

- a. Attention of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng to the interests of customers.
  - b. The ability of officers to provide explanations related to electrical installations in detail.
  - c. The level of satisfaction with the service of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng.
  - d. Staff understanding regarding the power requirements desired by the customer.
  - e. The calculation of PB/PD is in accordance with the applicable rules.
  - f. PLN service that meets expectations.
  - g. The readiness of officers in providing services.
3. The operational design for the improvement of PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng services based on the results of the research is as follows (based on QFD priorities):
    - a. Procurement of Staffs Training (Score: 632) with maximum improvement (▲).
    - b. Improve the Service Center (Score: 482) with improvements made according to the target (□).
    - c. Procurement of the Survey Team (Score: 182) with repairs carried out according to the target (□).
    - d. Procurement of Socialization (Score: 129) with improvements made according to the target (□).
    - e. Increase Advertisement (Score: 18) with maximum improvements (▲).

### Suggestions

Based on the results of the study, the suggestions that can be given include the following:

#### 1. Advice For Companies

Based on the results of research and discussion, suggestions that can be given to companies are to carry out operational designs to improve services for PT PLN (Persero) Unit Induk Distribusi Jakarta Raya UP3 Menteng. Starting from Procurement of Officer Training, Improving Service Centers, Procurement of Survey Teams, Procurement of Socialization, and Increasing Advertisement. In addition, what really needs to be paid attention to is the training of staffs. Judging from the results of SERVQUAL, the two lowest scores are the ability of staffs to understand the customer's power needs and know the true intentions of the customer's wishes.

#### 2. Advice For Practitioners

Suggestions for practitioners, for those who work in the field to be able to improve their competence in accommodating and handling every complaint and aspiration of the community. Both related to the electricity needs of the community as well as the obstacles that often occur.

#### 3. Suggestions for Further Research

Suggestions that can be given for further research is to conduct research related to improving and improving service quality with different analytical methods such as lean service or propensity score matching. Lean service is a systematic and systemic approach to eliminate waste or (non-value adding activities) non-value added activities

through radical continuous improvement by flowing products and information using a pull system from internal and external customers to pursuit of excellence and perfection. Meanwhile, probability score matching is an alternative method to estimate the impact of a treatment on a particular subject.

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