IMPROVEMENT OF SERVICE QUALITY IN PT TIKI JNE BANDUNG WITH CUSTOMER RELATIONSHIP MANAGEMENT

Mohamad Iqbal Musyaffa[1], Utami Dewi Widianti [2]

[1,2] Teknik Informatika – Universitas Komputer Indonesia
Jl. Dipatiukur 112-114 Bandung 40132
E-mail : iqbalm1995@gmail.com [1], utami.dewi.widianti@email.unikom.ac.id [2]

ABSTRACT

PT. TIKI JNE Bandung is a company serving the community in customs services especially imports of time-sensitive shipments through the 'Rush Handling' warehouse. In utilizing the Daily Activity Sales of PT. TIKI JNE Bandung held a communication agenda for customers directly discussing cooperation between customers with existing services at PT. TIKI JNE Bandung. There are activities that make complaints about services that can disappoint customers. Therefore the system for submitting complaints from customers to corporate sales services must be improved to improve the quality of service officers. Quality Function Deployment (QFD) for product planning and development to set specifications for the needs and desires of consumers, as well as systematically evaluating a product or service in meeting customer needs. then calculate the weighting results according to consumers from aspects to assess whether the service is good or not good by using the Likert scale method to calculate the quality of service officers. concluded that the need for an application of Customer Relationship Management to improve the quality of service officers at the Daily Activity Sales at PT. TIKI JNE Bandung.

Kata kunci : *Daily Activity Sale, Customer Relationship Management, Quality Function Deployment,* Improved service quality. consumer desires.

1. INTRODUCTION

PT. TIKI JNE Bandung is one of the companies serving the community in customs services especially imports of time-sensitive shipments through the 'Rush Handling' warehouse. There are many branches in Indonesia, one of which is JNE Naripan Bandung representative office which has a consistent role and high commitment to provide the best shipment services.

PT. TIKI JNE Bandung currently has 2 categories of customers, namely general customers who use personal delivery services and corporate customers who use services from customers who have a company or corporate name and also work with PT. TIKI JNE which makes a different service offer.

As for the types of domestic courier services offered, namely Yakin Tomorrow (YES) shipment service serving delivery delivery the next day to several cities, Express Regular shipment service with estimated delivery time 2-4 working days for destinations that can be served by cities direct flights, Economical Shipping (OK) shipping services at very economical prices with estimated delivery time of 3-5 working days or more depending on the destination, and JNE Pick-Up Points alternative customer service in the process of receiving shipments by taking it yourself at the branch JNE closest.

Based on the results of data from the Daily Activity Sales Maintenance and the results of interviews with the head of the sales department (Head of Section of Corporate Sales) there are activities that make complaints about the service of Pick-up delivery officers who have problems that can disappoint customers with problems in making deliveries and Daily Visit service activities . Low quality will put the company at a competitive disadvantage, potentially expelling dissatisfied customers [9]. Therefore the system for submitting complaints from customers to corporate sales services must be improved to improve service quality.

Customer Relationship Management (CRM) is a type of management that specifically discusses theories regarding the handling of relationships between companies and customers [1]. The method to be used is the Quality Function Deployment (QFD) method for product planning and development to determine the specifications of the needs and desires of consumers, as well as systematically evaluating a product or service in meeting customer needs. then calculate the weighting results according to consumers from aspects to assess whether the service is good or not good by using the Likert scale method to calculate the quality of service officers.

Based on this, it was concluded that the need for an application of Customer Relationship Management to improve the quality of service

officers at the Daily Activity Sales at PT. TIKI JNE Bandung.

2. RESEARCH CONTENTS

This section contains a discussion of the theoretical basis, research methods, results and discussion of problem analysis, the stages of the system process and the results of research.

2.1 Customer Relationship Management

CRM or Customer Relationship Management is the management of business relationships between companies and customers so that the company can better understand the character and needs of its customers which are then made into a company program according to those needs. With CRM the company is able to develop production activities, products, and service programs that are more suited to the needs of each customer and customer group [2] [6].

CRM has several types and levels that can be seen in Table 1.

Table 1. Table Of CRM Level Types

Tingkatan	Karakteristik
Strategic	The company's strategic development of top management decisions and guidelines for other CRM levels in the company's relationship with customers.
Operational	Focusing on automation projects such as service automation, fleet, sales and marketing.
Analytical	Focuses on database processing and is presented to corporate decision makers for strategic and operational interests.
Collaborative	Relationships with partners outside the company.

2.2 Framework Dynamic Customer Relationship Management

The CRM framework used in research is the Dynamic CRM Framework. Describe the CRM phase in a framework in the form of a series of stages of the Acquisition-Retention-Expansion process [4] [6]. What is shown in Figure 1.
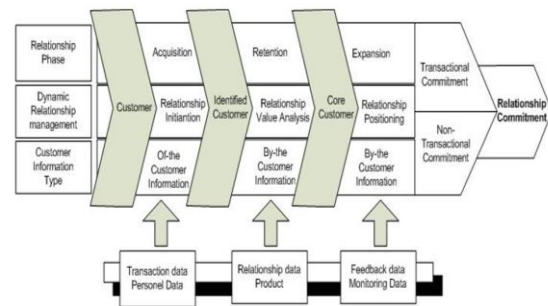
Figure 1. Framework Dynamic Customer Relationship Management

The implementation phase of the CRM concept is to organize the stages of the CRM process around the customer and not just stick to the rules of the company's functions [8]. The three stages of CRM, namely :

a. Acquire is a customer acquisition stage, with this stage can receive an impression of the company through an assessment of the company. Which is associated with differentiation, innovation, and customer convenience.

b. Retain is the phase where the organization carries out strategies to retain customers by improving a service. This phase is an important strategy for companies to build good relationships with customers. By listening to complaints from customers and receiving suggestions that are one way to build good relationships with customers.

c. Expansion is a time to foster good relations that have existed with the results of the process of maintaining customers from good service, the creation of customers who are loyal to the products / services of the organization.

The implementation of CRM in a company can maximize profits by organizing CRM processes around customers and not just sticking to the rules of the company's functions to establish better and harmonious relationships from the company to its customers.

2.3 Quality Function Deployment (QFD)

Quality Function Deployment (QFD) is a system that changes customer desires into quality characteristics and the development of a quality design to produce products / services that are systematically deploying the results of the relationship between these desires and characteristics [7]. The application of QFD method in the design process begins with the formation of a planning matrix, House of Quality [3] which can be seen in Figure 2.
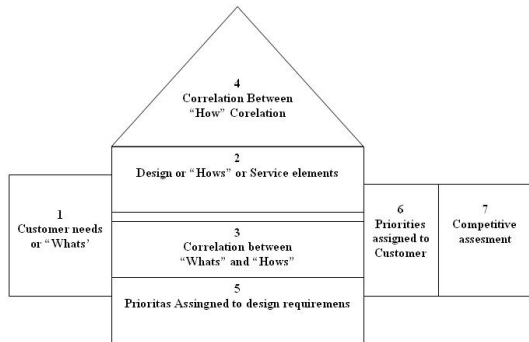
Figure 2. House Of Quality

2.4 Likert Scale

Likert scale is used to measure the opinions, perceptions, and attitudes of a person or group of people. With a Likert scale, variables will be measured to be indicator variables which are then used as starting points for compiling attributes that can be questions or statements. The answer from each attribute has a term property from very positive to very negative which can be in the form of words with a score value of each answer [10].

2.5 Research Methods

At the writing of this study will use descriptive research methods. This study systematically describes the facts, characteristics of objects and subjects [1]. The stages of the research include identification of problems, data collection, analysis and design, software development, and drawing conclusions. The research method can be seen in Figure 3 and Figure 4.
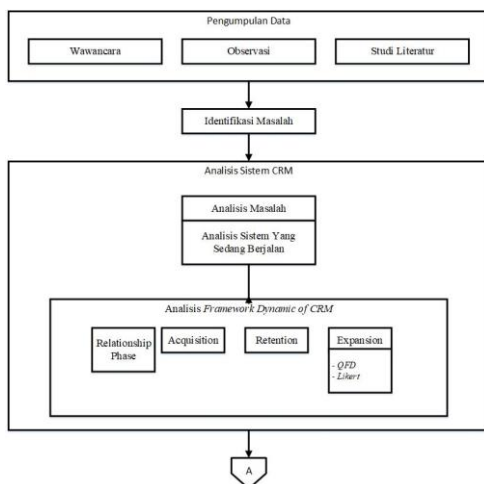

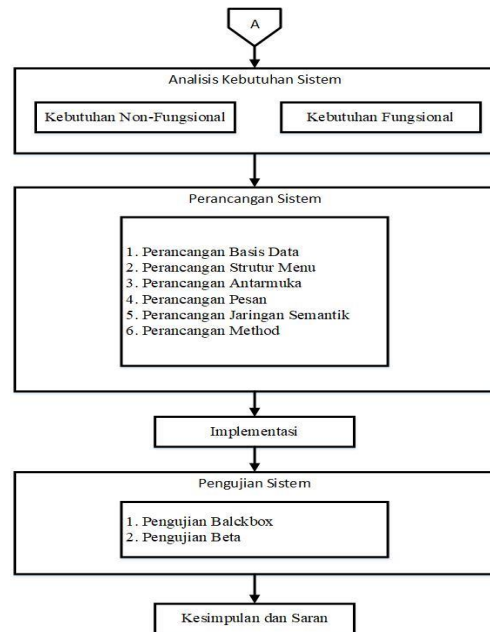**Figure 3.** Research methods



Figure 4. Research methods

2.6 Analysis of Problems

Based on the results of the research, a problem is found that in the current system there are problems with the services provided, based on the data recapitulation Daily Activity Sales data report there is communication with the service that is maintenance that complains about the service from the results of services and products, this is caused lack of evaluation of services provided to assess the quality of service officers. Daily Activity Sales currently underway still fully supports the information needs of the head of sales in monitoring the services that have been done, including in new customer data, details of corporate sales meetings, PIC data (Person In Charge), customer satisfaction data.

2.7 CRM Framework Analysis

In the application of CRM as the basis for its creation, the Framework of Dynamic CRM is used, which is used as a reference for implementing CRM, where we can find out what features will be applied to CRM in accordance with the background of the problem at hand. Based on the background of the problem, the CRM system built is an effort to improve the quality of service at PT. TIKI JNE Bandung based on reports from Daily Activity Sales, therefore the steps taken will be focused on the Relationship Phase [6].

Based on the analysis of the Framework of Dynamic CRM, it can be concluded what features will be built on complaint management. The stages of CRM can be seen in Figure 5.
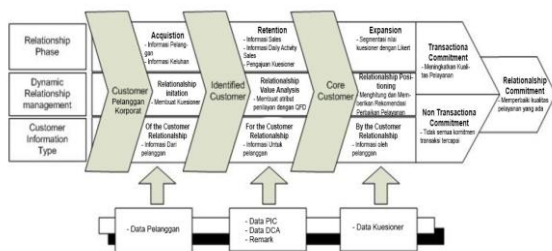
Figure 5. Analysis of the Stages of the Framework of Dynamic CRM

The stages of analysis of the Framework of Dynamic CRM are used :

1. The Acquisition Stage

   The purpose of the Acquistion stage is to provide information to the company to get to know the customer better. Therefore in the system there are functions as follows:

   a. Customer information

   Is a feature that is used for the Corporate Sales Section Head to find out the number and type of registered customers who have done a Daily Visit with sales at PT. JNE Bandung. The administrator flattens the customer's data, and the customer himself registers with the system.

   b. Customer complaint information

   Information on customer complaints can be accessed by the Administrator, Account Executive, Corporate Sales Section Head. The information aims to help make it easier for companies to assess service quality through a service questionnaire from Daily Activity Sales.

   Then determine the Relationship Initation that must be done for customers is to make a service assessment questionnaire.

2. Retain Stage.

   The Retain Phase has the goal of implementing a strategy to retain customers by increasing service. The explanation of the features of the Retain stage:

   a. Sales information

   Sales support area information that has a function so that customers know information about the sales area in PT. JNE Bandung in charge. Sales information that can be known by customers in order to build trust between sales and customers.

   b. Daily Activity Sales Information

   Daily Activity Sales Information aims to make it easier for customers to know the activities of the realization of the Daily Visit of customers with related sales. Each activity hour agenda is recorded by the Sales area to be used as a report on the Daily Activity Sales that have already taken place.

   c. Submission of Quesionnaire

The questionnaire submission feature can be accessed by customers. The questionnaire feature performs a service assessment if the customer has made Daily Activity Sales realization, and can record complaints if there are suggestions or complaints from the service results.

Determine Relationship Value Analysis, that is making assessment attributes using the Quality Function Deployment Method.

3. Expansion Stage.

   Expansion phase here is used to manage customer information and questionnaires into other information that can help determine the strategy in improving company services. The segmentation of the results of the questionnaire assessment uses a Likert scale. The results of the questionnaire assessment in order to know the calculation of the value of services that have been assessed by customers who assess the services that have been provided.

   Determine Relationship Positioning, which is to calculate and provide recommendations for service improvement from the results of the questionnaire that has been assessed with a service questionnaire.

2.8 Analysis of the QFD Method

The first stage that must be done in this study is to look for the attributes desired by the customer for the service of the problem at hand. By observing the customer and distributing information to the customer. The method applied is expected to provide input on the development and improvement of services at the Daily Activity Sales at PT. JNE TKI Bandung. Following is the method analyst for making service attributes at PT. JNE TKI Bandung :

1. Customer Needs or Whats.

   Here are the results of the attributes of customer desires from the results of interviews with customers and the Account Executive are in table 2.

Table 2. Attribute Table Customer Desires For Service

No.	Attribute
1	Petugas harus rapih dan beratribut lengkap.
2	Petugas memberikan sikap yang ramah
3	Petugas selalu mencatat kiriman pelayanan
4	Petugas selalu menawarkan mengenai produk
5	Petugas memberikan keutuhan pelanggan
6	Petugas memastika tidak ada barang yang tertinggal
7	Komunikasi yang baik
8	Ketepatan waktu pengiriman petugas
9	Kemudahan dalam media elektronik petugas
10	Penanganan Barang kriman yang baik

2. Design requirement or Hows
Service Attribute Performance is the performance value that the customer feels. Service Attribute Target Value (goals) is the reference value for the maximum assessment target. Determine Improvement Ratio (IR) is the ratio of the value of performance results that must be assessed for service improvement can be stated:

$$IR = \frac{Performance\ goal\ \text{dari 1 item atribut}}{Customer\ statisfaction\ \text{dari itrm atribut itu}} \quad (1)$$

Determining Sales Points aims to provide an assessment of the attributes, values used in determining sales points, among others:

    1   = Does not help sales point.
    1.2   = Enough to help the sales point.
    1.5   = Very helpful sales point.

Determine Service Attribute Weight (RW) to determine the weight of the results of customer attributes, RW can be stated:

$$Bobot(RW) = Derajat\ Kepentigan \times IR \times sales\ point \quad (2)$$

Determine and calculate with Microsoft Excel, can be seen in table 3.

Table 3. Matrix Planning Table

No.	Degrees of Interest	(IR)	Sales Point	(RW)
1	4.430	1.042	1.5	6.924
2	4.634	1.639	1.5	11.390
3	4.634	1.228	1.5	8.534
4	4.720	1.583	1.5	11.207
5	4.720	1.045	1.5	7.398
6	4.473	1.078	1.5	7.234
7	4.677	1.036	1.5	7.270
8	4.677	1.030	1.5	7.229
9	4.688	1.144	1.5	8.048
10	4.656	1.185	1.5	8.275

Obtained the results of the technical parameters of the results of customer desire attributes to the Daily Activity Sales service by determining the parameters of the customer language development attributes that will be used to assess the quality of the Daily Activity Sales service to customers. The following technical parameters from the results determined by the Human Capital section to determine the technical parameters of corporate sales service assessment [5].

3. Correlation between hows.
After determining the technical parameter attributes of the service assessment results, it is connected between the technical parameters with the needs and desires of the customer and determining the interaction value in the form of adjusted weight numbers, the relationship has its own weight value, if the relationship is strong then the weight value is 9, if the weight value is 3 , if the relationship is weak the weight value is 1, and if there is no relationship between the two, the weight value is 0 [5].

4. Priorities assigned to design requirement
It is a priority set by the company to implement each target according to the level of difficulty. Direction of Improvement (DOI) is to show the direction of improvement of technical responses to be adjusted to the desires / needs of customers. The meaning of each DOI symbol is :
↑: Customers like the best technical response.
↓: Customers like that the technical response is as small as possible.
○: Customers like if the technical response is carried out at a certain target.
Determination of Direction of Improvement can be seen the results of the relationship of attributes and technical parameters and multiply by normalizing the weight obtained from the attributes. Then the results will make a DOI symbol from the highest value to the lowest and take 10 attributes that will be used to the deployment stage [5].

5. Priorities assigned to Customer
Determination of absolute importance (AI) and relative importance (RI) to find technical responses that are priorities to be implemented first. Absolute importance is a measure that shows priority to be implemented, related to the relationship between technical responses and customer needs attributes, and the level of importance. Relative importance is the value of AI for each item expressed in cumulative percent [5]. The consecutive AI and RI formulas can be stated as follows:

$$AI = \sum (importance\ level\ \text{dari repons teknis} \times nilai\ hubungan) \quad (3)$$

$$RI = \frac{Nilai\ Absolute\ dari\ \text{1 item repons teknis}}{\sum (absolute\ importance\ \text{selutuh respons teknis})} \quad (4)$$

Table 4. Calculation Results absolute importance and relative importance

No.	(AI)	(RI)	Rank	Deployment
1	52.64	4.219%	5	√
2	47.376	3.797%	16	--
3	47.376	3.797%	7	√
4	47.376	3.797%	8	√
5	47.376	3.797%	17	--
6	47.376	3.797%	9	√
7	47.376	3.797%	10	√
8	121.072	9.705%	11	--

No.	(AI)	(RI)	Rank	Deployment
9	63.168	5.063%	18	--
10	47.376	3.797%	12	--
11	63.168	5.063%	19	--
12	63.168	5.063%	13	--
13	47.376	3.797%	4	√
14	63.168	5.063%	3	√
15	94.752	7.595%	14	--
16	47.376	3.797%	15	--
17	110.544	8.861%	2	√
18	94.752	7.595%	6	√
19	94.752	7.595%	1	√

Followed by segmentation of the results of the questionnaire assessment using a Likert scale. Determine the score to be applied for the assessment term which will be the answer to the choice of questions, along with the assessment term :

- Score 1. Very (disagree / bad / less)
- Score 2. No (agree / good /) or less
- Score 3. (Agree / Good / Like)
- Score 4. Very (agree / good / like)

Categorized by making recommendations to improve service quality from the index value results from related technical attributes. Then a score interpretation criterion is made based on the interval can be seen in table 5.

Table 5. Interval Table and Recommendations for Service Improvement

Interval	Criteria	Technical Response
Angka 0% - 24.99%	Sangat (tidak setuju/buruk/kurang sekali)	Harus diadakannya pelatihan lebih lanjut dengan petugas dari hasil pelayanan terkait.
Angka 25% - 49.99%	Tidak (setuju/baik/) atau kurang	Memberi peringatan kepada petugas untuk lebih baik untuk melakukan pelayanan.
Angka 50% - 74.99%	(Setuju/Baik/suka)	Dengan nilai pelayanan diatas rata-rata petugas bisa meningkatan kualitas pelayanan lebih baik lagi untuk pelayanan terbaik.
Angka 75% - 100%	Sangat (setuju/Baik/Suka)	Petugas harus bisa mempertahankan nilai pelayanan yang didapat.

The results of the questionnaire answered by the customer with the number of 30 Respondents questionnaire for the assessment of Pick Up service at PT. JNE Bandung. In the questionnaire there are 14 question attributes with 4 categories of answers.

Table 6. Number of Questionnaire Results From Services

Question	Percentage	Information
Karyawan menampilkan rambut rapih, berwarna natural & terawat.	75%	Sangat Baik
Karyawan memberikan pelayanan yang baik.	58%	Baik
Karyawan meninggalkan pesan ke Customer saat Customer sedang tidak di tempat.	55%	Baik
Karyawan meninggalkan pesan ke Customer saat Customer sedang tidak di tempat.	60%	Baik
Karyawan ikut membantu menyelesaikan permasalahan.	52%	Baik
Karyawan JNE khususnya AE melakukan visit ke customer secara berkala.	52%	Baik
Petugas memastikan barang terbawa pada saat loading barang.	57%	Baik
Perilaku Karyawan	62%	Baik
Kemudahan berkomunikasi melalui media elektronik Karyawan	63%	Baik
Penaganan barang kiriman oleh Karyawan	42%	Kurang baik
Rata-Rata	58%	Baik

2.9 Usecase Diagram

Use case diagram is a depiction of the system from the point of view of the system user, so that the system user understands and understands the usefulness of the system to be built. Use case

diagrams Daily Activity Sales that will be built can be seen in Figure 6 below :
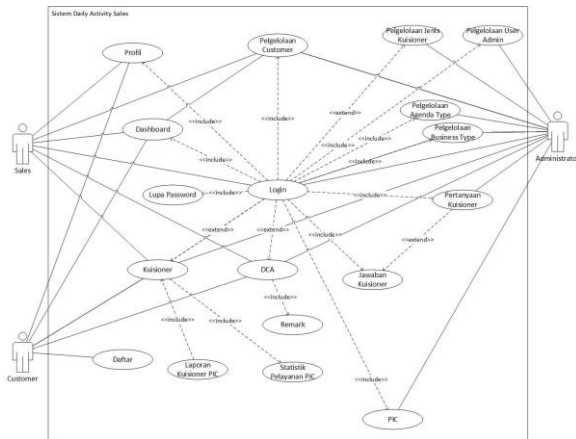

Figure 6. Use case CRM Information System Daily Activity Sales of PT. JNE Bandung

2.10 System Implementation

Implementation of the interface is done on every page in the program created and encoded in the form of program files. The following is the implementation of the interface that was made
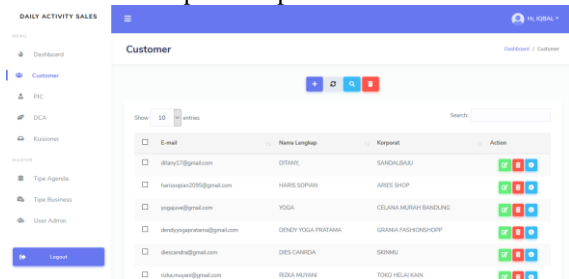
1. Login Interface

The login interface is a display to perform user data recognition activities to enter the main system.
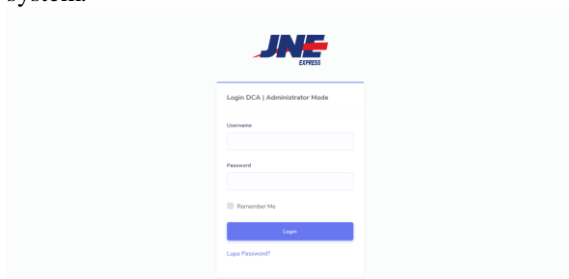
Figure 7. Interface Login

2. Data *Customer Interface*

The customer data interface is a display that contains complete corporate customer data.

Figure 8. Interface Data Customer

3. Data PIC Interface

The PIC interface is a display that contains complete data on all corporate sales employees.
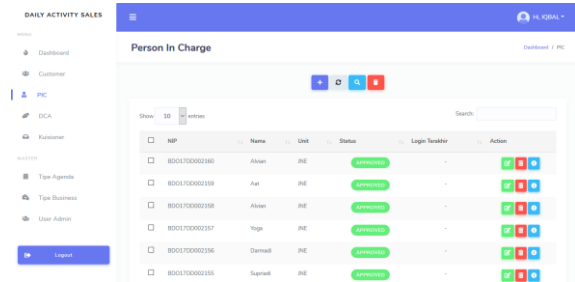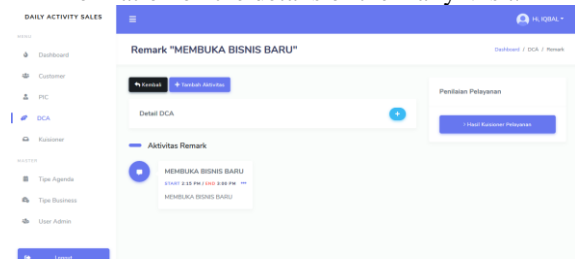

Figure 9. Data PIC Interface

4. DCA Interface

The DCA interface is a display that contains Daily Visit data.
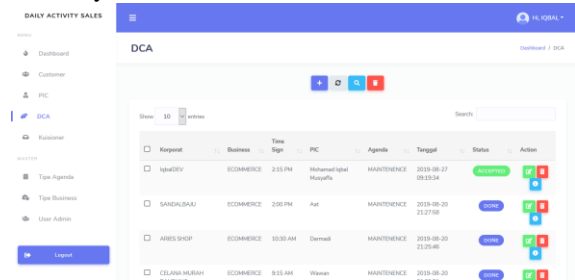
Figure 10. DCA Interface

5. Remark Interface

The remark interface is a display that contains information on the details of the Daily Visit.

Figure 11. Remark Interface

6. Kuesioner Interface

The Kuesioner interface is a display containing an assessment form for customer service officers.

Figure 12. Kuesioner Interface

7. Hasil Kuesioner Interface

The Hasil Kuesioner Interface is a display that contains information on the results of the customer service questionnaire assessment of customers.

Figure 13. Hasil Kuesioner Interface

3. CLOSING

3.1 Conclusions

Based on the results of the test, the conclusion of the thesis research entitled "Implementation of Quality Function Deployment of Service Quality Improvement in Daily Activity Sales at PT TIKI JNE Bandung with the Customer Relationship Management Approach" is the Application of Daily Activiy Sales System that was built to help the Head of Department (Head Of Corporate Sales Section) in improving service quality based on complaints submitted by customers.

3.2 Suggestions

In the construction of the Daily Activity Sales Application System at PT. TIKI JNE Bandung is far from perfect and there are still many shortcomings. Therefore it is necessary to develop and refine it further to meet the growing needs of users.

The suggestions for the development of the Daily Activity Sales Application System at PT TIKI JNE Bandung in the future are as follows:

1) Developing a CRM System Application on the Android platform.
2) Add or change the functionality of the information displayed from information in the form of text into information in the form of an image (dashboard)

Thus the advice that the author can give, hopefully these suggestions can be used as input material that can be useful for writers in particular and generally for the wider community.

DAFTAR PUSTAKA

[1] Sugiyono, Metode Penelitian Kuantitatif, Bandung: Alfabeta, 2014.

[2] R. Kurnia, New *Customer Relationship Management* Untuk Memenangkan Persaingan, Jakarta: PPM , 2012.

[3] S. H. Mafazah Noviana, Penerapan Metode *Quality Function Deployment* (QFD) Untuk Pengembangan Desain Motif Batik Khas Kalimantan Timur," 2014 .

[4] F. R. Kodong, Aplikasi *Customer Relationship Management* (CRM) Dengan Metode *Framework Of Dynamic* CRM, 2014.

[5] Gede Putu Agus Jana Susila, "Implementasi *Quality Function Deployment* (QFD) Untuk Meningkatkan Layanan Publik Di Rsud Kabupaten Buleleng Bali," 2014 .

[6] Anna Dara Andriana, Penentuan Jenis Promosi Menggunakan Pendekatan *Customer Relationship Management* (CRM).

[7] Y. Akao, *Quality Function Deployment*: Integrating Customer Requirements Into Product Design, Taylor & Francis, 2004.

[8] Agus Umar Hamdani, Model Electronic *Customer Relationship Management* Dengan Pendekatan Work Centered Analysis Dan Framework Of Dynamic Crm Untuk Meningkatkan Layanan Pelanggan Pada PT. xyz, Prosiding SINTAK, 2018 .

[9] Adityawarman Adil, "Pengaruh Kualitas Pelayanan Dan Biaya Terhadap Kepuasan Dan Loyalitas Pasien RSUD Kota Bogor," 2016 .

[10] "Pengertian Skala Likert Dan Contoh Cara Hitung Kuesionernya," 2019. [Online]. Available: Https://Www.Diedit.Com/Skala-Likert/.