Application Quality Function Deployment to Improve the Quality of Services in Ngodoe Cafe

Aviasti Anwar, Dewi Shofi Mulyati, and Wenny Amelia

***Abstract*—At this time the global market in Indonesia has two opposing effects, are increased or decreased. The company that has a quality of service that is not optimal, then the company will naturally decline. But to the company which always improve quality of products or services generated so as to satisfy the customers, then those company will continue to have the potential opportunities in the global market competition. One of the factors that are important in maintaining or developing company such as by providing customer satisfaction related to services produced by the company concerned with identifying the needs and desires of customers to a service ministry. To build a relationship with customers company are required to provide care and satisfaction to the customers so that the customer can give his loyalty to the products or services offered by the company. In response to the needs and desires of customers Ngodoe Cafe, this company strive to improve the quality of services. Methods used to make improvements to the customer service is method of Quality Function Deployment (QFD). The criteria used are tangibles, reliability, responsiveness, assurance, and empathy. Having acquired the data processing then processed into the four phases of QFD is to make the product planning matrix, the component design matrix, process planning matrix, production planning matrix so as to know what priority to be repaired. With see the results of four phase QFD, it can be determined that the priorities for quality improvement Ngodoe is competency of waiter, facility design improvements, fixes layout, menu quality improvement, and infrastructure design.**

***Index Terms*—Business, customer satisfaction, quality of services, QFD.**

I. Introduction

In the business category of the cafe is a business that will not be consumed by time because the cafe has the potential and huge market segmentation. Especially for people whose lives have now been very dynamic and need a place that provides facilities and comfort. They make the cafe as a means of entertainment needs to forget for a moment the activity is very solid. With supported by the discovery of a new breakthrough in terms of food and beverages that deliver more value for the cafe business. People still consider the various advantages of each cafe that appears, who will provide the facilities, comfort, cleanliness and of course the quality of the food or drink the best so this cafe will win the competition.

Ngodoe Cafe is one of the areas of similar business with coffee shop that specializes in culinary business with free facilities hot spot. This time Ngodoe Café its market oriented to the middle to lower, especially for teenagers and college students who want to enjoy the relaxed atmosphere and can enjoy a variety of flavors mix coffee at an affordable price. Market segmentation of Ngodoe Café for all people but after seeing the conditions that exist, then market segementation is the student and youth by not covering for other customers.

Looking at the situation in the field, the quality of services provided by the Ngodoe Café not currently able to meet the desires and needs of the customers. This can greatly affect the progress of Ngodoe Cafe which just starting a business in the field of coffee drinks. Especially a lot of businesses have sprung up that offer similar facilities and services to better service quality. Ngodoe Cafe should immediately fix themselves, with process improvements in service quality.

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II. Theory And Methode

A. Definition of Quality

To understand of the concept of quality is very important in the development activities of the company because the growth of a company is determined by the quality of the products or services it produces. Indifference to quality will lead to a loss of opportunity to sell products and market share, which in turn resulted in decreased activity and growth of the company.

In an effort to understand the quality concept of a product then five definition of quality as follow:

1) Quality is the ability of a product or service to be able to meet the desires of consumers with easy to understand, the characteristics associated with achieving or not so as to cause the reaction of others.
2) Quality is a business strategy fundamentally seek to produce various goods (goods) and services (service) that satisfy the customers both internally and externally with complete and trying to meet their expectations both implisist or explicitly [1]
3) Quality is the ability of the product to perform its functions during the term certain predetermined usage [2].
4) Quality is the totality of characteristics of a product that supports the ability to satisfy which specified or defined [3].
5) Quality is the total characteristics of an entity in accordance with the needs and desires of [4].

B. Characteristics of Services

The most prominent difference between the services with the manufacturing industry is the degree of tangibility of the

product and the degree of contact with the customer. The bigger two attributes in a company, it can be said that the company is engaged in the service sector. Both of the above attributes are the core services of the services sector, and a lot of implications that should be taken into account in operational management.

While in defining a quality service, there are some additional characteristics that should be considered also. Reference [5] identified five main dimensions related to the quality of services, among others:

1) Direct evidence (tangibles), including physical facilities, equipment, personnel, and means of communication.
2) Reliability (reliability), ie, the ability to deliver the promised services with immediate, accurate, and satisfying.
3) Responsiveness (responsiveness), which is the desire of the staff to help customers and provide service with a response.
4) Guarantee (assurance), covers the knowledge, skills, courtesy, and trustworthiness are owned by the staff, free from danger, risk or doubt.
5) Empathy, including ease of relationships, good communication, personal attention, and understand the needs of customers.

C. Definition of Quality of Service

Definition of quality services centered on addressing the needs and desires of customers and delivery accuracy to offset customer expectations. The level of service quality and excellence that is expected to control the level of excellence to meet the needs of customers. In other words, there are two main factors that affect the quality of services, the expected service and preceived service [5]. If the services received as expected, then the perceived better quality and satisfactory services. If the services received exceed customer expectations, the quality of service perceived as the ideal quality. Conversely, if the services received is lower than expected, then the perceived poor quality of services. Thus, the quality of services depends on the ability of service providers to meet customer expectations consistently.

D. Quality Function Deployment (QFD)

Design methodology used in this research is a methodology that can integrate the "voice of the customer" into the process of designing is the methodology of Quality Function Deployment (QFD). QFD is a methodology used by the company to anticipate and prioritize the needs and desires of consumers, as well as incorporating the needs and wants of the consumers in the products and services provided to consumers. QFD was introduced by Yoji Akao, Professor of Management Engineering of Tamagawa University, developed from practice and experience industries in Japan. Was first developed in 1972 by the company Mitsubishi Kobe Shipyard, and was adopted by Toyota in 1978, and following years were developed by other companies. QFD is a methodology for translating customer needs and desires into a product design that has the technical requirements and characteristics of a certain quality [6].

Application of the methodology QFD in the product design process begins with the formation of the matrix or often referred to as the House of Quality (HOQ). Basically the HOQ is a matrix which is incorporated in the first phase (product planning) that contains information about the customer and the needs of its potential, the relative importance, as well as the perceptions and customer satisfaction with products / services that the company provides in comparison with other competitors. HOQ shows the structure to design and establish a cycle, and its shape resembles a house. The key in building a HOQ is focused on customer needs, so that the design and development process more in line with what the customer wants and adapted to technology and innovation. It is intended to obtain the necessary information from the customer. Fig. 1 shows the components of a quality table or diagram HOQ.

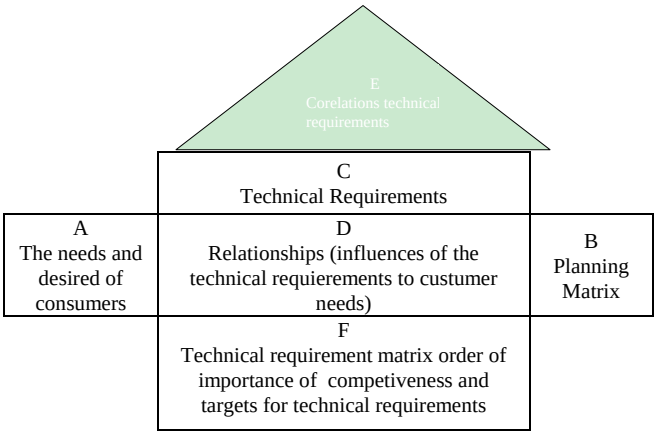

Fig. 1. House of quality [7].

Part A (Needs and desires of customers): Contains data information obtained from the results of market research on the needs and desires of consumers.

Part B (Planning Matrix): Loading the planning matrix, and referred to as a product targeting, based on the team's interpretation of market research data.

Part C (Technical Response): Contains the technical requirements for products or services that will be developed by the company. This data is derived based on the information obtained about the needs and desires of consumers (matrix A). There is some information obtained on technical requirements, the most common alternative is a need for your products or services and the ability and function of products or services.

Part D (Relationship): Contains the management assessment of the strength of the relationship between the elements contained in the technical requirements (Matrix C) to the needs of consumers (Matrix A) it affects. Strength of the relationship is shown by the use of certain symbols.

Part E (Correlation Matrix): Indicates that the correlation between the requirements engineering with other engineering requirements contained in the matrix C.

Part F (Matrix Requirement): Contains three types of data, namely are order of importance (rank) of technical requirements, information requirements of the performance comparison results, and target performance technical requirements of new products being developed.[7]

III. Results and Discussion

A. Matrix of Design Products / Services

Matrix of design product / service is the first phase of QFD

where in this phase including the translation process quality characteristics into customer desires Ngodoe that would be characteristic of technique Ngodoe. Fig. 2 shows the matrix of design products / services.

B. Matrix of Planning Component Services

Matrix of planning products / services known to have used the technical requirements to meet customer desires. In the next stage of planning services component, which is the second phase of the Quality Function Deployment (QFD). Requirements of this technique will turn out to be needed (so written in rows) that will be identified the critical components that are used to meet the needs of this technique. Characteristics of the components obtained based on the needs and desires of consumers and also based on the characteristics of the existing techniques in Ngodoe Cafe.Such as the characteristics of the technique in the House Of Qu ality (HOQ) to improve employee performance and customer service is the right component with employee training and Standard Operational Procedure (SOP), for organizational structure in Ngodoe Job descriptions are clear and the components of employees programs. Figure 3 shows the matrix planning component services.

C. Matrix Planning Process

From the stages matrix of planning component services are critical components identified and the selected component with a percentage above 5% for further analysis in the third phase of QFD. At this stage the components form a matrix of rows and columns to form the characteristic matrix. Every cell of the matrix indicates a potential relationship between the characteristics of the component with the characteristics of the process. Characteristics of the process or it could be referred to as a sequence of service processes in Ngodoe obtained by observation and attention to the characteristics of components in Ngodoe. Figure 4 shows the characteristics of the Matrix Planning Process.

D. Matrix Production Planning

This phase is the last phase to identify alternative actions that are needed to meet the critical process of previous phase. At this stage the process of forming the characteristic matrix rows and columns to form a matrix of production characteristics. Every cell of the matrix indicates a potential relationship between the characteristics of the production process characteristics. In addition it is necessary to be able to create a matrix of production planning is to determine the needs of the production planning. Figure 5 shows matrix production planning.

E. Analysis of to Determine Alternatives Repair

This stage is the stage of the overall improvements made by first noticed the main function of Ngodoe, sub-functions and what is needed in conducting its business, then create what is expected to be achieved in the repair process. The main function or basic function of Ngodoe is a provider of food and beverage services. While the attribute or input Ngodoe is available in Ngodoe facilities, quality of food and beverages available, in Ngodoe services, Customer Ngodoe. Then from the basic functions of the input and the Ngodoe, then the output of Ngodoe is Ngodoe service providers in accordance with customer needs and wants, a Coffee Shop with the best quality service, have coffee beverage products and food quality.

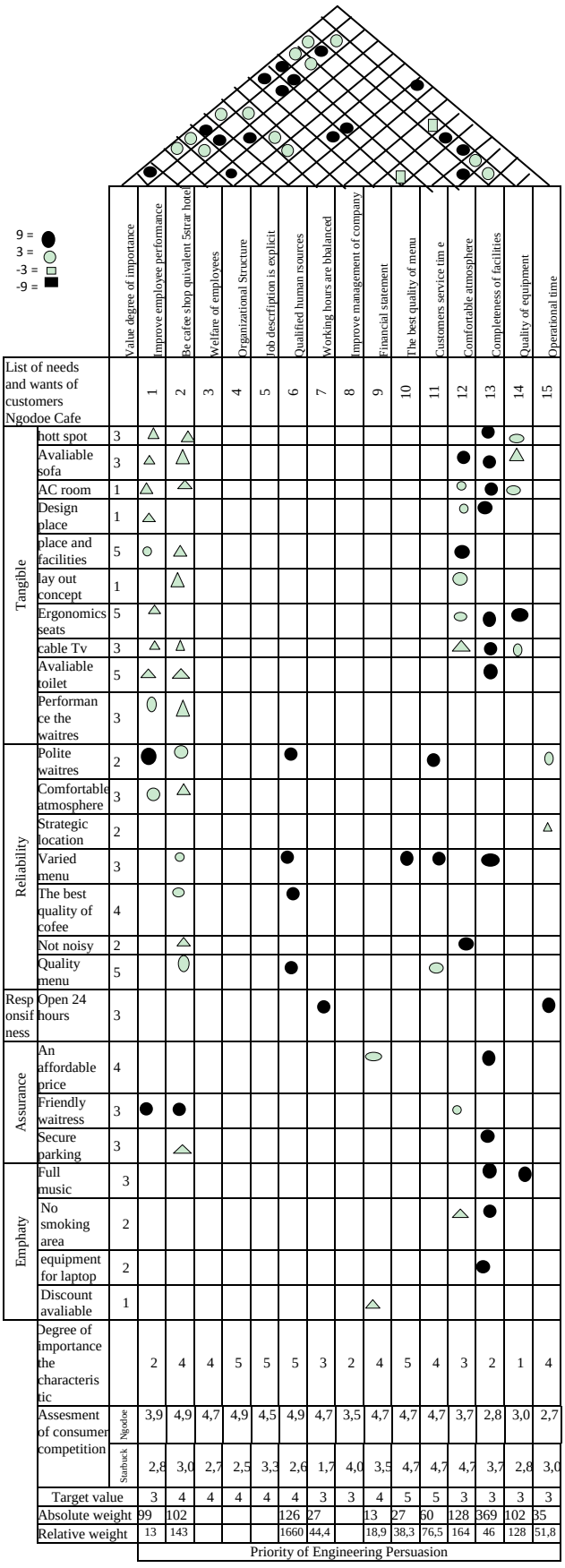

Fig. 2. Matrix of product planning.

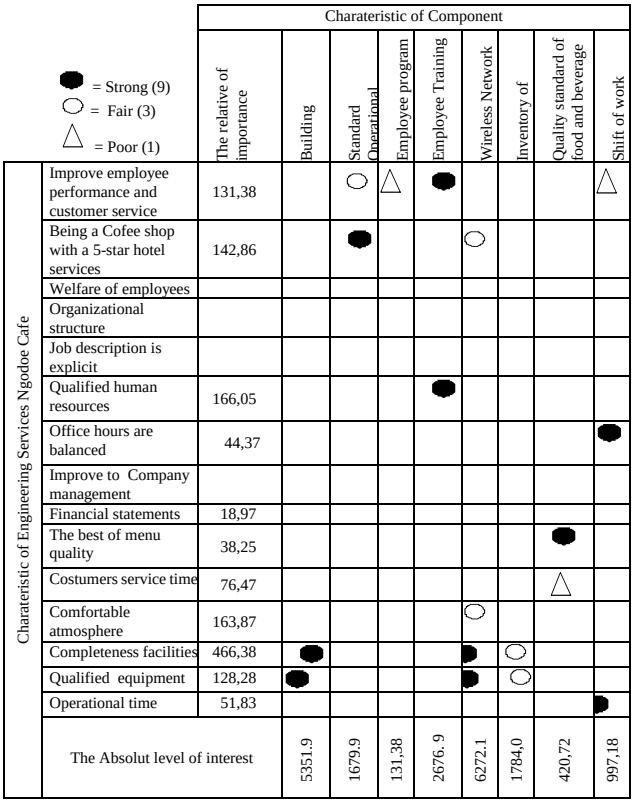

Fig. 3. Matrix planning component services.

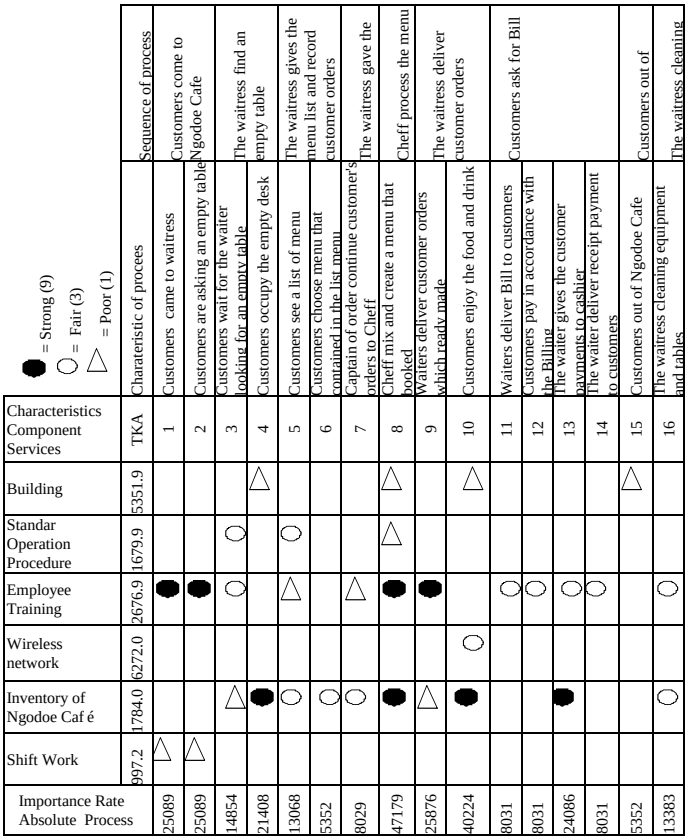

Fig. 4. Matrix planning process.

In addition to the functionality of limitations that may be achieved, and with regard to the outcome of the four phases of QFD, to gain some design or improvements that can be developed and implemented is:

1) Competence maid: Competence is the ability maid to serve well the customers Ngodoe, such as serving customers with fast, always ready and quick response if there are customers who need help, to the personal service to each customer, and memorized the names of its customers. This can be done by training employees, as well as appraisal and evaluation of the performance of the employees and waiters in serving customers.

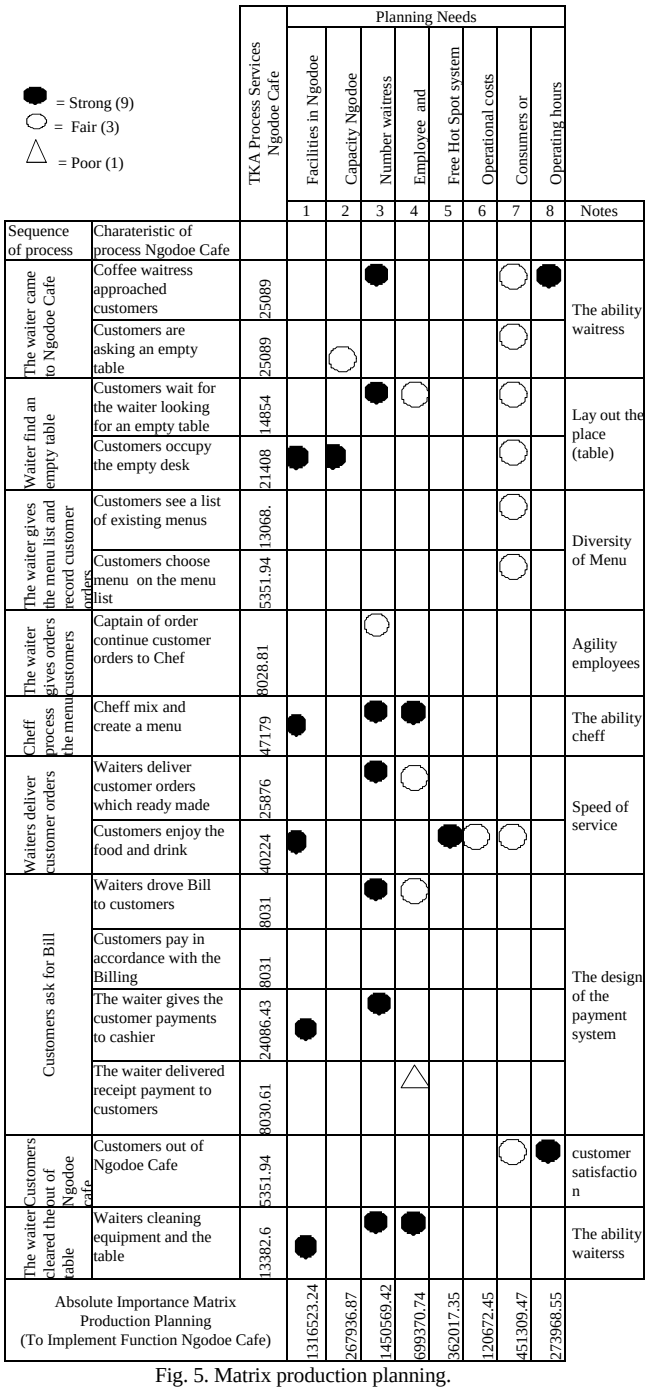

Fig. 5. Matrix production planning.

2) Repair Facility: The design of facility improvements can be done by treating all the facilities available in Ngodoe and replace equipment that is already unfit for use or which is not in the cycle again as eating utensils and drinking that was dull and unattractive color, the sofa is not comfortable anymore used also need to be updated as well as the cleanliness of the facilities such as toilets and keeping clean fragrance Ngodoe room.
3) Lay out improvements: After seeing the initial layout of Ngodoe it is necessary to lay out improvements to increase capacity to accommodate Ngodoe customers

and increase customer convenience that can also indirectly increase revenue turnover Ngodoe. Here we cannot increase the number of tables is too much because it will affect the operating costs of Ngodoe so much but focused on table layout and the changing atmosphere of the room.

4) Improvement of quality menu: Menu is the main thing in business is where Ngodoe Coffee Shop is a provider of a wide variety of coffee drinks and food. So Ngodoe parties must always be prepared and find variants - new and unique variants that can attract customers and customers do not get bored with the menu and can be a main attraction for Ngodoe because of the unique diversity of the menu and have a high taste.
5) The design of the network infrastructure: For the design of the network infrastructure is also the author feels that the existing network structure by using TELKOM SPEEDY is very appropriate. Because with TELKOM SPEEDY has been familiar in the community and certainly more economical and easier to be checked to maintain its quality.

IV. Conclusion

The results of the quality improvement method Quality Function Deployment (QFD), which consists of several phases, as follows:

1) After knowing the needs and wants of the customer attribute to services Ngopi Doeloe the importance of the attributes are; complete facilities, competent human resources, good atmosphere, wireless network, building, employee training, cheft mix and create menus are ordered with quality standards and equipment are available, customers enjoy food and drinks that have been ordered, the number of waiters, the facilities available, the competence of employees and waiters Ngopi Doeloe.
2) Alternative Repair: By looking at the results of a 4-phase QFD (Quality Function Deployment), it can be determined that the alternative for quality improvement Ngodoe is on competence waiter, facilities improvement plan, lay out repair, improvement of quality menu, design the network infrastructure.

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