# Improving The Quality of Coffee Shop Service With The Implementation of Quality Function Deployment: A Case Study in XYZ Coffee Shop

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## Abstract

The coffee is a commodity essential to the economy of Indonesia. Globally, Indonesia is the fourth manufacturer in the world after Brazil, Vietnam and Colombia. The added value of a commodity the coffee will be even greater when processed into end products in the form of various flavors of coffee products and sold to consumers at outlets service coffee shop. This research aims to develop the design of a coffee shop with Quality Function Deployment (QFD) method. The priority of the development of the design of the coffee shop XYZ based on QFD method obtained : Completeness of facilities (19.9%) where required the development of infrastructure both wifi, inetrior, and others. Reliable waiters and baristas (16.6%), where training is required for individual development in order to increase service capacity. Accuracy of service (15.1%), where required good cooperation from management and employees to get maximum target.

*Keywords: Coffee Shop, Service, Quality Function Deployment, Development.*

## 1. Introduction

In the last few years there is a growing business model that is significantly wrong is a coffee shop. It can be observed with more coffee shop outlets from overseas such as Starbuck or local such as Coffee Itam, Maxx Coffee and others. Based on Otten Magazine's history of coffee evolution, the world's first recorded coffee shop was known to have appeared in 1475. The coffee shop is named Kiva Han andis in the city of Constantinopel (now Istanbul, Turkey). This coffee shop is known to be the first coffee shop to open and serve its visitors with typical Turkish coffee. At that time, coffee was an important element in Turkish culture to the present day many coffe shops are appearing all over the world. The presence of coffee shop in Indonesia is not separated from the expansion of Starbucks Coffee company that entered into Indonesia in 2002. Customers come not only to get the products sold, but also to spend time together community or just hang-out or the term is now called hanging out (Kompas, 30 November 2009). In the last four years, coffee consumption in the country has increased from 600 grams per person to 1.3 kilograms per person. If every one cup of 14 grams of coffee, then the Indonesian drink 114 cups per year (Indonesia Speciality Coffee Committee, 2017). This is due to the growth of middle class society and the proliferation of coffee shop specialty that began to grow seven years ago. Growth of coffee shop in Indonesia is expected to grow 100%. It has now reached more than 200 registered associates (Sindo News, October 10, 2014). Here is an example of one of the coffee shop that has been in Indonesia, with the picture shown figure 1.



Fig. 1. One of favourite coffee shop (Grand Indonesia, Jakarta)

In Indonesia, coffee shop or often called a coffee shop or a *kedai kopi* in that coffee shop is a place that sells coffee and other types of beverages, as well as snacks at low prices. In addition to food and drinks that have a delicious taste, will be unique coffee shop if have a good waiter in terms of facilities and services for customers to be comfortable and form a community of customers that will increase economic growth at the coffee shop. On this occasion will be presented a design place and facilities in

accordance with the needs and convenience of today's consumers. The purpose of this research is to produce a service design facilities and services based on the needs and desires of consumers.

## 2. Problem Statement

2.1 Formulation of the Problem

One way to win the competition is that the company must be able to provide satisfaction to its customers, for example by providing better quality products, cheaper price, faster product delivery and better service than its competitors will cause customers to be more satisfied (Nugroho and Puriarta, 2011: 28). In the face of increasingly fierce competition, the management of coffee shops is required to be more responsive to know what the needs, desires and tastes of consumers in the present and in the future (Indah Sevia Wulandari, 2012). Taking business opportunities in today's consumer lifestyle models. According to Sumarwan (2002: 57) lifestyle is often depicted with the activities, interests and opinions of a person and more describes a person's behavior is how they live, use the money and take advantage of time in his possession. One modern lifestyle to date is the habits of certain groups of people who hang out in coffee shops or cafes. The same thing is supported by the opinion of Rhenald Kasali (2008: 27), a marketing expert said that coffee is now no longer just to eliminate sleepiness, but as part of the lifestyle, where coffee shops become a place to hang out that is in great demand. Based on some of the above literature other than taste pleasure, improving the quality of service needs of facilities both facilities and service in coffee shops is needed.

Through this research will create a coffee shop design that offers facilities tailored to the needs of today's consumers. In the process of designing the product consumers coffee shop involved in order to be designed products in accordance with the wishes and needs specifications. To design the product, the method used is Quality Function Deployment (QFD) which is a direct design method involving the consumers associated with the service quality aspects of the place and services. Consumer engagement is needed to know the perceived, desired, needed, and consumer impression of a product so that it can simplify the process of product design

2.2 Literature Studies

In the coffee shop industry business other than the taste presented required a form of strategic services both in infrastructure and adequate services. Seeing the current condition of the average customer who gives longer time to enjoy the coffee, some character than this customer is need a place that is relaxed and sufficient to be connected with the world of "social media" and can communicate as comfortable as possible with peers. The challenges facing local coffee entrepreneurs themselves with the increasingly rampant coffee shop business that previously existed Starbucks, Coffee Itam, and the like for the middle class up and roadside for the middle to lower, to attract a variety of customers to get into place. With the QFD method is expected to emerge the form of strategic analysis in increasing service for customer purchasing power increases in the company that will be created later.

In general, QFD is a tool or method used to focus attention on the things that the needs and desires of consumers in the preparation of service standards. According to Cohen (1995), QFD is a method used to develop and plan products so that the development team can specify in detail the needs and desires of the customer. According Ermer (1995), QFD is a method of quality improvement based on the search input directly from the consumer for further thought how to meet the input. Meanwhile, according to Daetz (1995), QFD is a systematic planning process created to help companies manage all the elements necessary to define, design and create products or provide services that can meet customer needs.

2.3 Methodology

2.3.1 The establishment of House Of Quality (HOQ). In the formation of HOQ consists of several processes, namely:

A. Technical Specifications.

Engineering specification consists of attributes, matrices, technical specifications, units and criteria. Relationship is an assessment of the strength of the relationship between attributes with technical specifications. assessment of the relationship with a scale of 0 (Unrelated), 1 (Weak), 3 (being), 9 (very strong).

B. Planning Matrix.
In determining the mathematical planning done several processes, among others:

- Importance to costumer (Level of Interest of Consumer Attribute) Assessment of product importance is subjected to the attribute of the coffee shop model
- Current Satisfaction Performance (Consumer Satisfaction) This column contains the results

of the satisfaction questionnaire conducted in order to know the assessment of existing products related to the design of the attributes of the HOQ table. Here is how to calculate customer satisfaction. Performance Weight is obtained by the formula = Number of Respondents * Performance (scale) (3) Number of Respondents is the value of satisfaction level on the product used today.

C. Goal

Goal is the target value of satisfaction to be achieved for the product and developed. Goal can be measured on a scale of 1 to 4, (1 = very unsatisfactory), (2 = unsatisfactory), (3 = more satisfactory), (4 = very satisfactory).

• Improvement Ratio

The value of improvement ratio shows how much improvement or improvement should be done in developing the product. If the result is <1 = no change, 1-1.5 = moderate improvement,> 1.5 = overall improvement. The way to know the value of improvement ratio is as follows'.

• Sales Point

Sales point is an attribute that is considered to have a high selling value, especially for sales. Sales point value consists of, 1 = no sales point; 1.2 = medium sales point; 1.5 = strong sales point.

• Raw Weight and Normalized Raw Weight

The value of raw weight shows how much improvement of kitchen table products should be done.

D. Technical Correlation (Technical Specification Correlation).
Technical Correlation describes the correlation between specifications of techniques that meet other technical specifications. The relationship is symbolized.

E. Technical Matrix (Order of Importance Level of Competitiveness and Target for Technical Requirements). At this stage is the process of determining technical priorities. Priority of this technique will be a consideration of research in the process of developing technical characteristics.

F. Product Concept Design : The result of House of Quality (HOQ) is a proposal about coffee shop facility services design based on the aspect of quality, to know the concept of product to be designed then done the product dimension calculation process.

G. Selection concept some of these alternatives should do a selection concept or concept selection. The selection of the concept is to compare the resulting prototype. In the process of selecting the concept is the assessment of the matrix on the resulting prototype. The assessment uses a rating scale. This method lists all of the desired customer attribute (CA) attributes, generated by market research, then converts it into a list of engineering attribute (EA) engineering attributes that can be used by policy makers. The main contribution of QFD is to improve communication between marketers, engineers, and production people (Kotler, 2005). Here is Quality Function Deployment structure shown Fig. 2.
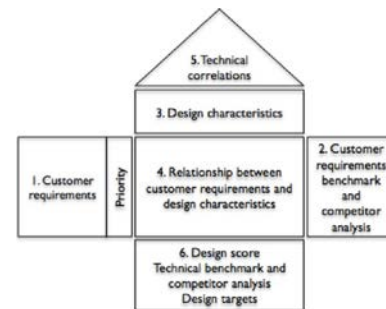


Fig. 2. Quality function deployment structure

Information of the Fig. 2 : **(1)** Customer requirements : contains data information obtained from the result market research on the needs and desires of customers, **(2)** Customer requirements benchmark and competitor analysis: analyze what is needed by consumers and compare with competitor brand as one aspect to give solution in the future, **(3)** Contains the design characteristics for product or services that will developed, this data is base on customer requirements, there is some information obtain on the design characteristics, the most common alternative is a need for products or services and the ability and function of product services, **(4)** Contains the management assessment of the strength of the relationship between the elements contained in the design characteristics to the needs of consumers requirements is affects. Strength of the relationship is shown by the use of certain symbols, **(5)** Indicates that the correlation between of the requirements engineering with the other engineering requirements contained in the design characteristics matrix, and **(6)** Contains three types of data namely are order of important (rank) design characteristics, information requirements of the performance comparison results, and the target performance design characteristics of new products being developed.

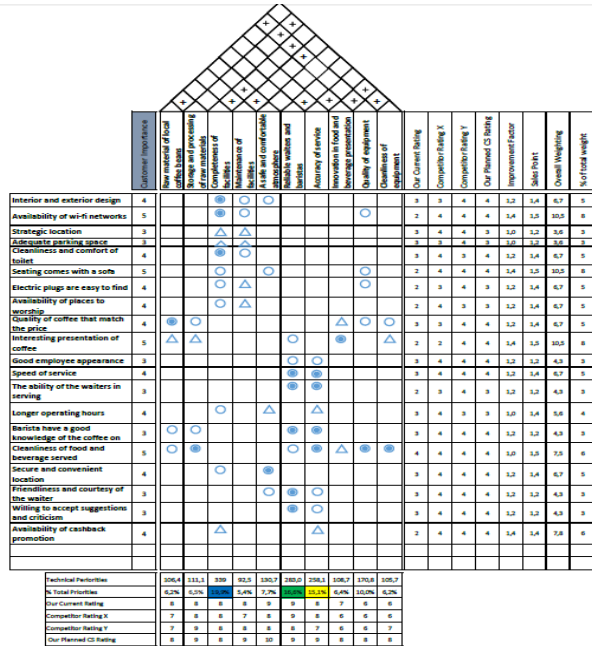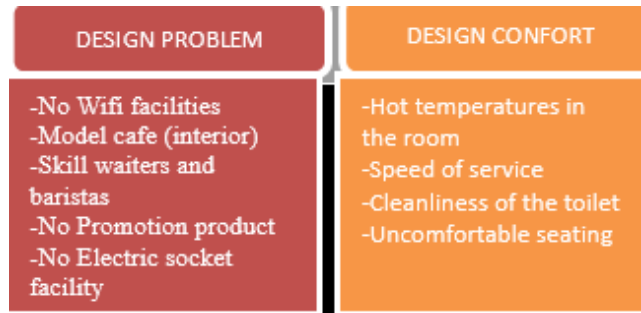Here is the Quality function deployment structure of XYZ Coffee Shop shown Fig. 3.



Fig.3.  Quality function deployment structure of XYZ Coffee Shop

## 3. Result and Discussion

The success of the coffee shop business is influenced by several factors both from taste, facilities and speed of service and many other things that are disregarded by coffee shop owners. which has been described in detail in the HOQ house. Based on the concept of QFD can help find the best solution by analyzing the information in detail what the customer needs and comparing with competitors. Basically, there are have 7 steps that must be done in QFD, there is affinity diagram, tree diagram, the weighting of customer need, competitive benchmark, technical requirement (how's), interrelationship what's and how's, and design target and the house of quality.

Step 1: Affinity Diagram is used for grouping customer issues based on data needs (voice of customer) to focus more on problem-solving product design.



**DESIGN PROBLEM**

-No Wifi facilities
-Model cafe (interior)
-Skill waiters and baristas
-No Promotion product
-No Electric socket facility

**DESIGN CONFORT**

-Hot temperatures in the room
-Speed of service
-Cleanliness of the toilet
-Uncomfortable seating

Step 2: Improvement  Table is used for plotting the issue-issue from that has been grouped in step 1 to determine the satisfaction aspects of customer needs in the improvement effort service quality.



**DESIGN IMPROVEMENT**

- Add Wifi facilities
-Model cafe (interior)
-Improve Skill waiters and baristas
-Add Promotion product
-Add Electric socket facility
-Add Smoking room

**SATISFACTION IMPROVEMENT**

-Hot temperatures in the room
-Speed of service
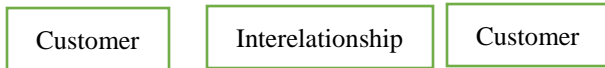-Cleanliness of the toilet
-Uncomfortable seating

Step 3: Weighting of Customer Need is used for conducting customer need priority to the facility and services, to know the level of customer interest to the product by sevice quality given.

| Interior and exterior design | 4 |
|---|---|
| Availability of wi-fi networks | 5 |
| Strategic location | 3 |
| Adequate parking space | 3 |
| Cleanliness and comfort of toilet | 4 |
| Seating comes with a sofa | 5 |
| Electric plugs are easy to find | 4 |
| Availability of places to worship | 4 |
| Quality of coffee that match the price | 4 |
| Interesting presentation of coffee | 5 |
| Good employee appearance | 3 |
| Speed of service | 4 |
| The ability of the waiters in serving | 3 |
| Longer operating hours | 4 |
| Barista have a good knowledge of the coffee on offer | 3 |
| Cleanliness of food and beverage served | 5 |
| Secure and convenient location | 4 |
| Friendliness and courtesy of the waiter | 3 |
| Willing to accept suggestions and criticism | 3 |
| Availability of cashback promotion | 4 |

By using scale 1-5, and based on brainstorming results in Product Development, that the top three percentagesin total benchmarking are: Completeness of facilities (19,9%), Reliable waiters and baristas (16,6%), Accuracy of service (15,1%).

**Step 5**: Technical Requirements (HOWs), to determine from technical aspect for product development plans to meet customer needs.



**Step 4**: Competitive Benchmark is used for conducting benchmarks with competitors' products based on survey results and brainstorming product development team to see the position of the product to competitors.
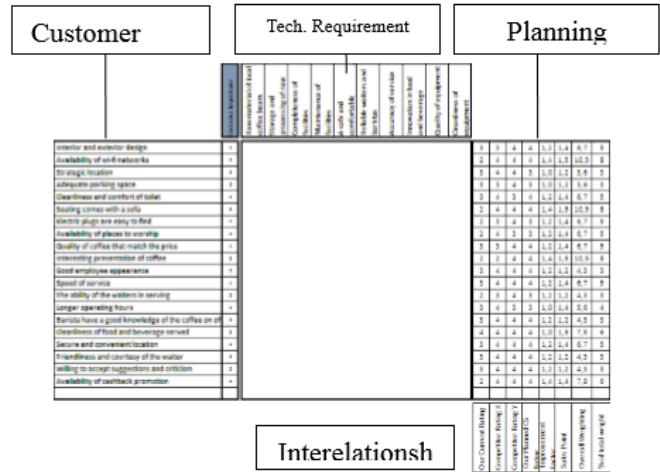


**Step 6**: Interrelationship WHATs and HOWs, to determining the level of relationship (relation) between customer needs and needs in terms of technical aspects.



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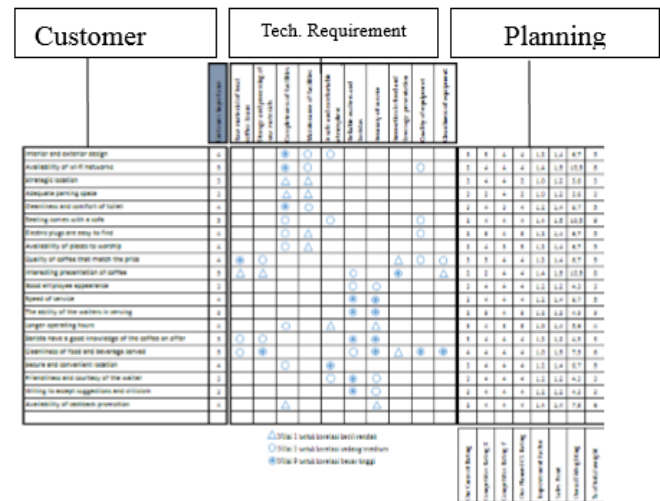
By using score : 1 (week), 3 (medium), and 9 (high), based on brainstorming results in sections product development obtained a high correlation is in several things, point 9 get a) completeness of facilities with detail interior and exterior design, availability of wi-fi networks, cleanliness and comfort of toilets.
 b) reliable waiters and baristas with detail speed of service, the ability of the waiters in servinge, barista have a good knowledge of the coffee on offer, friendliness and courtesy of the waiter.

Step 7: Design target and House of Quality, calculation, and weighting of design targets to determine priorities in conducting product development related to customer need (WHATs), technical requirement (HOWs) and benchmarking result to competitors so that the products produced in accordance with customer needs and able to compete with competitor services.
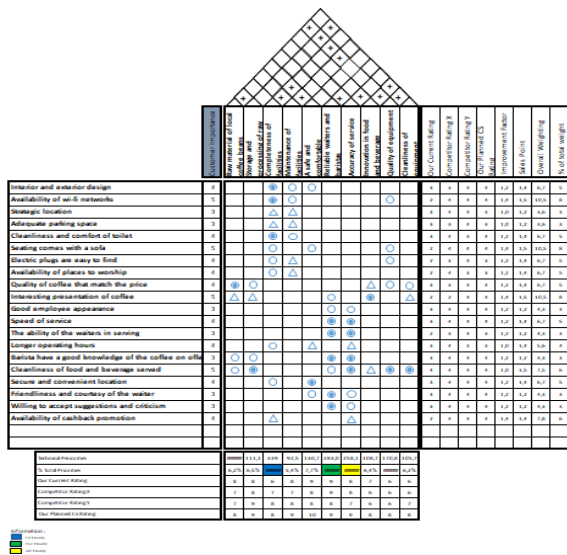


With the same calculations we can put the values as the matrix, figure 7 From the comparison result data in QFD House, Coffee shop will be done with the following criteria:

1. Development of interior facilities more comfortable to give the impression different nowadays competitior although have more 'expensive'.

2 Improve availability of wi-fi networks: Increasing the speed of wifi combined with TV channels will help the customer to survive longersupported TV facilities that can strike preferred channels like soccer

3. Improvement of toilet hygiene because in general the customer will like a clean place especially in the toilet especially if the business is a coffee shop should be hygiene support is mandatory.

4. Speed of service. The ability of the waiters in serving and barista have a good knowledge of the coffee on offer may differ from competitors who have a large enough and skilled workforce but this can be improved by increasing the existing workforce skills to be more effective and efficient.

5. Friendliness and courtesy of the waiter can be done with the selection of skilled workers who communicate, experience and have initiative. Willing to accept suggestions and criticism, which remains open to receive input and criticism in order to get more and more customer needs often hidden needs arise from here.

## 4. Conclusion

With increasing coffe shop business in-depth analysis needs to be done in order to stay with the competitors, some things that need to be understood and analyzed how to get a coffe shop in accordance with the wishes of the customer. Through this QFD can be analyzed how the priority positions to be developed in XYZ Coffe Shop, with the following recommendations:

1. Completeness of facilities (19.9%) where required the development of infrastructure both wifi, interior, and others.

2. Reliable waiters and baristas (16.6%), where training is required for individual development in order to increase service capacity.

3. Accuracy of service (15.1%), where required good cooperation from management and employees to get maximum target.

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