Analysis of Customers Requirements of XYZ Resto POS System of PT. XYZ Using Quality Function Deployment

Nurul Fithri Sylvani

Undergraduate Degree, Telkom University, Bandung, Indonesia

nurulfithrisylvani@gmail.com

Abstract. *This research is proposed to identify the customer requirements that will support the product development of XYZ RESTO application. XYZ RESTO is a POS (Point of Sales) system developed by PT. XYZ. This desktop based application is used in several restaurants and cafés in Bandung. The mix qualitative and quantitative methods are used in this research to know the XYZ RESTO product further. Moreover, secondary data obtained from the internal data of PT. XYZ regarding the customer complaints report is used to be translated into voice of customers. There are several service quality development tools that can assist the company to track what is the most required aspects of XYZ RESTO as POS system to meet its client's needs. In this research, one of service quality tools will be used is Quality Function Deployment (QFD) as this tool will enable to clarify the customer requirements priority. The House of Quality (HOQ) will be deployed as the tool of QFD. The result of this research will be examined is what kind of services offered by XYZ RESTO application need to be kept and enhanced to increase the XYZ RESTO service quality that will meet the customer needs.*

Keywords.*POS; QFD; service deployment; House of Quality.*

I. INTRODUCTION

In digital era, the way serving of business for customers is shifted to computerization-based. A long service time is considered as a waste that will impact on customer dissatisfaction. The benefits of using technology also encourage restaurants enterprise to adapt a system in the daily operations that can help them to increase time efficiency and effectiveness. There are a lot of benefits that can be obtained as examined by Kimes (2008): shortening time spent in the ordering process (e.g., handheld terminals), enhancing processing in food production (e.g., kitchen technology), speeding up the service time (e.g., table management systems), providing faster payment (e.g., handheld terminals), shortening seat turnover or turnaround time (e.g., near field communications and/or table management systems), and decreasing labor cost (e.g., labor management systems, online reservation systems and POS integration into online ordering). A researcher found that the first revolutionizing technology implemented by restaurants, was the well-known POS system (Koutroumanis, 2011).

POS itself offers a lot of features that consider the information recorded automatically. It can be a sales record, pricing, products detail, tax information and even tracking a cash receipt to prevent theft. Ultimately the POS system had a positive effect on service quality (Koutroumanis, 2011). Nevertheless, some aspects offered by POS still need to be considered in terms of the cost and also the security. An error is possible to occur in the system. The IT management of restaurant also needs to know which part is required to be in POS otherwise it will be costly especially for start-up business. The usage of POS is highly related to service quality; therefore the restaurant enterprises as the clients along with the POS developers have to know how to maintain the system so that it will remain suitable with the needs of the operations process improvement. According to Center for Study Social Policy (2007), "improving service quality to meet customers' standards is an ongoing part of doing business".

The rapid growth of technology development that impact on restaurants has led IT industry to take part in this opportunity. Moreover, according to KOMINFO (Ministry of Communication and Informatics) statistical data survey, there are 92% companies from all sectors that already utilize computer which is all restaurant enterprises that used computer are including in 86.14% of 92%. PT. XYZ is one of IT companies developing a POS system for restaurant industry. PT. XYZ also sees the increasing number of restaurants and café as an opportunity to expand the target market for their IT product. In 2014, total number of restaurants, cafés, and bars in Bandung is 653 (Statistics of Bandung City, 2015).[1] The POS application developed by PT. XYZ is known as XYZ RESTO. XYZ RESTO itself was released in late 2015 and it has already been used in some number of restaurants and cafés in Bandung. The XYZ RESTO offers three different type of POS system: Production Zone, Human Resource Zone, and Marketing Zone. This POS system is a desktop application based which needs to be installed manually on every hardware such as PC, laptop, or smartphone. Furthermore, Bychkov (2013) on Segue Technologies examined that "updates to the applications must be applied by the user directly to their installation, and may require hardware upgrades or other changes in order to work". Since XYZ RESTO developed based on desktop application, the IT technical supports of PT. XYZ need to come to the place to do application installment whenever the clients want to change or add the hardware.

Considering the cost of POS installment in every hardware platform, usually the restaurants require customization in order to make the system adjustable to the current needs of the operations management. Therefore, as an IT Consultant, PT. XYZ, need to prioritize what features are required the most by the customers since they are offered three different types of POS system that consisting of several features. As the POS product features offered by this company have been applied in some cafes and restaurants, it cannot be ignored that the clients as the customer's complaints regarding the POS appeared. According to PT. XYZ customer complaints record, mostly the system is error because they are late to upgrade the system. As the XYZ RESTO system is still new, error and system failure still often occur, requiring PT. XYZ to fix some features for the betterment. Even though XYZ RESTO already had a good accounting report such as daily transaction report, but there are a lot of clients who complained that the report can only be opened in PDF format, thus it is hard for them to edit the data when necessary.

Based on the customer complaint records, PT. XYZ wants to know which parts need to be enhanced to meet the customer requirements. To deal with this issue, there are several service quality development tools that can assist the company to track the most required aspects of XYZ RESTO as POS system to meet its client's needs. In this research, one of service quality tools to be used is QFD. Baba et al (2009) in Prasad et al (2010) examined that "QFD is one of the Total Quality Management quantitative tools and techniques that could be used to translate customer requirements and specifications into appropriate technical or service requirements". The QFD is chosen to analyze the XYZ RESTO because it enables to clarify the priority of customer requirements to be then implemented into development stage to enhance the POS system of XYZ RESTO. The information related to the voice of customers will be gathered through qualitative method which is interviewing the IT managers of PT. XYZ and secondary data to be translated into customer requirements in QFD.

Previous research regarding POS system for restaurants industry was also conducted by Sularto et al. (2014) and Cavusoglu (2015). Sularto et al. (2014) conducted an analysis about customer requirements and technical requirements that are part of QFD to obtain POS system design to be applied in SME restaurants in Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek). In his paper, the development of POS system planning will be based on the

1http://www.westjavainc.org/wp-content/uploads/2016/04/Kota-Bandung-Dalam-Angka-2015.pdf?bf98dc Retrieved: August 25, 2016

research findings which are focused on accounting function in POS system. Without using QFD analysis, Cavusoglu (2015) conducted a POS system analysis to know the difference between the use of Front of House and Back of House POS function in different IT management levels of U.S restaurants by using descriptive, factor analysis, and independent sample t-test. Meanwhile, this study will focus on restaurants in Bandung that are clients of PT. XYZ and already XYZ RESTO POS system.

II. RESEARCH OBJECTIVE

- To identify the customer requirements and technical requirements which are parts of Quality Function Deployment (QFD) as used in House of Quality (HOQ) of XYZ RESTO in Bandung.
- To know which services offered by XYZ RESTO application that is required to be enhanced by PT. XYZ to meet the requirements of customer using XYZ RESTO in their restaurants operations management in Bandung.

III. LITERATURE REVIEW

A. Defininition of POS

Point of Sales defined by Collins and Cobanoglu (2008:245) as "a network of cashiers and server terminals that typically handles food and beverage orders, transmission of orders to the kitchen and bar, guest-check settlement, timekeeping, and interactive charge posting to guest folios". POS hardware and POS software are two main components that compose the POS system.

Since the technology development is rapidly grown, it also impacts on the use of POS in business, such as restaurants that consider about the services for their customers. Implementing POS system in their operations management can assist them to make the delivery process to be more effectively due to the automation in recording every transaction and order or even in warehouse to purchase all ingredients needed. The benefit of POS system examined by Sularto et al (2014) is: "some wireless POS systems for restaurants not only allows to process mobile payments, but also allows the server to process the correct sequence throughout the food ordered".

B. Service Quality

There are many scholars who examine different definition of service. However, Fitzsimmons and Fitzsimmons (2011) explained that commonly the definition of service itself consists of intangibility and simultaneous consumption. "A service is an activity or series of activities of more or less intangible nature that normally, but necessarily, takes place in interactions between customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems".

C. Quality Function Deployment (QFD)

"Quality function deployment (QFD) refers to both (1) determining what will satisfy the customer and (2) translating those customer desires into the target design" (Heizer and Render, 2009:191). According to Fitzsimmons and Fitzsimmons (2011:123), the resulting process generated form a matrix, referred to as a "house of quality", for a particular product relates customer attributes to engineering characteristics. Moreover, Bestrefield et al

(2003:315) explained that "quality function deployment focuses on customer expectations or requirements, often referred to as the voice of customer".

D. House of Quality (HOQ)

According to Besterfield et al (2003), house of quality is the planning tool used in QFD. Furthermore Besterfield et al (2003:322) explained the relationship between the voice of customers and the organizations: "The house of quality translates the voice of customer into design requirements that meet specific target values and matches those against how an organization will meet those requirements." The house of quality itself consists of several parts as the basic structure for the house of quality explained by Besterfield et al (2003:322) as follow (*see Fig. 1)*:

a. The exterior walls of the customer requirements.
b. The ceiling, or second floor, of the house contains the technical descriptors.
c. The interior walls of the house are the relationships between customer requirements and technical descriptors.
d. The roof of the house is the interrelationship between technical descriptors.
e. The foundation of the house is the prioritized technical descriptors.

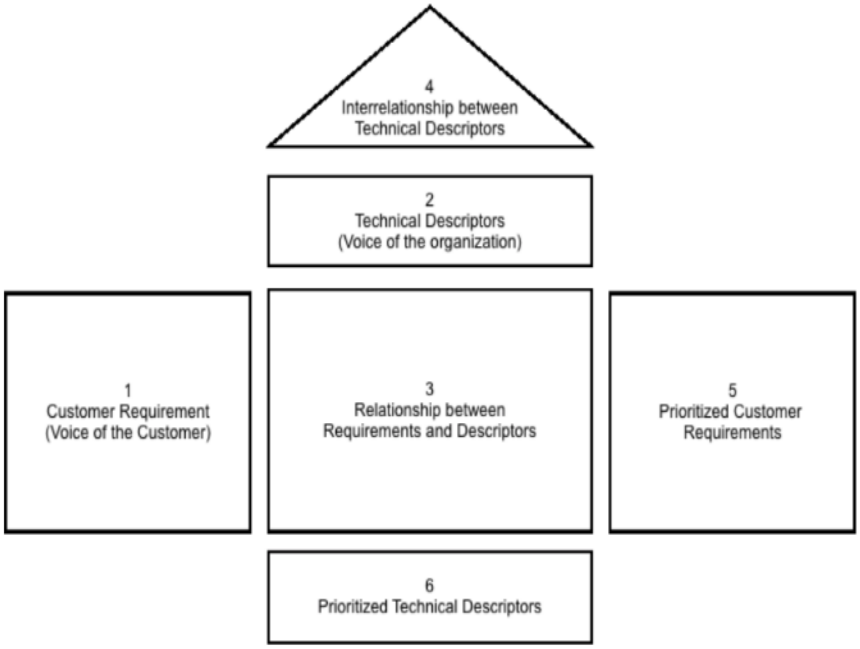

Fig. 1 House of Quality (Besterfield et al, 2003)

III. METHODS

A. Research Methodology

The research methodology used in this research is the mix of qualitative and quantitative methods. The author conducted individual depth interview with the CEO of PT. XYZ to know the XYZ RESTO further. "An individual depth interview (IDI) is an interaction between an individual interviewer and a single participant" (Cooper and Schnidler, 2011: 172). Descriptive study is conducted to describe relevant aspects of the phenomenon in this research background. Sekaran and Bougie (2010:105) stated that "descriptive study is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in situation".

The data collection techniques used is secondary data which obtained from the internal data of PT. XYZ. This data regarding the customer complaints report is utilized to be translated into voice of customers. Moreover, the data obtained from interview are used to get information about technical descriptors for HOQ. This research focused on the analysis of the XYZ RESTO application services required for the restaurants to measure the quality of POS system. Nevertheless, this research is without benchmarking to the competitors who have similar product like PT. XYZ since the author cannot get any information regarding the competitors' product, thus the research will focus on internal management which is XYZ RESTO as a research object.

B. Quality Function Deployment Procedure

This research will use House of Quality as one of the tools of Quality Function Deployment. The HOQ building will refer to Besterfield et al (2003). According to Besterfield et al (2003:325-339), there are seven steps to develop the House of Quality:

- Step 1-List Customer Requirements
  In this research, the customer requirements are gathered through the customer complaint summary report. The list of customer complaint obtained from secondary data of PT. XYZ that will be then translated into voice of customers. These voice of customers will be described into customer needs as the secondary customer requirements *see Table 2*. The list of primary customer requirements will not be included in the House of Quality.
- Step 2-List Technical Descriptors
  The next step is making a list of engineering characteristics or technical descriptors that will affect one or more of the customer requirements. The author conducted an interview with the CEO of PT. XYZ to get the data regarding the technical descriptors that knew about the object of this research.
- Step 3-Develop a Relationship Matrix Between WHATs and HOWs
  The relationship matrix is used to represent graphically the degree of influence between each technical descriptor and each customer requirement. The symbol is used to represent the weight of relationship as seen in *Table 1*.

Table 1. Symbol Relationship between Customer Requirements and Technical Descriptors

Symbol	Weight	Relationships
•	+ 9	Strong
O	+ 3	Medium
Δ	+ 1	Weak

- Step 4-Develop an Interrelationship Matrix Between HOWs
  The correlation matrix is a triangular table attached to the technical descriptors to identify any interrelationships between each of technical descriptors.
- Step 5- Competitive Assessment
  The competitive assessment tables are separated into two categories:
  1) Customer Competitive Assessment
     The customer competitive assessment is the block of columns responding to each customer requirement in the house of quality on the right side of the relationship matrix. The numbers are used to indicate rating of 1 for worst and 5 for the best.
  2) Technical Competitive Assessment

The technical competitive assessment makes up a block of rows corresponding to each technical descriptor in the house of quality beneath the relationship matrix. The test data are converted to the numbers 1 through 5 (1 for worst and 5 for the best).

- Step 6-Develop Prioritized Customer Requirements

It consists of five assessments as follows:

1) Importance to Customer
   Use a rating of 1 for the least important and 10 for the very important.
2) Target Value
   The target value column is on the same scale as customer competitive assessment (1 for worst, 5 for best can be used).
3) Scale-up Factor
   The scale-up factor is determined by dividing the target value by the product rating given in the customer competitive assessment.
4) Sales Point
   The sales point is a value between 1.0 and 2.0, with 2.0 being the highest.
5) Absolute weight
   The absolute weight is calculated by multiplying the importance to customer, scale-up factor, and sales point.

- Step 7-Develop Prioritized Technical Descriptors

It contains degree of technical difficulty, target value, and absolute and relative weights.

1) Degree of Difficulty
   It is determined by rating each technical descriptor from 1 (the least) to 10 (very difficult).
2) Target Value
   The target value for each descriptor is determined the same way that the target value was determined for each customer requirement.
3) Absolute Weight
   The absolute weight for the *j*th technical descriptor is then given by

$$a_j = \sum_{i=1}^{n} R_{ij} c_i$$

4) Relative weight
   In a similar manner, the relative weight for *j*th technical descriptor is the given by replacing the degree of importance for the customer requirements with the absolute weight for customer requirements.

$$b_j = \sum_{i=1}^{n} R_{ij} d_i$$

IV. RESULT AND DISCUSSIONS

A. Identifiation of Customer Requirements

The customer requirements obtained from the secondary data which is from the customer complaint summary report 2016. There are twelve common complaints that occurred frequently for last 7 months; January 2016 to July 2016.The complaints are vary from the most occurred which is considered as major error till the least occurred. Moreover, the

complaints are classified by the type of feature errors to make translation of voice of customer easier to be examined. The customer complaints relates to voice of business that are translated into list of customer requirements as seen in *Table 2.* The customer requirements will be listed in House of Quality as the WHATs that a customer needs or expects.

B. List of Technical Descriptors

The list of technical descriptors is obtained through an interview with the CEO of PT. XYZ. It examines what kind of technical aspects in accordance with the design of features in developing XYZ RESTO POS application. According to the interview result, there are 23 attributes of technical descriptors for XYZ RESTO application. (*See Table 3*)

Table 3. List of Technical Descriptors

No.	Technical Descriptors
1	Personal cashier data reports
2	Personal worker data reports
3	customer data report
4	Application has different access rights over different users
5	Application provides backup data facility
6	Application can perform automatic data backups periodically
7	Application is capable of sorting entry the data automatically
8	Previous data can be accessed in the future
9	Application can serve customers using a tablet
10	Accounting application is connected with excel and word
11	Transaction report for a certain period
12	Daily raw materials purchase reports
13	Monthly raw material purchase reports
14	Reports of raw material purchasing for a certain period
15	Application record inventory and stock level
16	Application is well-integrated with fingerprint hardware
17	System can manage the shift schedule
18	Appraisal data record
19	Worker credit data record
20	System has a primary rule for managing customer whist list record
21	Application can analyze and make a list of favorite menu
22	Software is updated periodically
23	Application can forward promotion towards online and messaging

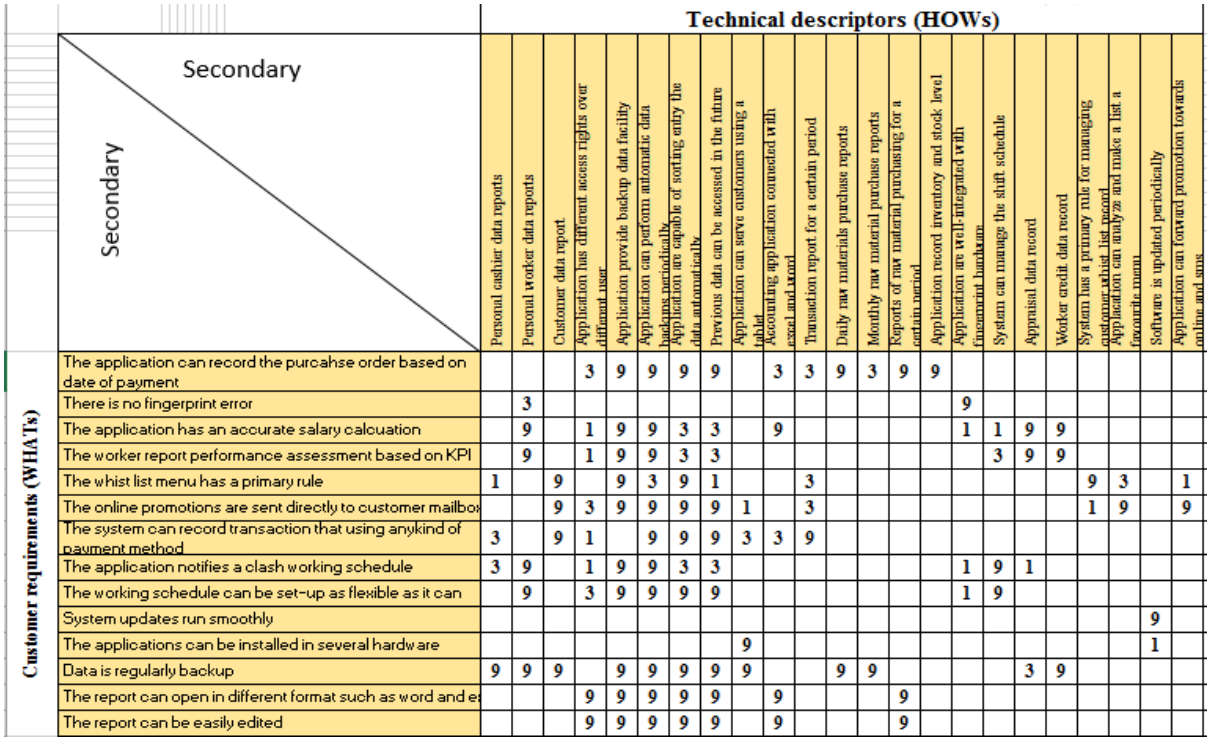

Fig 2. Relation Matrix between WHATs and HOWs

Table 2. List of Customer Requirements

Complaint Description	Voice of customer	Customer requirements (WHATs)
The application cannot record the postponed payment for purchase order (PO)	The application should be able to record the payment for purchase order according to the date of payment	The application can record the purchase order payment based on the date of payment
Unbalanced transaction record due to postponed PO		
Fingerprint error	The system should be able to support fingerprint detection	There is no fingerprint error
Error salary calculation	The application must have a precise and an accurate calculation for each worker salary	The application has an accurate salary calculation
Inaccurate worker report accordance with KPI	The worker report performance assessment should be based on KPI	The worker report performance assessment based on KPI
There is no primary rule in inputting whist list customers data	There should be a rule that must be filled up if the customer reserve for whist list	The whist list menu has a primary rule
Online promotion through email goes to spam	The online promotion should be sent to customers inbox in email	The online promotions are sent directly to customer mailbox
The transaction history cannot be recorded by the system when using credit card	The system should record every transaction using credit card	The system can record transaction using any kind of payment method
The worker schedule management is overlapped	The system should have a good worker schedule management	The application notifies an overlapped working schedule

The working schedule that has been set for one-week shift cannot be changed	The working schedule should be able to be changed	The working schedule can be set-up as flexible as it can
Error during updating the system	There is no error during system update	System updates run smoothly
Client's hardware is not support with the XZY RESTO application system	The application should be appropriate for any kind of hardware	The applications can be installed in several hardware
Transaction data lost	The application should have data backup	Data are regularly backup
The report can only be opened in pdf	The report should be able to be opened in different format	The report can be open in different format such as word and excel
Fingerprint error	The system should be able to support fingerprint detection	There is no fingerprint error
		The report can be easily edited
Fingerprint error	The system should be able to support fingerprint detection	There is no fingerprint error
Error salary calculation	The application must have a precise and an accurate calculation for each worker salary	The application has an accurate salary calculation
Inaccurate worker report accordance with KPI	The worker report performance assessment should be based on KPI	The worker report performance assessment based on KPI
There is no primary rule in inputting whist list customers data	There should be a rule that must be filled up if the customer reserve for whist list	The whist list menu has a primary rule
Fingerprint error	The system should be able to support fingerprint detection	There is no fingerprint error

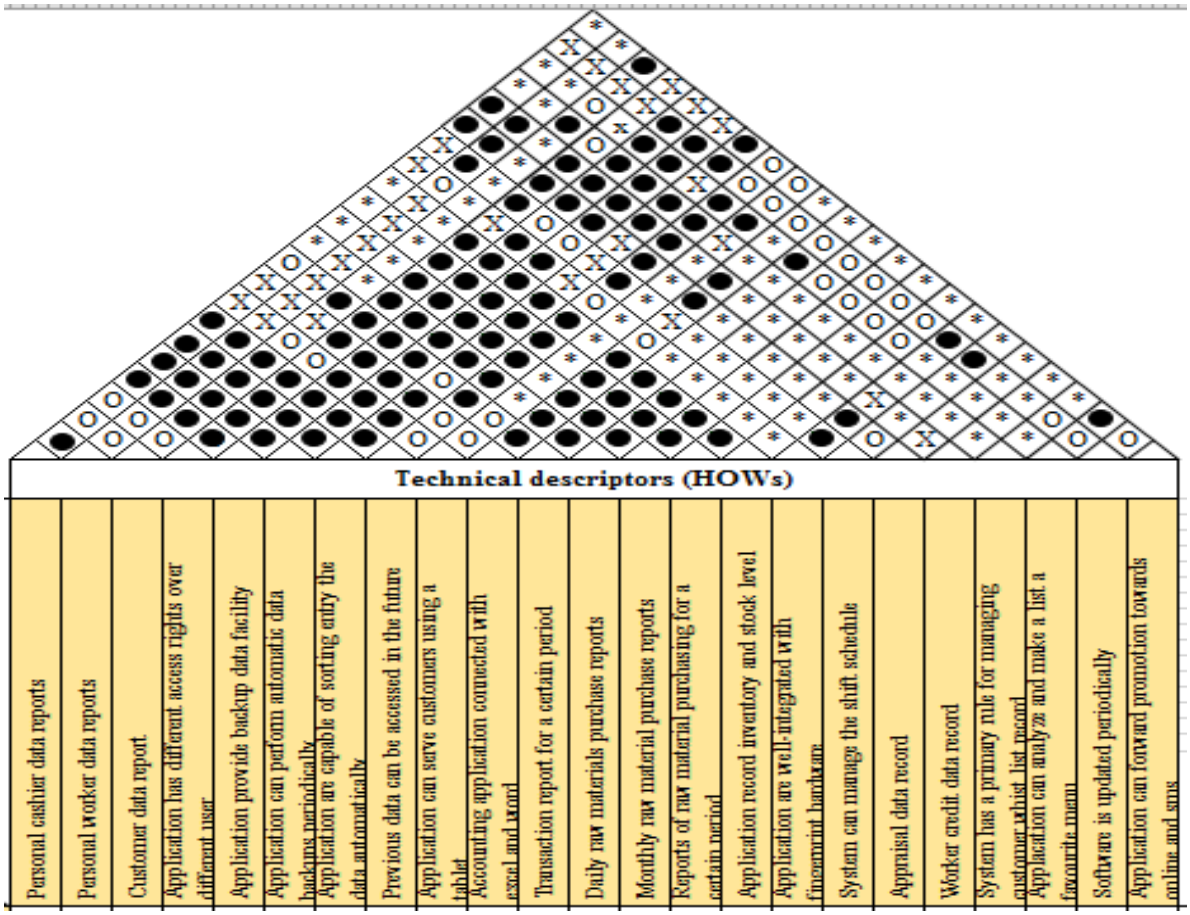

Fig 3. Interrelationship between HOWs

Customer requirements (WHATs)																																
The application can record the purcahse order based on date of payment				3	9	9	9	9		3	3	9	3	9	9								3			8	4	1.3	1.5	15.6
There is no fingerprint error		3														9							4			7	3	0.8	1	5.6
The application has an accurate salary calcuation		9		1	9	9	3	3		9						1	1	9	9				4			8	5	1.3	1.5	15.6
The worker report performance assessment based on KPI		9		1	9	9	3	3									3	9	9				4			4	3	0.8	1	3.2
The whist list menu has a primary rule	1		9		9	3	9	1			3									9	3		1	4			6	4	1	1	6
The online promotions are sent directly to customer mailbox			9	3	9	9	9	9	1		3									1	9		9	3			6	4	1.3	1.5	11.7
The system can record transaction that using anykind of payment method	3		9	1		9	9	9	3	3	9													3			9	5	1.7	2	30.6
The application notifies a clash working schedule	3	9		1	9	9	3	3								1	9	1						3			7	5	1.7	1.5	17.9
The working schedule can be set-up as flexible as it can		9		3	9	9	9	9								1	9							3			7	3	1	1.5	10.5
System updates run smoothly																						9		4			9	5	1.3	2	23.4
The applications can be installed in several hardware									9													1		4			7	4	1	2	14
Data is regularly backup	9	9	9		9	9	9	9	9			9	9					3	9					4			8	5	1.3	2	20.8
The report can open in different format such as word and excel				9	9	9	9	9		9				9										2			8	5	2.5	2	40
The report can be easily edited				9	9	9	9	9		9				9										2			6	2	1	1.5	9
Technical competitive assessment — Our product	5	5	4	4	4	4	3	3	5	5	5	4	4	3	4	3	3	4	4	3	4	3	3	Our Product								
Technical competitive assessment — A's product																								A's product								
Technical competitive assessment — B's product																								B's product								
Degree of technical difficulty	1	1	4	7	7	8	8	7	8	5	2	2	2	2	3	6	6	1	1	4	6	4	4	Customer competitive assessment								
Target value	5	5	5	4	5	5	5	5	5	4	4	5	4	4	4	4	3	4	2	2	4	4	2	Importance to customer								
Absolute weight	126	318	306	217	432	585	579	531	168	249	141	144	96	198	72	85	146	139	180	60	72	88	60	Target Value								
Relative weight	349	1444	632	901	2168	2408	2224	2176	427	731	386	338	245	592	151	194	1096	260	367	76	134	235	122	Scale-up factor								
Prioritized technical descriptors																								Sales point								
																								Absolute weight								

Fig 4. Customer and Technical Competitive Assessment

C. Analysis of House of Quality

The deployment of HOQ has been done in accordance with the stages as examined in research methods. Determining the customer requirements and technical descriptors is already described. The next stage is developing an interrelationship matrix between WHATs and HOWs which can be seen in *Fig. 2*. Moreover, the interrelationship between HOWs which is among technical descriptors can be seen in*Fig. 3***.** After filling up the matrix for WHATs and HOWs, the next step is evaluating the product by calculating the customer competitive assessment and technical competitive assessment. In customer competitive assessment, absolute weight can be used to determine the rank for each customer requirement. *See Fig. 4*

Table 3. Absolute weight of Customer Requirements

No.	Customer Requirements	Absolute Weight
1	The application can record the purchase order payment based on the date of payment	15.6
2	There is no fingerprint error	5.6
3	The application has an accurate salary calculation	15.6
4	The worker report performance assessment based on KPI	3.2
5	The whist list menu has a primary rule	6
6	The online promotions are sent directly to customer mailbox	11.7
7	The system can record transaction using any kind of payment method	30.6
8	The application notifies an overlapped working schedule	17.85
9	The working schedule can be set-up as flexible as it can	10.5
10	System updates run smoothly	23.4
11	The applications can be installed in several hardware	14
12	Data are regularly backup	20.8
13	The report can be opened in different format such as word and excel	40
14	The report can be easily edited	9

From this absolute weight of customer competitive assessment, the report can be open in different format is the highest required since the absolute weight is 40. The second most required by the customers is the system can record transaction that using any kind of payment method which has absolute weight of 30.6. Moreover, the third highest absolute weight of 23.4 represents that the system updates run smoothly is required most by the customers as well. However the least required is there is no fingerprint error which represented by the smallest assessment of absolute weight of 5.6. The other least required is the whist list menu has a primary rule and the report can be easily edited.

For technical competitive assessment, it can be seen from *Table 4* that the highest absolute weight and relative weight score of 585 and 2408 respectively is the application can perform automatic data backups periodically. This technical descriptor is related to almost all customer requirements, except for system updates run smoothly and the applications can be installed in several hardware. The second highest is the application is capable of sorting entry the data automatically. The same as the first highest one, this is also related to the majority of customer requirements. Previous data can be accessed in the future received score of 531 for

absolute weight and of 2176 for relative weight. All of these top 3 highest technical competitive assessment are related to the same customer requirements list.

Table 4. Absolute and Relative Weight of Technical descriptors

No.	Technical Descriptors	Customer Req. #	Absolute Weight	Relative Weight
1	Personal cashier data reports	5,7,8,12	126	349
2	Personal worker data reports	2,3,4,8,9,12	318	1444
3	Customer data report	5,6,7,12	306	632
4	Application has different access rights over different users	1,3,4,6,7,8,9 ,13,14	217	901
5	Application provides backup data facility	1,3,4,5,6,12, 13,14	432	2168
6	Application can perform automatic data backups periodically	1,3,4,5,6,7,8 ,9,12,13,14	585	2408
7	Application is capable of sorting entry the data automatically	1,3,4,5,6,7,8 ,9,12,13,14	579	2224
8	Previous data can be accessed in the future	1,3,4,5,6,7,8 ,9,12,13,14	531	2176
9	Application can serve customers using a tablet	6,7,11,12	168	427
10	Accounting application is connected with excel and word	1,3,7,13,14	249	731
11	Transaction report for a certain period	1,5,6,7	141	386
12	Daily raw materials purchase reports	1,12	144	338
13	Monthly raw material purchase reports	1,12	96	245
14	Reports of raw material purchasing for a certain period	1,13,14	198	592
15	Application records inventory and stock level	1	72	151
16	Application is well-integrated with fingerprint hardware	2,3,8,9	85	194
17	System can manage the shift schedule	3,4,8,9	146	1096
18	Appraisal data record	3,4,8,12	139	260
19	Worker credit data record	3,4,12	180	367
20	System has a primary rule for managing customer whist list record	5,6	60	76
21	Application can analyze and make a list of favorite menus	5,6	72	134
22	Software is updated periodically	10,11	88	235
23	Application can forward promotion towards online and messaging	5,6	60	122

V. CONCLUSION

The result of data processing using the Quality Function Deployment has identified 14 customer requirements i.e. report can be opened in different formats such as in office tools. It becomes one of the most required by the customers since the current application can only produce the reports in PDF format. Furthermore, having a system that can process all transactions from various payment methods is also highly required, because currently the number of customers who use credit card is increasing. Besides the features offered by XYZ

RESTO application, the system update is crucial to support the application to run well since XYZ RESTO is a desktop application-based. There are technical descriptors that have to be highlighted by IT management. The data backup facility becomes the most crucial one related to data safety. According to the absolute and relative weights of technical descriptors, 3 out of 5 the highest weights are related to data backup and guarantee that the data can be accessed in the future.

According to the result, PT. XYZ needs to focus on enhancing the data backup matters. Even though based on complaint records there are several kinds of problems in XYZ RESTO application, but PT. XYZ must prioritize the data backup facility, because it is storage for all information needed by the restaurants. If the data backup facility is not capable, then it will cause disadvantage for the restaurant.

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