Hyper Smart Cart As Hypermart Business Process Improvement In Minimizing In-Efficiency At The Cashier

[1]Muhammad Muharrom Al Haromainy, [2]Aviolla Terza Damaliana, [3]Abdul Rezha Efrat Najaf, [4]Reisa Permatasari

[1]Informatics, Computer Science Faculty, UPN "Veteran" Jawa Timur
[2]Data Science, Computer Science Faculty, UPN "Veteran" Jawa Timur
[3,4]Information System, Computer Science Faculty, UPN "Veteran" Jawa Timur
[1]muhammad.muharrom.if@upnjatim.ac.id[*] , [2]aviolla.terza.sada@upnjatim.ac.id, [3]rezha.efrat.sifo@upnjatim.ac.id, [4]reisa.permatasari.sifo@upnjatim.ac.id

Abstract

The world today has a rapidly growing human population whose daily needs are certainly increasing. Supermarket is a place to fulfill daily needs. When going to the supermarket, we have to spend a lot of time both shopping and also queuing at the cashier. This turns out to be a problem for customers because it can take up customers' time which is also experienced by one of the largest supermarkets, namely Hypermart. Not only a problem for customers, but it can also create a threat to Hypermart companies. However, with advances in technology and information systems, the world is growing to adapt to current conditions, namely by improvising. The improvisation carried out in this research is the payment transaction business process at Hypermart, namely by implementing the Self-CheckOut system by replacing the old trolley with a "Hyper Smart Cart" as an improvisation which will certainly answer all existing problems.

Keywords: Smart Cart, Hypermart, business process, Self-CheckOut

1. Introduction

Current technological developments are in the era of supersmart society 5.0 which is the leading solution of the 4.0 industrial revolution. This Society 5.0 resolution concept uses modern technology, however, relies on humans as its main component. For this reason, not only good technology is needed, but also a good information system is needed in its application, especially in the business world. Hypermart is a company engaged in the retail business in Indonesia which is included in one of the largest supermarket companies or retail businesses in Indonesia.

However, as one of the largest supermarkets which is measured by the number of customers, it becomes a problem for Hypermart companies and makes Hypermart fail to be the best for customers. One example of a problem that often occurs is such as a queue that accumulates at the cashier during the payment transaction process which can lead to less effective time in terms of shopping and can make the level of customer satisfaction decrease in terms of shopping. this can lead to less effective time in terms of shopping and can reduce the level of customer satisfaction in terms of shopping.

In business, information systems are increasingly needed to ensure the business operates properly. However, there are still a number of business people who have not optimized their information systems. However, as Information System actors, we should not develop Information Systems without knowing how to manage or assess the business that we implement. For this reason, the technique that we will apply to the system that we will improvise in this discussion is to use SWOT analysis, Competitive Forces Analysis, Fishbone Diagram.

So this research will be carried out using several techniques as described in the paragraph above which will later produce a Self-CheckOut system called "Hyper Smart Cart" as an innovation and improvisation in terms of payment transactions at Hypermart to minimize in-efficiency at the cashier.

2. Research Methods

This chapter describes the research methodology which contains the stages that will be used later in each sub-chapter. These stages can be seen in Figure 2.
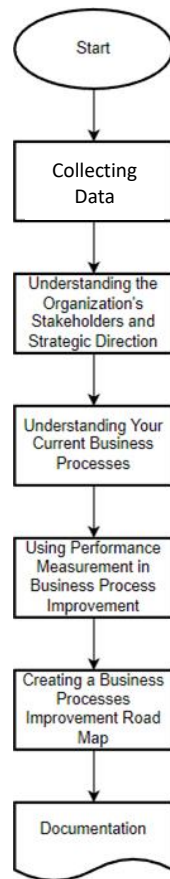
Figure 2. Collecting Data

2.1. Collecting Data

This study takes data from Google to find information about Hypermart which will be analyzed for the next chapter and also looks for references from national and international journals. We also observe directly the business processes between customers and cashiers at Hypermart.

2.2. Understanding the Organization's Stakeholders and Strategic Direction

Understanding organizational stakeholders and meaningful strategic directions at this stage we analyze the company profile, organizational structure, vision, mission, SWOT analysis, and competitive force analysis which will later become material for the development of the Hypermart retail business. All data obtained were sourced from Google and journals related to this research.

2.3. Understanding the Current Business Process

At this stage we analyze the business process between customers and cashiers at Hypermart by conducting direct analysis and seeking some responses from Hypermart customers. Business processes are described by traditional flowcharts in the results and discussion chapters.

2.4. Using Performance Measurement in Business Process Improvement

At this stage, we will analyze to find the possible causes of the main problem raised. In addition, we will find several solutions from the possible causes of the existing problems and later will choose the most suitable solution to be used for improvement. After that, we will analyze the root of the problem or the biggest problem that causes an improvement to the business process along with it.

2.5. Creating a Business Process Improvement Road Map

After finding a suitable solution to the root of the problem, then at this stage an improvement will be carried out by improving the part of the system that is the root of the problem that has been described. In addition, this stage will contain how the system works that we have made along with the reasons for its importance. improvements to the system. At this stage, we will replace the old business flowchart with a new business flowchart on Hypermart.

3. Results and Discussions

In your section, the author must explain/display/show the results of the research or the results of what you observed or found while conducting the research.

3.1. Understanding the Organization's Stakeholders and Strategic Direction

3.1.1. Company Profile

Hypermart is one of the largest retail companies in Indonesia. Hypermart provides a variety of basic daily needs such as food, beverages, basic necessities, household appliances, to clothing. This company has been operating since 2004 which is currently under the auspices of PT Matahari Putra Prima Tbk. Hypermart has more than 100 outlets spread across Indonesia.

3.1.2. Organizational Structure

Hypermart's organizational structure is composed of commissioners, board of directors, CEO, director, regional manager, store manager, division manager and below that there are department managers, team leaders, and staff like Figure 1.

3.1.3. Vision and Mission

Vision : To be the first choice of consumers in the retail sector and to be the market leader in the hypermarket market.

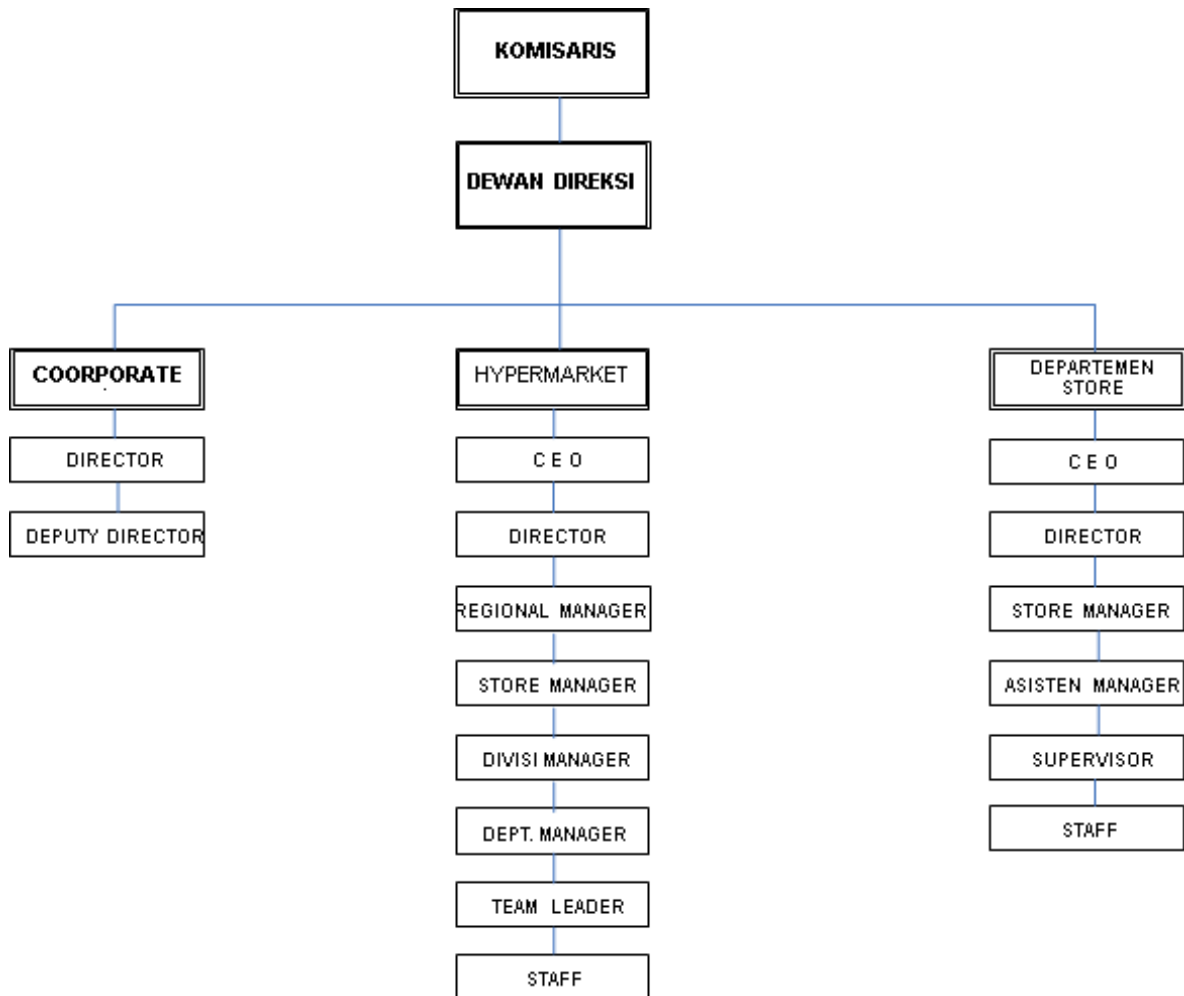Mission : To provide value, goods and services to consistently improve the quality of consumers and lifestyles.

Figure 3. Organizational Structure of Hypermart

3.1.4. SWOT Analysis

Table 1. SWOT Analysis

Strength	Weakness
- The products produced are guaranteed quality. - Well-organized management management. - Distribution of strategic store locations. - One of the largest retail companies in Indonesia. - Experienced and qualified human resources.	- Very long queue for payment. - Limited number of human resources. - Purchase of items for traders is still limited.
Opportunity	Threat
- The rapid development of development. - The rapid development of information technology facilitates promotion. - Held promos every weekend for customers who have hypermart cards. - Cooking ingredients are kept fresh because they are always under the supervision of employees.	- Price and quality competition with other retail companies. - Online shop enthusiasts are increasing. - Changes in consumer tastes.

3.1.5. Competitive Forces Analysis

1. Rivalry Among Existing Firms

Competition between companies in the supermarket retail business industry is currently quite tight. There are several other companies besides Hypermart that are also involved in this retail business, such as Carrefour, Superindo, Lotte Mart, and Matahari which are also big companies in the supermarket retail business in Indonesia. The growth rate of each company also tends to be the same every year, as if chasing each other so as not to be left behind. Currently Hypermart has more than 100 outlets spread across Indonesia, this figure also shows indirectly that Hypermart still has a strong position in its competition with other companies, so it is still able to continue to expand its business empire in Indonesia.

2. Bargaining Power of Buyers

In selling its products, the company that operates in the supermarket retail business, such as Hypermart,

places its consumers in the position of final consumers, so that consumers become the main priority who holds power. The company must set the right price and the right service for its consumers, in order to provide satisfaction for these consumers. The power possessed by buyers is able to force prices to fall and increase service and quality by the company. In pricing, Hypermart does not directly determine the price, the price is fully determined by the suppliers and the price offered is a fixed price and is non-negotiable. So, in this case the bargaining power of the buyer can be said to have no effect or low.

3. Bargaining Power of Suppliers

Hypermart supermarket position strength is weaker compared to its suppliers. This is because Hypermart is a franchisee of PT. Matahari Putra Prima, thus one hundred percent supply of Hypermart goods comes from PT. Matahari Putra Prima with several pre-determined suppliers, namely 850 suppliers. In this case, Hypermart has a good position in determining the products to be sold. Judging from the large number of suppliers, purchases of goods on a large scale, the supplier's products are evenly differentiated.

4. Threat of New Entrants

It's no secret that the competition in the supermarket retail business is currently very tight. Especially with the threat of the presence of potential new entrants who can further enliven the existing competition. The rise of online shops today makes retail companies threatened because it can make it easier for consumers to make purchases in an easier and more practical way. In addition to a more efficient transaction process, online shops also offer more attractive discounts than current retail companies.

5. Threat of Substitute Products or Services

In the supermarket retail business, the threat of substitute or substitute products can be said to be "strong enough" because there are many online shops that provide quite a complete set of basic needs needed by consumers for daily life such as basic necessities, snacks, soft drinks, home appliances/equipment. stairs, and so on. The advantage of having an online shop is that the price is relatively cheaper and also makes it easier for consumers to make purchase transactions.

Hypermart's organizational structure is composed of commissioners, board of directors, CEO, director, regional manager, store manager, division manager and below that there are department managers, team leaders, and staff.

3.2. Understanding The Current Business

This second stage uses a flowchart to describe the Hypermart business process in making purchase transactions between buyers and employees. Starting with the buyer or customer taking a trolley to shop, then the customer enters the Hypermart. The next process is the customer looking for groceries, then put it on the cart. Here there are two possibilities whether the customer will return the goods, if so then the customer needs to return the goods, if not then it will continue to the next process. Then the customer needs to go to the cashier to make a purchase transaction. In this cashier stage, customers need to queue at the cashier. The cashier makes the transaction after that the final process is to put the groceries in the shopping bag.

Like the flowchart shown, there is a customer process in a payment transaction when it arrives at the cashier, the customer needs to queue. Hypermart as one of the largest retail industry companies in Indonesia, of course, wants to always develop in order to be better. However, in the process, Hypermart can be judged to have failed to be the best in terms of serving consumers. It is proven when the customer waits for the long queue.

Presented data sourced from the IENACO-2014 National Seminar, the average daily chart in a month at Hypermart. In the graph, it can be seen that the number of visitors to Hypermart is very large every day, especially the increase which can be considered quite drastic on weekends, which reached up to 2600 visitors to 3400 visitors. From the number of visitors in every day can make the queue crowded which is also concluded from these problems, it makes customers feel dissatisfied with the service from Hypermart itself.

3.3. Using Performance Measurement in Business Process Improvement

Based on the previous sub-chapter, there is a main problem, namely at the Hypermart cashier where there is a queue buildup during the transaction process. Therefore, we analyze these problems and their solutions.

3.3.1. Fishbone Diagram

Based on the main problems that have been described, we have identified the causal factors that may arise in this business process, namely in terms of Man (Human), Machine, Material and Environment.
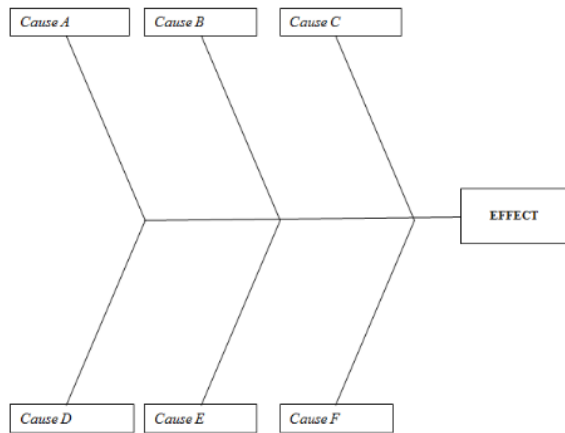
Figure 4. Fishbone Diagram

Based on the fishbone diagram [8,9,10] , we found solutions to the possible causes of each of these problems, namely:

- Man (Human)

It takes a long time to pack groceries

Solution: Carrying out self-service packaging. Poorly trained employees

Solution: Need to attend training before work

- Machine

Error machine

Solution: Making sure the machine can be used properly

- Environment

Limited number of cashiers available

Solution: Innovate by creating a Self-CheckOut (SCO) basket

- Materials

Lack of machine capability in fulfilling payment processing Solution: Updating machines to keep up with current technology.

3.3.2. Analyzing Biggest Problems

Based on the previous discussion, we analyze that the biggest problem lies in environmental factors where the possible cause is the limited number of cashiers available. For that we found a solution, as follows:

- Adding an existing cashier

- Increase the number of Human Resources

- Replacing the old trolley with a more sophisticated trolley, namely the Hyper Smart Cart.

3.4. Creating a Business Processes Improvement Road Map

Based on the previous chapter, the biggest problem in this research has been explained, which lies in environmental factors where the possible cause is the limited number of cashiers, so in this chapter, we determine to choose a solution by repairing or improvising the payment transaction system at Hypermart by replacing an old trolley with a more sophisticated trolley, namely the "Hyper Smart Cart", where previously customers had to go to the cashier and queue to pay for their total purchases, however, with the "Hyper Smart Cart", customers do not need to queue long at the cashier because this system uses Self - Checkout. Figure 5 "Hyper Smart Cart" trolley:

Figure 5. Hyper Smart Cart

"Hyper Smart Cart" is a sophisticated shopping trolley using technology. The "Hyper Smart Cart" is also equipped with an LCD on the trolley, which can be called a Machine Cart whose function is to view the temporary price and the total price of groceries. The working system on this "Hyper Smart Cart" trolley is by means of Self-CheckOut where the customer will perform an independent scan on each item to be spent and when finished shopping, the customer will pay for the total amount of purchases that can be seen on the LCD and payment using the payment instruments provided. Payments made by customers can only use a cashless or non-cash system.

With systems and business processes like this, it will certainly make it easier for customers to process payments. Not only eliminating queues at the cashier and providing efficient time for customers when shopping, however, with improvements like this, Hypermart can and is able to compete in the retail business world in Indonesia. Therefore, a system like this deserves and deserves to be issued,

The improvement made, of course, will make the business process also change.

4. Conclusion

The development of technological innovation in the interaction of humans and technology has been known to have many benefits. In the discussion of this research, it can be concluded regarding the development and innovation of the Hyper Smart Cart that based on the identification of problems in purchasing products at Hypermart, the number of customers with a limited number of cashiers causes long queues. With this innovation, it is hoped that the transaction process at

Hypermart can be more efficient because the Self-CheckOut system can help speed up the transaction process so that customers do not have to queue at the cashier but go directly to their respective trolleys.

Acknowledgment

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