

THE IMPROVEMENT OF HUB CONCEPT AT PT.  
MARCOS TRANS INDONESIA

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A project report submitted in partial fulfilment of the  
requirements for the award of the degree of Master of  
Business Administration

UNIVERSITI TEKNOLOGI MALAYSIA

## **DEDICATION**

*This work is entirely dedicated to my devoted parents and beloved parents Jimmy Chandra and Enung Nurhayati; without whose constant support this research paper was not possible. A special feeling of gratitude to my siblings and Shirin nabilla who always cheer me up. To my dedicated supervisor Dr. Thoo Ai Chin, thank you for guiding me on this journey.*

## **ACKNOWLEDGEMENT**

In preparing this thesis, I was in contact with many people, researchers, academicians, and practitioners. They have contributed towards my understanding and thoughts. In particular, I wish to express my sincere appreciation to my thesis supervisor, Professor DR. THOO AI CHIN, for encouragement, guidance, critics and friendship. Without her continued support and interest, this thesis would not have been the same as presented here.

I would like to show my appreciation to Universiti Teknologi Malaysia (UTM) for allowing me to carry out my research with the various assistance provided. Also a special thanks for PT. Marcos Trans Indonesia Enterprise for giving me an opportunity and participation for this research project despite the COVID-19.

Lastly, thank you for my family and friends that supported emotionally when I was doing this project and showing their understanding of every situation when I'm conducting this research.

## **ABSTRACT**

In the last few years, the logistic volume accidentally unstable due to Covid-19 pandemic. Government regulation that limited people mobilization somehow affect retail business like Super Indo that needs to match their supply and demand. During this uncertainty period, many company wanted to shrink their expenses by optimizing the efficiency or cost reduction to remain survive in the industry. The purpose of this study is to investigate the factor that could reduce the logistics cost of MTI and Super Indo. At the same time, the research aims to develop appropriate logistics strategies to achieve a win-win solution for both of entities and ends up by measuring the effectiveness of the logistics strategies implemented

Resource-Based View theory and Supply Hub Model in Supply Chain Management underline the model framework for this research. This study used a mixed-method approach that included interview, surveys and observation. The data was analyzed using Thematic Analysis and the Statistical Package for Social Sciences (SPSS). As a result, the intervention of the new model distribution strategies found to be significant towards the cost reduction since the company can maximize their capacity. Therefore, future research is recommended to further investigate a more suitable approach in improving the delivery methodology for supply chain industry or a similar study.

## **ABSTRAK**

Dalam beberapa tahun kebelakangan ini, jumlah logistik secara tidak sengaja tidak stabil kerana wabak Covid-19. Peraturan kerajaan yang menghadkan pergerakan orang entah bagaimana menjejaskan perniagaan runcit seperti Super Indo yang perlu sepadan dengan penawaran dan permintaan mereka. Dalam tempoh ketidakpastian ini, banyak syarikat mahu mengecilkan perbelanjaan mereka dengan mengoptimumkan pengurangan kos untuk terus bertahan dalam industri. Tujuan kajian ini adalah untuk menyiasat faktor yang boleh mengurangkan kos logistik MTI dan Super Indo. Pada masa yang sama, penyelidikan ini bertujuan untuk membangunkan strategi logistik yang sesuai untuk mencapai penyelesaian bagi kedua-dua entiti dan berakhir dengan mengukur keberkesanan strategi logistik yang dilaksanakan.

Resource-Based View theory and Supply Hub Model Bekalan dalam Pengurusan Rantaian Bekalan menggariskan rangka kerja model untuk penyelidikan ini. Kajian ini menggunakan pendekatan kaedah campuran yang merangkumi temu bual, tinjauan dan pemerhatian. Data ini dianalisis menggunakan Analisis Tematik dan Pakej Statistik untuk Sains Sosial (SPSS). Akibatnya, campur tangan strategi pengedaran model baru didapati penting ke arah pengurangan kos kerana syarikat dapat memaksimumkan kapasiti mereka. Penyelidikan masa depan disyorkan untuk terus menyiasat pendekatan yang lebih sesuai dalam meningkatkan metodologi penghantaran untuk industri rantaian bekalan.

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## LIST OF ABBREVIATION

<b>ABBREVIATION</b>	<b>MEANING</b>
SPSS	Statistical Package for Social Science
NVIVO	Qualitative data management software
ANOVA	Analysis of Variance
MTI	Marcos Trans Indonesia
RBV	Theoretical framework when designing the role of firm-specific in achieving sustainable competitive advantage
SCM	Supply Chain Management
SWOT	Tools to determine company internal and external capability



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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Introduction**

This chapter explains an overview of the research study. It starts with the company profile to elaborate on the company business sector. Then, the case description of the research project. Next, it defines the research problem, research questions, and objectives. Following this, it explains the researcher's role and research ethics. The chapter is finalized by the importance of the proposed research.

### **1.2 Information about the case company**

#### **1.2.1 Company Profile**

PT. Marcos Trans Indonesia (MTI)

PT. Marcos Trans Indonesia (MTI) is a transportation logistics company in Indonesia that was established on 16 May 2013. Marcos Nasution, SE. MM is the owner and founder of MTI who is a local entrepreneur which active in the business of transportation services since 2000. This company provides integrated services in business logistics, supply chain, distribution, warehouse, rental truck, and also workshop truck in by professionals and supported with reliable technology and systems. Also, this company becomes the number one transporter class, especially in the Jabodetabek area and surroundings. As a result, MTI handles many famous customers in Indonesia. For Instance: SuperIndo, Carrefour, Transmart Carrefour, MR. DIY, Sido Muncul, Farmer Market, SariRoti & Hero. MTI head office is located at Jl. Wijaya Kusuma BS 6 No. 13

Jatisampurna, Bekasi city and have a couple workshop/pool at Jl. Gemalapak No. 11 Pasir Sari. Figure 1.1 illustrate t South Cikarang, Taman Lele Semarang and Jl. Al-azhar, Mojokerto. Figure 1.1 illustrates the location of Office & Workshop MTI in Java Island.

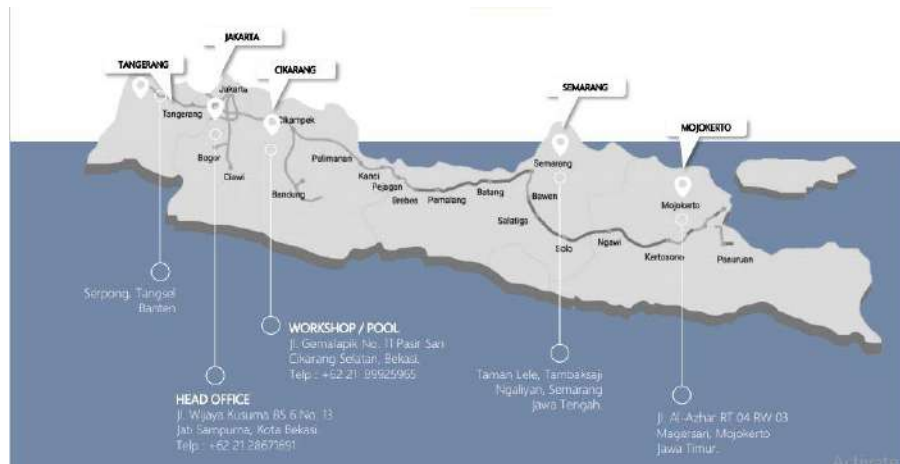


Figure 1. 1 PT. Marcos Trans Indonesia Map in Java Island

MTI offers delivery services throughout the country because it provides reliable, predictable, and consistent personalization services. MTI also take attention to detailed processes and interactions with customers are the most important thing. MTI works with customers to provide the best results and solutions in every situation and is supported by an IT solution system and management team that has the experience, competence, and high dedication to the smooth running of our customer business. "Exceeding Customer Expectations" becomes the motto that MTI believe every day." MTI is supported by several types and types of truck vehicles that always maintain the quality of vehicles by having a workshop on maintenance and service cars that are ready to respond and provide solutions for truck rental needs with 24-hour service. MTI services include:

- **TRUCKING:** Service needs delivery of goods via land between cities and between islands with various types of trucks
- **FORWARDING** Service needs delivery of goods via land, sea, and air with handling and document process
- **PROJECT** Service needs transportation with the specification of heavy goods by using a special type truck

- CARGO Retail delivery needs services with small or large quantities with special handling

### **1.2.2 Case Company Background**

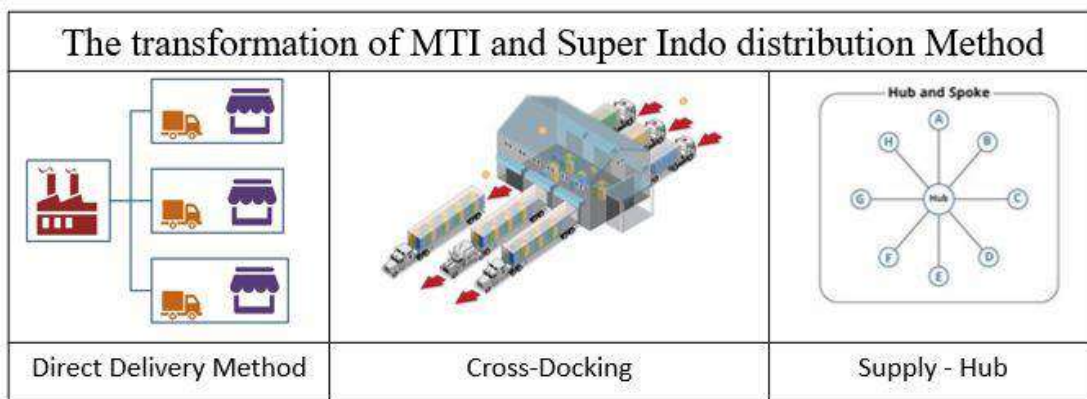
In general, there is two big company who involve in this particular action research. The first one is PT. Marcos Trans Indonesia (MTI) which the researcher place to discuss, make a reflection, and analyze the problem. Secondly is Super Indo as an MTI customer in this project. MTI has been in partnership with Super Indo for 2 years to handle the logistics. MTI even construct a workshop/pool to support Super Indo warehouses in Cikarang. Super Indo is a leader in sustainable retailing. Super Indo provides a variety of everyday products with reliable quality, complete, low prices, and an easy-to-reach store location. Each outlet generally sells a variety of food products, beverages, and other necessities.

In the beginning, MTI only supports minor volumes for Super Indo by providing 5 – 7 units. Because at that time MTI was a newcomer in transportation services. Besides, Super Indo was sourcing the delivery into numerous vendors to get the best price and efficiency. MTI has a responsibility to deliver Super Indo items by applying a direct delivery method to retail outlets. Along the way, the number of unit utilization was a rise by hitting 10 – 12 units twice a week. The objective of these units is to fulfill Super Indo request to distribute throughout Java Island.

Furthermore, with the development of Super Indo business, the outlet number was increasing which in line with the volume items to distribute. As a result, Super Indo decided to run a cross-docking method to cut the logistic cost from Cikarang to Surabaya. It was also supported by MTI by shrinking the number unit amount to 3 wing boxes. After Super Indo stable to secure the market over the east java area, Super Indo built a hub warehouse in Mojokerto to hit the demand. The purpose of these facilities is to have a ready supply of the items available to support retail operations undertaken by Super Indo.

The supply hub is also known as supplier hub, vendor-managed inventory (VMI) hub, which refers to the logistics distribution center located near the retail outlet zone and used to store the raw materials of the supplier (Ran et al., 2017). The reason for a Super Indo to consider moving to a supply hub is typical to get rid of the high margin of error in forecasting and the uncertainty imposed on suppliers to keep excessive safety stock throughout the supply chain. It's an important part of supply chain strategy in order to optimize the logistic cost. Supply Hub changes the flow delivery between MTI and Super Indo from one to one become simplifying the operation processes. Hub Concept has been implemented as a method to distribute items due to optimization of transportation cost and shorter lead time. Figure 1.2 will present the transformation of the delivery distribution method.

Figure 1.2 Transition from direct delivery into Hub C



Source: Author

After the hub concept has been implemented by Super Indo since 2019, it gave them significant impact in terms of logistic and financial things. However, Super Indo still finds the best solution to handle their delivery method to gain more profit. Therefore, the pandemic situation and contract renewal between these two companies became two factors that force Super Indo demand to MTI for improving the delivery method. The purposes of improvement are to increase the efficiency so the company will obtain more profit by decreasing the logistic cost. Therefore, as a vendor, it's one of our responsibility to formulate the solution before the bidding time come. Furthermore, it can be an opportunity to engage more with the customer also being a leader among the competitor.

### 1.2.3 Internal Environment Analysis

The role of internal analysis is to evaluate and diagnose the internal resources and capabilities of the organization and create a competitive advantage (Sammut Bonnici and Galea, 2015). There were few components of internal analysis such as culture, management, marketing, research and development, operation, and management information systems. With the analysis, management does have a clearer picture of the position of the organization and forming a SWOT analysis to strategize the business plan. In this internal environment analysis, I tried to diagnose MTI capability in terms of financial, marketing, and operation.

Table 1.1 Internal Analysis

Factor	Facts	Strength	Weakness
Marketing	Pioneer in distribution services	/	
	Own assets with various type of vehicle	/	
Operation	Need to establish a new method		/
Financial	Investment in the financial aspect		/

Source: Author

As mentioned, all of the strengths of PT. Marcos Trans Indonesia are from the marketing factor. It indicates that MTI is one of the experienced transportation services, especially throughout Java island. It can be seen that MTI is the pioneer in distribution services along with the numerous assets that the company owns. The brand name itself is known by the competitor as well as the potential customers. It brings MTI to become the first choice of the customer when looking for services. Besides, MTI does provide distinctive services. It will allow the customer to customize their desired requirement to fulfill the delivery.

Apart from that, there were also weaknesses found in the internal analysis. The Weak spot is from an operation and financial aspect. The project between MTI and Super

Indo has been running for 2 years with a consistent method. If they need to generate new improvements, a lot of things will change in their operations. It could affect human error or administrative things since the operation team is supposed to adapt to the new circumstance. Furthermore, if MTI has to improve its services, it could impact MTI cash flow if the new method forces them to invest in new assets.

#### 1.2.4 External Environment Analysis

The role of external analysis is to identify what are the opportunity and threats that the company will face later. In other words, the external analysis could be a tool for a company to enlarge their businesses by taking advantage of their opportunity and also prepare the worst scenario which causes from threat. In this external environment analysis, I tried to diagnose factors that could be an opportunity and threat for MTI services.

Table 1.2 External Analysis

Factor	Facts	Opportunity	Threat
Financial	Miscellaneous cost		/
	Inflation on fuel price throughout the world		/
Relationship	A good relationship with Super Indo	/	
Competitive	Benchmarking a new method	/	

Source: Author

According to the previous table, an opportunity for MTI is from the good relationship with Super Indo. Because of the strong connection between these companies, it makes MTI agile to formulate the new method that fulfills the requirement from Super Indo. Another thing, if MTI succeeds to establish a remarkable delivery method, it could attract another company to hire MTI service. Moreover, the new delivery method will be a benchmark for MTI itself and became an added value among the competitor.

Nevertheless, all of the threats are from financial factors. In general, the profit margin for transportation services is less than 15% and the most significant aspect is from fuel price. Therefore, with the uncertainty that lies ahead over a similar industry, it can be a threat for everyone. Besides fuel price, another critical factor is miscellaneous costs such as toll fees and community costs. Specifically, in Indonesia, the government used to increase toll fees gradually and it really damaged a company if they only generate a thin profit margin.

### 1.2.5 SWOT Analysis

A SWOT analysis is done through the evaluation of internal and external analysis. The internal analysis consists of strengths and weaknesses. At the same time, the external environment analysis consists of opportunities and threats. The objective of SWOT analysis is to evaluate and analyze the internal and external environment and hence develop the best strategy towards business development. The following table 1.1 will explain SWOT analysis results if MTI accepts Super Indo offering.

Table 1.3 SWOT Analysis

Strength		Weakness	
S1	Pioneer in the distribution industry	W1	Need to establish a new method
S2	Own assets with various type of vehicle	W2	Investment in a financial aspect
Opportunity		Threats	
O1	A good relationship with Super Indo	T1	Miscellaneous cost (Toll fee & Community cost)
O2	Benchmarking a new method	T2	Inflation on fuel price throughout the world

Source: Author



### 1.3 Problem Statement

Nowadays, it is clear that no company is immune to the increase in fuel prices and energy sources used for air conditioning, refrigeration, and heating, as well as traffic congestion and the degradation of road infrastructures. For this reason, companies are more and more concerned about energy and environmental issues and have to revise their logistics in order to reduce their costs and increase their competitiveness (Benotmane et al., 2018). Specifically, during the Covid-19 Pandemic, all of the companies have the same problem in their financial aspect. The outbreak of Covid-19 had affected all the factories and businesses since they are unable to operate the business by generating profit. It difficult for them to reach the target that has been set in the yearly forecast.

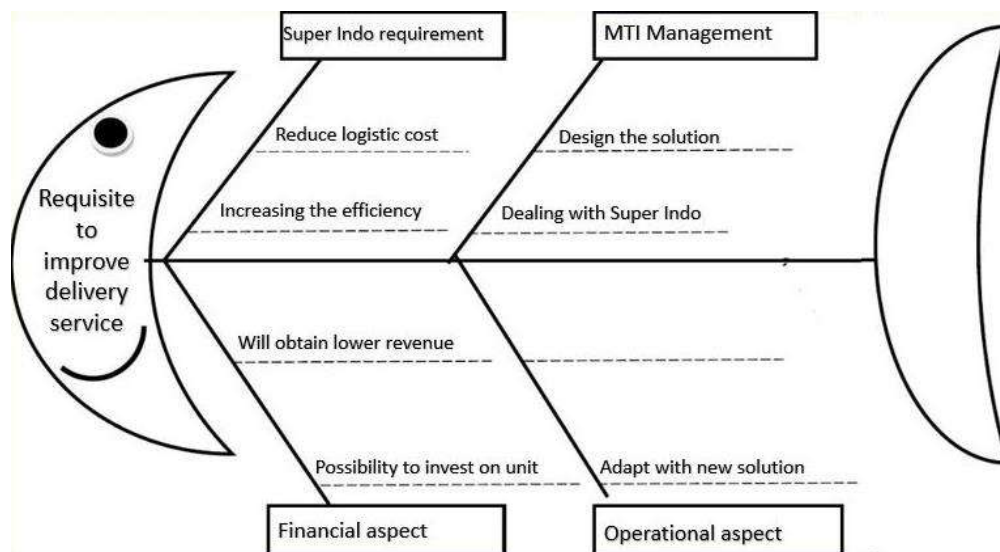
This Covid-19 Pandemic had brought significant effect on economics globally. As a consequence, many companies got bankrupt that affect in increasing of unemployment. To overcome the situation, many of them try to lower their cost by minimizing the number of employees. Because management needs sufficient liquidity to pay the salaries to their employees and workers. Terminate employee is really effective to help the company sustain in a particular moment when sales couldn't be improved. Nevertheless, there is another solution to handle this circumstance. The solution is company need to maximize the efficiency to shrink their cost. In other words, the use of logistical savings will allow the policy of lower prices and increased operating efficiency (RISTOVSKA et al., 2017).

Specifically, Super Indo chooses to reduce the logistic cost by maximizing efficiency to face this pandemic. Super Indo doesn't have any option then challenge the MTI to find a solution to handle this particular occasion. If MTI declines the offering from Super Indo, it really has a massive effect on them. The reason is, MTI will lose two fundamental aspects which help them to sustain. In the financial aspect, MTI will lose revenue and opportunity costs from Super Indo. In this difficult circumstance, revenue is one essential factor to support a company run the business. In-network aspect, MTI will lose its loyal customer. In other words, MTI doesn't have any option rather than accept Super Indo special requests.

### 1.3.1 Problem Diagnosis

After the identification of the problem statement based on PT. Marcos Trans Indonesia, the preliminary discussion was conducted with the operational manager and business development of the company, Mr. Fadly, and Mr. Dede to discover the specific problems underpinning the Super Indo requisite. The business framework of the fishbone diagram was used in problem formulation for the company.

Figure 1.3 Ishikawa Fishbone



Source: Fishbone Diagram of new improvement

Fishbone diagram, also known as Ishikawa diagram or cause-and-effect diagram, is useful for categorizing the potential causes of a problem (Coccia & National, 2017). In this research, four causes were identified that might contribute to new requested to improve delivery services. It includes the entire aspect from the Financial, operational aspect, MTI perspective, and Super Indo perspective. The current situation is, MTI utilizes three wing boxes to distribute Super Indo items from warehouse Cikarang to Mojokerto. However, along the way, these wing boxes did split delivery. Some of the wing boxes had a retail as a destination point meanwhile the rest was heading to Mojokerto. Moreover, the contract between these companies will roll out in January 2021. Therefore, Super Indo comes up with a new requisite to challenge MTI to reduce their logistic cost in the new

contract. In this action research, the researcher will try to help MTI to figure out what is the appropriate strategy should MTI implement in order to overcome the hiccup. Eventually, the strategies also consider the cost structure and effectiveness performance.

## **1.4 Research Questions and Objective**

### **1.4.1 Research Question**

- What is the best solution to achieve a win-win solution for MTI and Super Indo?
- How to run the intervention proposed in order to assist MTI to meet Super Indo demand?
- What is the impact of intervention proposed for the MTI side?

### **1.4.2 Research Objective**

- To investigate the factor that could reduce the logistics cost of MTI and Super Indo
- To develop appropriate logistics strategies to achieve a win-win solution for MTI and Super Indo
- To measure the effectiveness of the logistics strategies implemented by MTI and Super Indo

## **1.5 Researchers Role**

Currently, I'm in an internship with PT. Marcos Trans Indonesia which is my company for this action research. I involve in the operations department to escort transportation operations. My academic background is grounded in areas including engineering. My role during this study was that of an observer-as-participant, as I used to be the main instrument of data collection and analysis that collected, coded, and analyzed the information from group discussion, interviews, and questionnaire to identify the emerging concepts and patterns.

Thus, there's the potential for bias on my part, which could impact the result of the study, making this a challenging balancing act of being objective and nonjudgmental in

my thoughts, observations, and actions. Bias could be a source of error also bias is a smaller amount of an issue than when a qualitative researcher encompasses a conversation with a participant. It therefore implies, that for my research to be considered to own the specified academic rigor, I will be able to should proportionately increase my ethical checks and balances concerning the decreased power and decision-making barriers within my project. For example:

- I must ensure that the company (s) do not feel pressured to answer questions because they believe it would affect our professional or personal relationships.
- That summary of discussions with the company (s) are summarized accurately, and inaccurate inferences are not drawn from what they would have said.
- Although as the Researcher I may ask for has access to all project information including cost and SKU goods, I must ensure that project information stays confidentially within the context of my research project.

However, I feel that this dual role is manageable given the strict ethical rules of the University Technology Malaysia Ethical Board which subsequently required that strict ethical standards be built into this scientific research.

## **1.6 Research Ethics**

Among some of the ethical issues I expect to come across in my thesis elaboration, they are summarized as follows:

- I. I intend to respect the dignity and worth of all people involved in my research by being aware of their age, gender, cultural or language background, and any other status that may impact my ability to talk to them.
- II. I intend to inform people when I conducting surveys or interviews what the information, they give me will be used for and that would be it. I intend to get permission to use the information that I gather from surveys and interviews. Also, I need to make it confidential if they want it.
- III. I intend to only use the information collected for my research project.

- IV. I am not willing sure that the work that I produce is my own by summarizing and writing information in my own words.
- V. My research project question has been approved by my supervisor which has been deemed appropriate for research.

### **1.7 Importance of the proposed research**

Clearly, one of the main parts of research is the significance of the study where the importance of the study is explained by the researcher. This study is significant since it is one of its kind to dwell extensively on real case situations which commonly Transportation Company face. Furthermore, this study is going to break down the logistic cost structure and compare among the options to choose the best option especially in the financial aspect for MTI. To understand more about the implementation of the distribution method, this research provides the data for every possible vehicle with the details on calculation for logistic cost per each vehicle. The classification vehicle can be useful to the supply chain industry and other organizations as they try to distribute their items. The researcher hopes this research can give a contribution to the Supply Chain industry.

Nowadays, many suppliers want to maximize efficiency to reduce their logistic costs. The impact is many Transportations Company have to formulate a new method to press that cost. Therefore, it is significant and important to identify the factor cost which really affected logistic cost. Hence, the primary outcome of the study is to discover a new method of distribution to answer challenges and problems in PT. Marcos Trans Indonesia. After completing this study, it can help to recognize how the best method for MTI to implement a new method that costs a lower budget. A detailed relevant study will disclose in Chapter 2, hence, a framework will develop with the related journal's articles. The intervention plan proposed in this research is expected to be a reference towards management or practitioner. It allows guiding as a recommendation in order to solve a similar problem. The problem could be tackled immediately.

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