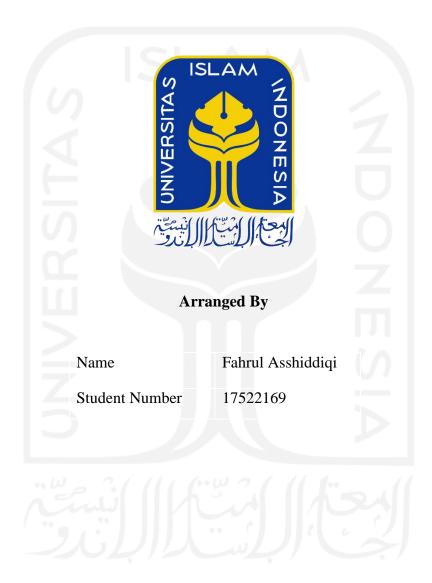
# ANALYSIS OF THE PERFORMANCE IMPROVEMENT PROGRAM ON LEATHER SME IN SLEMAN REGENCY BY USING SCORE RACETRACK MODEL

(CASE STUDY: CV. KAY NUSA BIHAKA)



INTERNATIONAL PROGRAM DEPARTMENT OF INDUSTRIAL ENGINEERING UNIVERSITAS ISLAM INDONESIA YOGYAKARTA

2021

## AUTHENTICITY STATEMENT

On behalf of myself, hereby I certify that this research is based on my work except for citations and summaries in which those are explicit knowledge. If in the future, this statement is proved not right and violates the legal regulation of papers and intellectual property rights, I agree Universitas Islam Indonesia revoke my bachelor certificate.

Yogyakarta, 12 August 2021

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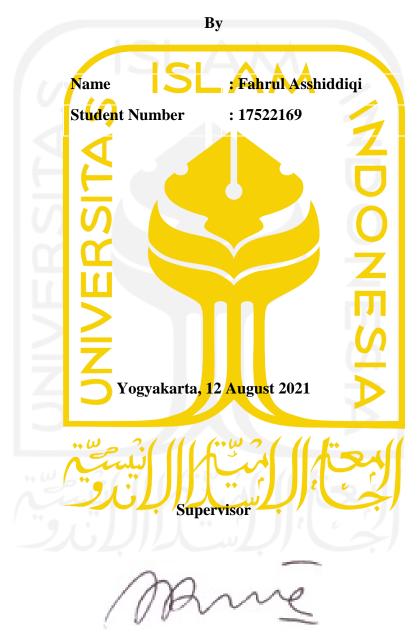
Fahrul Asshiddiqi

# THESIS APPROVAL OF SUPERVISOR

# ANALYSIS OF THE PERFORMANCE IMPROVEMENT PROGRAM ON LEATHER SME IN SLEMAN REGENCY BY USING SCORE RACETRACK MODEL

# (CASE STUDY: CV. KAY NUSA BIHAKA)

THESIS



(Dr. Ir. Elisa Kusrini, MT., CPIM., CSCP)

## THESIS APPROVAL OF EXAMINATION COMMITTEE

#### ANALYSIS OF THE PERFORMANCE IMPROVEMENT PROGRAM ON LEATHER SME IN SLEMAN REGENCY BY USING SCORE RACETRACK MODEL

NUSA BIHAKA)
: Fahrul Asshiddiqi
: 17522169
ommittee in Partial Fulfillment of the
k Industrial Engineering Department
Technology
Indonesia mittee A.Ph.D. Togram ustrial Engineering Indonesia

# **DEDICATION PAGE**

This undergraduate thesis that spent a lot of time and resources is dedicated to my family, especially Papa, Mama, and Adek that always support me in any situation and condition. My classmates in International Program Industrial Engineering 2017, who always share and care for each other, and also all my friends in university life.



# ΜΟΤΤΟ

"Our struggle should be based on holiness. We believe that a holy struggle always gets help from God " –Jendral Soedirman



#### PREFACE

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Allhamdulilah, all praise to Allah SWT, because only with his permission the author can finish the undergraduate thesis. Shalawat and greetings to the prophet Muhammad SAW who has to save mankind from the jahiliyyah era to the Islamiyah era and also give syafaat in yaumul akhir.

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#### ABSTRACT

CV Kay Nusa Bihaka is a small-medium enterprise that produces stuff made from leather located in Yogyakarta. In 2020 Kay Leather has a serious problem, they lose their revenue 50% from the previous revenue. Many influence above problem, one of the problems is caused by Covid-19 pandemic. This research has aimed to analyze the performance of using the SCOR Racetrack Model, which started with *Pre-SCOR*, *Set the Scope*, *Configure the Supply Chain, Optimize the Project,* and *Ready for Implementation*. Based on the research the attribute chose for the observation the *asset management efficiency*. This research is more focus on level one in CV Kay Nusa Bihaka which is *return on supply chain fixed asset* because CV Kay Nusa Bihaka wants to improve *supply chain fixed asset*. To elaborate on the cause of the gap, a fishbone diagram is choosen to find the root cause. In the fishbone diagram, the main problem is caused by the lack of marketing strategy, lack of brand awareness, and overbudgeting in CV Kay Nusa Bihaka and used for an *improvement project* to improve the performance level in CV Kay Nusa Bihaka.

Keywords: Leather SME's, Marketing Strategy, Performance, SCOR Racetrack,



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#### **CHAPTER I**

#### **INTRODUCTION**

#### 1.1 Background

Sleman Regency is currently encouraging the growth of Micro, Small, and Medium Enterprises (MSMEs), as well as the development of Small and Medium Industries (IKM), since small and medium enterprises, provide the majority of jobs in the region. From 2013 to 2017, the number of small to large industrial business units in the Sleman Regency increased year after year. The continued expansion of corporate divisions must be weighed against the industry's overall improvement in operational efficiency (DISPERINDAG Sleman 2018).

CV. Kay Nusa Bihaka that owns the brand name Kay Leather is one of the leather SMEs in Sleman Regency that focused to produce a leather product made from good quality leather. CV Kay Nusa Bihaka produces stuff that made from leather, especially premium product for bags, apparel, and wallet. Kay Leather has a specialty to serve a premium product from Javanese leather that is claimed as the best leather in the world.

CV. Kay Nusa Bihaka is located in Jl. Boyong, Pandan Puro, Hargobinangun, Pakem, Sleman Regency, Yogyakarta Special Region. Every day CV Kay Nusa Bihaka produce the product that made from leather supported by employees and machines. All the processes are conducted by using a traditional method to keep the authenticity and the quality of the product. CV Kay Nusa Bihaka has some partners and channels to sell its product to the customer.

In 2020 Kay Leather has experienced a serious problem, they lose their revenue 50% from the previous revenue according to the statement of owner CV Kay Nusa Bihaka. The problem is caused by decreasing in demand, in March – July, CV Kay Nusa Bihaka lost its demand by 70% from the previous year. CV Kay Nusa Bihaka only gets revenue Rp. 36.968.600 from 4 months of selling the product. In August – December, CV Kay Nusa Bihaka get more orders from customers, they get revenue Rp. 92.833.535. Besides low demand, CV Kay Nusa Bihaka also has to deal with overbudgeting problems in the production process, especially in the labor cost. CV Kay Nusa Bihaka spend Rp. 41.884.034 in one year to pay their employee, this amount is counted 5% over from the

actual budget. Based on the problem, hence this research is conducted to find the solution for CV Kay Nusa Bihaka to settle their problem by using the SCOR Racetrack model approach.

The supply chain operations reference (SCOR) model is a process reference model developed and endorsed by the Supply Chain Council as the cross-industry, standard diagnostic tool for supply chain management (APICS, n.d). According to the SCOR model, market activities that are associated with satisfying a customer's need are plan, acquire, produce, deliver, return, and allow. The model may be used to analyze the current state of an organization's operations and priorities, measure organizational efficiency, and compare corporate performance to benchmark data, among other things. Representatives from the Supply Chain Council have formed business committees to gather best practices insights that firms can use to improve their supply chain models, and SCOR has developed a set of supply chain efficiency standards. SCOR has been upgraded to version 12.0, which was introduced in 2017 by the Supply Chain Council (SCC). This is attributed to a change in a few metrics in SCOR 11.0. Adding sE10 and sE11 to the allow feature, changing the description of the metric RL.11, improvements in agility attributes in AG.1.1, AG.1.2, and AG.1.3, and a hierarchical shift in the cost attribute, which was originally the overall serving cost, are only a few of the modifications. To best fit with the service sector and the new world, overall supply chain management costs have changed, as has the concept of the make, produce, and empower elements. The weakness of the SCOR method itself is that this method can only measure performance and cannot make updates on an ongoing basis (APICS, 2017). The SCOR approach has some benefits over other approaches such as the Balanced Scorecard (BSC), where the Integrated Performance Measurement System (IPMS) only researches the company's internal operations, while SCOR measures upstream to downstream activities.

The SCOR Racetrack Model explains how to use the SCOR mechanism and supporting methodologies to coordinate a SCOR improvement program. Pre-SCOR, Set The Scope, Configure The Supply Chain, Optimize Project, and Ready for Implementation are the five phases in this approach. A hierarchical model can be used to define the output of a supply chain. The primary goal of this hierarchy is to determine a supply chain's output value. The key goal is at the top of the calculation ladder, with an output measurement centered on the SCOR standard version 12.0 and useful measure attributes under it. (APICS, 2017)

In the calculation, the author finds the gap in CV Kay Nusa Bihaka was found in the return on supply chain fixed assets, especially in the supply chain revenue. Based on this finding the author aims to help Kay Leather solve this problem. This SCOR Racetrack model help to analyze and find the improvement program to increase the revenue of

# **1.2 Problem Formulation**

Based on the background, the formulation of the problem in this study is as follows:

- What are the performance attributes that need to be improved based on SCOR Racetrack in CV Kay Nusa Bihaka?
- 2. What is the solution that must be proposed to improve performance at the CV Kay Nusa Bihaka?

#### **1.3 Research Objective**

Based on the formulation of the problem, the objectives to be achieved through this research are:

- Identifying the performance attributes that need to be improved based on the SCOR Racetrack at the CV Kay Nusa Bihaka.
- 2. Developing a proposal of improvements to the performance at the CV Kay Nusa Bihaka.

# **1.4 Scope of Research**

Research objectives can be achieved appropriately, the following research boundaries are needed:

- 1. The research was conducted at CV Kay Nusa Bihaka.
- 2. The method used is the SCOR Racetrack based on version model 12.0.
- 3. The KPI used is following the current situation at the company.
- 4. Data were obtained through observation and interviews at CV Kay Nusa Bihaka.
- 5. The data were taken from January to December 2020.

6. The results of the analysis will be provided as a recommendation for improvement that is ready for implementation.

### **1.5 Benefit of Research**

This research is expected to provide the following benefits:

- For the government, this research is expected to be able to be taken into consideration for policies to support progress and increase the competitiveness of small and medium industries.
- For the community, this research is expected to be able to become a reference for improving the performance of a business or industry so that more people build businesses and have an impact on economic improvement in the community.
- 3. For the related company, this research is expected to become a reference to improve performance so that there is an increase in productivity, customer satisfaction, and wider competitiveness.
- 4. For further researchers, this research is expected to become a reference for research related to improving performance or can be developed further.

## **1.6 Systematical of Research**

For this thesis to be more organized, systematic research is divided into six chapters, as follows:

The first chapter will include the research's background, problem formulation, research aim, research scope, research benefit, and systematic research. These explanations will be expanded upon in the literature review, which will be discussed in greater detail in the next chapter.

Then, in order to address research issues, the concepts and principles are required. As a result, such will be covered in Chapter 2. It also provides a summary of the findings of prior studies conducted by other researchers that are relevant to this study. After the reviews have been thoroughly detailed, a strategy for resolving existing problems and the stages of their resolution is required.

The researcher should write a description of the research framework, the framework and flow chart, the methods used, the data collection techniques, the

materials, the tools, the research procedure, and the data to be studied and the methods of analysis to be used to make this research more organized. Following that is research and data processing, which will be described in further detail in the following chapter. Those are going to be in Chapter 3.

The data acquired during research and processed using the methods chosen will be detailed in Chapter 4 after that. This chapter serves as a foundation for the discussion of the results in Chapter 5.

The outcomes of the study are discussed in the next chapter, and theoretical explanations are analyzed subjectively, quantitatively, and statistically based on the research findings and studies developed to satisfy the research objectives. Then, depending on the problem formulation in the introduction chapter, it will receive the predicted responses.

Then there are some research-based results, and ideas or proposals for achieving desired outcomes are nothing more than confirmation of hypotheses, responses, and recommendations. Based on the knowledge and expertise of researchers who can contribute to the advancement of research. So, chapter 6 is the chapter where we'll talk about it.



#### **CHAPTER II**

## LITERATURE REVIEW

# 2.1 Empirical Study

### 2.1.1 Supply Chain Management

Supply chain management is the flows of money and information between businesses and locations and includes the movement and storage of raw materials, work-in-process inventory, and finished goods as well as end-to-end order fulfillment from point of origin to point of consumption. Interconnected, interrelated, or interlinked networks, channels and node businesses combine in the provision of products and services required by end customers in a supply chain. (Harland, 1996). Supply-chain management has been defined as the "design, planning, execution, control, and monitoring of supply chain activities to create net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally". (APICS, 2021)

According to Pujawan (2005), supply chain management is an integrated approach in managing the flow of products, information, and money that involves upstream to downstream parties consisting of suppliers, factories, distribution networks, and logistics services to the end consumers. According to Dawei Lu (2011), supply chain management is a group of interrelated company participation that adds value to the flow of changes in input from their source of origin to the final product or service demanded from the intended end consumer. Supply chain and form can only be formed by the spatial planning of more than one responsible company.

According to Wirdianto (2008), the supply chain is a network of companies that work together to create and distribute a product in the hands of end-users. The groups of companies are suppliers, factories, distributors, shops, or retailers, as well as supporting companies such as services in logistics. To manage the supply chain, we need an approach method known as Supply Chain Management (SCM). Meanwhile, according to Said (2006) Management of information and products from initial suppliers to end consumers is the goal of using an integrated systems approach by the supply chain. According to Turban, Rainer, Porter (2004), there are 3 kinds of supply chain components, namely:

1. Upstream supply chain

The upstream (upstream) part of the supply chain includes the activities of a manufacturing company with its distributors (who can be manufacturers, assemblers, or both) and their connections to their distributors (second-trier dealers). Resellers' relationships can be expanded to several strata, all the way from origin materials (eg mining ore, plant growth). In the upstream supply chain, the main activity is procurement.

2. Internal Supply Chain Management (Internal supply chain management)

Parts of the internal supply chain include all the processes of entering goods into the warehouse used in transforming input from suppliers into the organization's output. This matter extends over time input into the organization. In the internal supply chain, that concern the main areas are production management, manufacturing, and inventory control.

3. Downstream Supply Chain Segments (Downstream supply chain segment)

The downstream (direction of the mouth) of the supply chain includes all activities that involve shipping the product to the end customer. In the downstream supply chain, attention is focused on distribution, warehousing, transportation, and after-sales service.

## 2.1.2 Benefits of Supply Chain

In general, the application of the SCM concept in the company will provide benefits, (Jebarus, 2001) customer satisfaction, increased revenue, decreased costs, higher asset utilization, increased profits, and the company is getting bigger.

1. Customer Satisfaction

Customers satisfaction applies to the key goals of the manufacturing process operations of each product manufactured by the firm, who are customers or product users. The products or users listed in this sense are unquestionably long-term customers. Consumers must first be pleased with the company's offerings before they can become loyal.

2. Increase the Revenue

The more loyal consumers who become partners of the company means that it will also increase the company's income so that the products produced by the company will not be "wasted".

3. Decreasing Cost

Management.

Stream integration products from companies to end customers also means reducing costs on the distribution line.

- 4. The utilization of assets is getting higher Assets, especially the human factor, will be increasingly trained and skilled both in terms of knowledge as well as skills. Human resources will be able to empower the use of high technology as required in the implementation of Supply Chain
- Increase profitability
   With the increasing number of loyal consumers and product users, in turn, increase company profit
- 6. Company getting higher

Companies that continue to benefit from the distribution process will grow bigger and grow stronger.

# 2.1.3 Supply Chain Operations Reference (SCOR) 12.0

The supply chain operations reference (SCOR) model is designed to help maintain these processes and to evaluate them for effectiveness and efficiency. SCM is complex, but the SCOR model is intended to help standardize the process and create a measurable way to track results. It's meant to work across industries using common definitions that can apply to any supply chain process. Using the SCOR model, businesses can judge how advanced or mature a supply chain process is and how well it aligns with business goals. (Sarah, 2018)

Originally founded in 1996 by PRTM, a management consultancy company, Supply Chain Operations Reference (SCOR) is now backed by the Supply-Chain Council, which is now a member of APICS. APICS published SCOR 12.0, the most recent update of the system, in 2017.

The purpose of the SCOR or business process framework is to define processes in a way that is aligned with key business functions and objectives. How the process interacts, is configured, and the requirements (skills) of the staff operating the process (APICS, 2017). The SCOR model consists of 4 main parts:

- 1. Performance, which is a standard matrix to describe process performance and determine strategic objectives.
- 2. Processes, namely a standard description of the management process and process relationships.
- 3. Practices, namely management practices that result in significantly better process performance.
- 4. People, namely the standard definition for the skills required to perform the supply chain process.

# 2.1.4 SCOR Performance

The SCOR performance section focuses on measuring and assessing the results of the supply chain process implementation. The approach to understanding, evaluating, and identifying supply chain performance consists of three elements: performance attributes, matrices, and process/practice. Reliability, responsiveness, and agility are customer-focused. Cost and asset management efficiency are considered as an internal focus. All SCOR metrics are grouped under one performance attribute (APICS, 2017). These are the attribute based on SCOR:

1. Reliability

The ability to perform the task as expected. Reliability focused on the predictability of the outcome of a process. Typically matrics for the reliability attribute include On-time, the right quantity, the right quality.

2. Responsiveness

The speed at which tasks are performed. The speed at which a supply chain provides products to the customer. Examples include cycle-time metrics.

3. Agility

The ability to respond to external influence, the ability to respond to marketplace changes to gain or maintain competitive advantage. SCOR Agility matrics include Adaptability and Overall Value at Risk.

4. Cost

The cost of operating the supply chain processes. This includes labor costs, material costs, and management and transportation costs. A typical cost metric is the Cost of Goods Sold.

5. Asset Management Efficiency

The ability to efficiently utilize assets. Asset management strategies in a supply chain include inventory reduction and insourcing vs outsourcing. Metrics include Inventory days of supply and capacity utilization.

## 2.1.5 SCOR Racetrack

SCOR Improvement Program Racetrack is an improvement program originating from SCOR 12.0 as the basis for preparing the improvement program. The word racetrack is taken from the word race or runway. Apart from the acronym for Supply Chain Operational Reference, SCOR in Racetrack stands for Set the Scope, Configure the Supply Chain, Optimize Project, and Ready for Implementation. Before starting the project, there is a process that must be passed, namely the Pre-SCOR Programs Steps.

The objectives of implementing the SCOR Improvement Program are as follows:

- 1. Learn how to set up the supply chain improvement program with the SCOR method.
- 2. Learn how to use the SCOR Model Reference framework to develop an effective supply chain improvement program.
- 3. Develop an understanding of the typical steps of a SCOR improvement program.
- 4. Develop an understanding of how to use the racetrack of the SCOR supply chain improvement program.
- 5. Develop knowledge and skills to complete major implementation program outcomes.
- Delve into case studies that illustrate the application of the SCOR Racetrack and the SCOR 12.0 framework.

The following is a model of the SCOR Improvement Program Racetrack which resembles a racing track as shown in the following figure in figure 2.1:



Figure 2.1 SCOR Racetrack Model

1. Pre-SCOR Program Steps

The initial stage is wherein this stage identifies the background of the problem, an overview, and the organizational structure of the company.

2. Set the Scope

At this stage, an understanding of the company's business environment is carried out and determining the scope of the supply chain for the SCOR improvement program.

3. Configure the Supply Chain

At this stage, mapping is carried out on the current conditions against the conditions of the competitors, so that this stage will obtain the current position of the company and determine which SCOR attributes will be improved, then benchmarking, gap analysis, modeling, identifying the causes of gaps, and selecting improvement alternatives were selected.

4. Optimize Projects

At this stage, a list of all improvement projects that have been carried out in the previous stage is carried out to assess the benefit costs of these projects, then identify the SCOR level 3 processes, then link the performance gaps to the projects, then document the expected benefits or opportunities of each. projects, the next goal is to prioritize projects that need improvement.

5. Ready for Implementation

Based on the previous stage, this stage estimates the things that must be prepared as well as proposals for the implementation of the improvement projects that will be carried out.

## 2.1.6 Fishbone Diagram

An Ishikawa diagram (also known as a fishbone diagram, or cause-and-effect matrix) is a diagram that shows the causes of a specific event. This diagram was first introduced by Kaoru Ishikawa (1968). The fishbone diagram can be explained as a tool that describes a systematic way of looking at the various impacts or effects or causes that have a relationship or contribute to producing these impacts (Illie, 2010).

#### 2.2 Theoritical Study

Jagan Mohan Reddy (2019) used the Supply Chain Operations Reference model (SCOR), Balance scorecard models (BSC), and hierarchical-based approach to review the supply chain performance measurement system. This research focused on discovered performance measurement supply chains that operated in a volatile environment. Rafal Tarasewicz (2016) studied the integrated approach to supply chain performance measurement – the result of the study on the Polish market by using CAT and CATI methods. The research focused on the importance of integrated measurement in the modern supply chain management process involved in providing customers with the products they want toward customers satisfaction in Poland.

Ravinder Kumar, Rajesh. K, & Ravi Shankar (2015) conducted research with the title Critical success factors for the implementation of supply chain management in Indian small and medium enterprises and their impact on performance. Rajesh focused on determining the influence of CSFs for supply chain management to developing the global market. They found that SMEs in India understand the significance of SCM deployment on a bigger scale to meet the difficulties of a global market. Oualid Kherbacha, & Marian Liviu Mocan (2016) also research to find the importance of logistic and supply chain management in the enhancement of Romanian SMEs. The research focused on the connection supply chain of the Romanian market to the European market. As a result, SMEs with well-organized logistics and SCM will be able to fully exploit their abundance and develop their competitiveness.

Adi Djoko, Rika, & Dinovita (2015) use SCOR Matric & Analytical Hierarchy Process (AHP) to conduct an assessment of the supply chain factors and classification of inventory management in suppliers level of fresh vegetables. The research focused on comparing inventory policy decisions for non-unique items result in various types of inventory, policies, such as postponement for unique items and vegetables, and inventory speculation for non-unique items. In this research, supply chain performance in cost elements is significant for the quality of fresh vegetables. Jul Esin Delipinar & Batuhan Kocagolu (2016) find the answer that using the SCOR model to gain competitive advantage by a literature review research. The author uses the SCOR model and AHP as the method to conduct this research. The SCOR model is the most important subjects are process modeling and performance measurements. A company can get the advantage of implementing the SCOR model. As a result, the SCOR model is revealed in the literature review.

No	Author	Title	Research Method	Result
	Jagan Mohan	A review on supply	Supply chain	According to the study, a
	Reddy. K,	chain performance	operations	substantial amount of
	Neelakanteswara	measurement	reference model	work has been done in
	Rao. A, &	systems	(SCOR), Balanced	the field of SCPMS
	Krishananad. L.		scorecard models	during the last few
			(BSC) &	decades. As per the
			Hierarchical based	study, the SCPMS
			approaches	should be created in
1				accordance with the
•				company's Supply Chain
				strategy. Performance
				measurement in the
				context of the supply
				chain has been identified
				to be a potential topic for
				future study. For Supply
				Chains that function in a
				volatile environment,

Table 2.1 Inductive Literature Study

No	Author	Title	<b>Research Method</b>	Result
		ISL	AM	further research in the subject of Supply Chain performance modeling using simulation techniques such as system dynamics and discrete event simulation is essential, according to the authors.
2	Thoo Ai China, Abu Bakar Abdul Hamida, Amran Raslia & Rohaizat Baharuna.	chain management	Supply Chain Management (SCM) & Small Medium Enterprises (SMEs)	Because of their flat organizational structure and flexibility, SMEs are well-positioned to absorb change and execute change management once they use SCM. It is obvious that SMEs can identify strategic challenges and opportunities in SCM inside their companies.
3	Adi Djoko Guritnoa, Rika Fujiantib & Dinovita Kusumasarib	Assessment of the Supply Chain Factors and Classification of Inventory Management in Suppliers' Level of Fresh Vegetables	SCOR Matric & Analytical Hierarchy Process (AHP)	According to the findings, analyzing inventory policy decisions for non-unique and unique goods leads in a variety of inventory policies, including delay for unique items and veggies and inventory speculation for non-

No	Author	Title	<b>Research Method</b>	Result
				unique items. To asses
				the factors that influence
				supply chain performance
				it was discovered that cos
				is a significant factor in
				fresh vegetable supply
				chain managemen
				practices, with warranty
				considerations being the
				most important factor to
				consider, which can be
				interpreted as quality
				assurance when evaluating
				supply chain performance
	Ravinder	Critical success	Critical Success	Determine the impact o
		factors for	Factors (CSFs)	CSFs for SCM on the
		implementation of		performance of Indian
		supply chain		SMEs as in framework or
		management in		global market's
		Indian small and		development. Key success
		medium		factors (CSFs) have a
		enterprises and		positive impact on a range
ļ		their impact on		of performance categories
		performance.		in Indian SMEs, including
		periormanee.		customer service and
				happiness, innovation and
				growth, financia
				performance, and interna
				business, according to the
				findings of this study
				- inomingo or and brady

No	Author	Title	<b>Research Method</b>	Result
		ISL		studied sector by sector different CSFs have varied effects on different performance indicators in different industries. SMEs in India are also recognizing the importance of deploying SCM on a larger scale to address the challenges of a global market.
5	Hua Songa, Xuan Yang & Kangkang Yu	How do supply chain network and SMEs' operational capabilities enhance working capital financing? An integrative signaling view.	Case Selection, Data Collection, & Data processing and the quality of research.	This study explores FSPs solutions for SME working capital finance by addressing the problem of information asymmetry using signaling. In contrast to traditional schemes these solutions give data to both SMEs and financia institutions participating in SCF.
6	Rafal Tarasewicz	Integrated approach to supply chain performance measurement – results of the study on the Polish market	Computer-Assisted Telephone Interviewing (CATI)	This research emphasizes the need of integrated measurement in current supply chain management procedures that entail supplying consumers with the items they want. Good measuring methods should

No	Author	Title	<b>Research Method</b>	Result
				take into account both the
				individual components of
				these systems as well as
				the supply chain's overall
				performance. Despite the
				fact that 97 percent of
				respondents believe
				measurement is an
				extremely essential
				component of supply
				chain management,
				empirical investigations
				reveal that the degree of
				measurement integration
				in supply chain
				management in the Polish
				firms studied is far from
				adequate.
1	Amine Belhadi, M	anufacturing and	Supply chain	The innovative COVID-
	Sachin Kamble, ser	rvice supply	resilience (SCRes)	19's quick and extensive
(	Charbel Jose ch	ain resilience to	evaluation and	dissemination created
(	Chiappetta the	e COVID-19	strategies.	enormous demand

the COVID-19 strategies. outbreak: Lessons learned from the automobile and airline industries Ndubisi, & Mani

Jabbour,

Angappa

Gunasekaran,

Nelson Oly

Venkatesh

7

demand enormous uncertainty and supply chain disruptions all across the world. The movement of completed goods and raw materials from Chinese factories to many areas of the world, as well as from other countries to China and

No	Author	Title	<b>Research Method</b>	Result
				other destinations, ha been interrupted by pandemic contro- measures, causing have on the global economy and supply chains. This study used an integrated TTR-F strategy to examine the predicted consequences of the COVID-19 pandemic on supply chains.
Huan	Li, Yongping g, Jia Yu, & ggui Zhaod	OperationModeofSmallandMedium-sizedCommercialEnterprisesatWesternAreainChinaBasedonSupplyChain	Supply Chain Management (SCM)	More efficient cash flow Accelerating grown-up speed; keeping an eye of long-term enterprise profits and developments
	bacha, & an Liviu	The importance of logistics and supply chain management in the enhancement of Romanian SMEs	Supply Chain Management (SCM)	The first stage in integrating global supply systems is for firms to be able to transfer item across borders reliably and cheaply. To connect the Romanian economy to worldwide trends and processes, as well as to connect the Romanian market to European and

No	Author	Title	<b>Research Method</b>	Result
				global markets, the improvement of logistics and supply chain management in Romania should be given high importance. Small businesses with well- organized logistics and supply chain management will be able to fully use their resources and increase their competitiveness.
	Gul Esin Delipinar & Batuhan Kocaoglu	Using SCOR model to gain competitive advantage: A Literature review	Operations Reference (SCOR) & Analytical	Process modeling and performance measurement are the two most significant topics in the SCOR model. The application of these principles to firms will help the industry.
10				Integration of information technology is also advised in order for these research to be useful. This integration should be investigated, and a strong structure should be put in place. The SCOR model's major goal is to travel as one unit without halting in

No	Author	Title	<b>Research Method</b>	Result
				other regions. As a
				consequence of the
				literature study, significant
				deficiencies in the SCOR
				model are discovered.



### **CHAPTER III**

# **RESEARCH METHODOLOGY**

# 3.1 Research Object

The object of this research is to improve its performance in the supply chain process by using the SCOR Racetrack approach with *Supply Chain Operations Reference (SCOR)* version 12.0 as the reference to conduct this research. The data used for this research is obtained from interviews and observation of the supply chain process in CV Kay Nusa Bihaka. This research aimed to help CV. Kay Nusa Bihaka improves its performance in the supply chain process CV. Kay Nusa Bihaka is located in Jl. Boyong, Pandan Puro, Hargobinangun, Pakem, Kabupaten Sleman, Daerah Istimewa Yogyakarta.

# **3.2 Research Instrument**

This research uses the questionnaire as a medium to collect the data of supply chain assets and revenue of CV Kay Nusa Bihaka. The owner of CV Kay Nusa Bihaka will be asked a list of questions that have already been provided by the researcher.

# **3.3 Method of Data Collection**

In this research, the researcher conduct interview with the owner of CV Kay Nusa Bihaka. The owner will ask a list of questions to get the supply chain assets, business process and sales data of CV Kay Nusa Bihaka. The data will be transfer from qualitative to quantitative data.

## **3.4 Method of Data Processing**

The data will be processed by SCOR Racetrack Model explains how to use the SCOR mechanism and supporting methodologies to coordinate a SCOR improvement program. Pre-SCOR, Set The Scope, Configure The Supply Chain, Optimize Project, and Ready for Implementation are the five phases in this approach. (APICS, 2017)

 Identification of the background of the problems in the company, expectations, efforts that have been made, an overview, and organizational structure based on observations and interviews conducted at CV. Kay Nusa Bihaka.

- 2. Develop a business context summary that is supported by a SWOT analysis to determine where the SMEs are about the market.
- 3. Compiling the Supply Chain Definition Matrix obtained from quantitative data such as sales capacity, production, suppliers, demand, and so on.
- 4. Make a geographical mapping of the SME in terms of the location of suppliers, production, customers, warehouses, and others.
- 5. Based on the problems that occurred in SME, then the performance attribute selection was carried out using the SCOR level 1 performance metric selection and then assembling the level 2 metrics of the selected performance attributes.
- 6. Develop metrics data collection in detail where the data is obtained through observation and interviews.
- 7. Benchmarking that can be performed on industry data, internal targets, or certain data for further detailed gap analysis supported by a thread diagram.
- 8. Perform modeling in the form of level 3 processes workflow.
- 9. Identify the causes of gaps using a fishbone diagram.
- 10. Develop detailed metric gaps through a quantitative approach to obtain performance improvement alternatives using the Pareto diagram.
- 11. Identifying performance issues into the performance issue worksheet and grouping similar issues or having the same character to obtain a list of improvement projects from the grouping.
- 12. Conducting an opportunity analysis converted into rupiah nominal to determine the impact of the improvement on costs, as well as determining the supporting application (software).
- 13. Conduct estimates in the form of recommendations for needs, infrastructure, as well as other things that support the implementation of the improvement programs that have been planned. The proposed project is based on the performance calculation. The best option of the project will be implemented in CV Kay Nusa Bihaka.

# 3.5 Method of Data Analysis

The descriptive analysis method is a statistic used to analyze data by describing or describing the data that have been collected as they are without intending to make conclusions that apply to the public or generalizations (Sugiyono, 2014). To analyze the result the researcher uses descriptive analysis to determine the project improvements.

# 3.6 Flowchart of Research

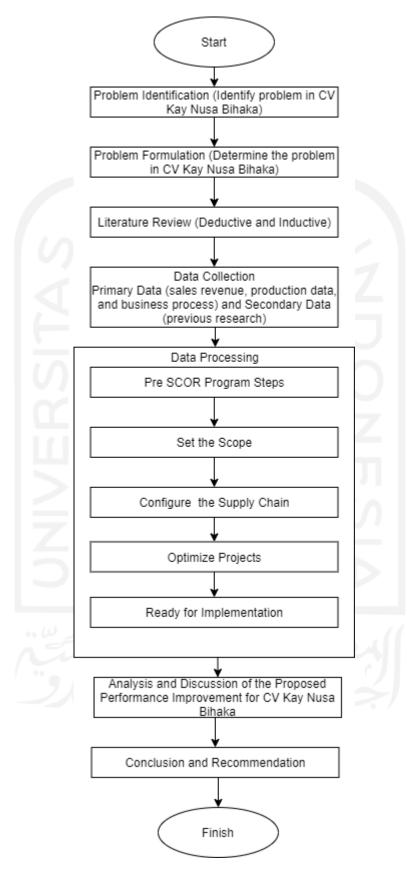


Figure 3.1 Research Flowchart

Based on figure 3.1 above, it can be explained that the stages carried out in the study are as follows:

1. Problem Identification

The first step in this work is to evaluate the field conditions. It is assumed that the research determines what issues exist in it, with the recognition for this research focusing on the supply chain's output at the CV Kay Nusa Bihaka.

2. Problem Formulation

The next stage is to define problems that are acceptable and in line with what occurred to CV Kay Nusa Bihaka in the supply chain phase after recognizing the problems that exist in CV Kay Nusa Bihaka. The formulation of this issue will be used to determine the research's goals and benefits later on.

3. Literature Review

Deductive and inductive studies are used to do literature reviews. Literature studies are conducted with related and similar sources from the previous study to collect hypotheses that support the research's direction. Furthermore, previous research can be used as a reference and consideration for current research.

4. Data Collection

Primary and secondary data are collected at this time. At CV Kay Nusa Bihaka, primary data was collected through observation, interviews, and questionnaire design. Conducting a review of previous research is how secondary data is gathered. The data collection process starts with the gathering of company profile information, followed by the identification of the company's supply chain activities in the performance segment.

- 5. Data Processing
  - a. Pre SCOR Program Steps

Preparations are carried out at this point in the form of finding issues in CV Kay Nusa Bihaka based on performance levels. This identification is essential to determine what should be developed at a performance level, as well as the best approach for doing so. At this stage, we'll use the SCOR Racetrack method to give CV Kay Nusa Bihaka an overview of the project. This phase divided into three phases which are:

1) Identify Improvement Motivation

The researcher and CV Kay Nusa Bihaka decide what should be developed in the first stage of the pre-SCOR process. At this stage, the project's methods will also be determined. This process would analyze the conditions that exist in CV Kay Nusa Bihaka and classify them into each group, making it easier to decide which output should be improved. This stage also includes information about SCOR 12.0 and how to run a project using the SCOR Racetrack technique, in addition to performing research. Workshops for the owner of CV Kay Nusa Bihaka and workers may be used to conduct these tasks.

2) Identify SCOR Program Organization

The next step is to form an organization to operate the project after workers have a thorough understanding of SCOR 12.0 and how to work on projects using SCOR Racetrack. The organization is made up of all of the CV Kay Nusa Bihaka components, organized by their respective fields and competencies. The organization's creation aims to ensure that the project succeeds as planned, as well as to serve as a supervisory role during the project's design, execution, and evaluation.

3) Plan for the Next Phase

After the principles and supporting organizations have been developed, the next step is to decide whether or not the project will be continued. The following are some of the elements that must be considered when making a decision:

- Cost Estimation
- Scheduling
- Resource and Requirements

The decision-making process for estimating the above components must be meticulously calculated to aid in the selection of the project management strategy. After careful consideration and calculation, it is hoped that a decision on the project's long-term viability would be reached at the CV Kay Nusa Bihaka.

b. Set the Scope

At this point, the market environment is assessed, and the scope of the supply chain for the SCOR improvement program is determined. Several activities must be completed to determine the extent of the supply chain, including:

- 1) The competitive environment can be understood by employing SWOT analysis for its market position or supply chain position, so what is the strength of the business, the company is more dominant in what part, the source where did it come from, and so on. Data can be collected from stakeholders, financial statements, strategic strategies, competitive analysis, or even independent sources when explaining the business context, which means that the company needs to know what the actual state of the supply chain in the company is.
- 2) Documenting or visually mapping the supply chain, such as who the consumers and markets are; any goods and services; who the supplier and even who the channel partner is; what kind of marketing organization structure is; procurement organizational structure; and the kind of product service demanded by the consumer. The information was gathered from the following sources:
  - Customer and markets: from marketing, business development, and the other organization in the customer's segmentation.
    - Product and service: from Enterprise Resource Planning and product management systems.
  - Suppliers and Channel partner: strategic sources and business development organizations, who are the suppliers, where are they located. This data is obtained from supplier masters such as ERP, SRM, and logistics systems.
- 3) The aim of prioritizing the supply chain is for the SCOR team to understand that not all supply chains can offer value or benefits to a company; for example, some supply chain networks produce a lot of revenue, but there

are also several that don't, and sorting them out is a priority under its significance To assess ranking, you can use quantitative supply chain metrics such as size, sales, volume, and margin. Complexity (number of SKUs or sold items), strategic significance (for example, opening a branch market in another country), cash consumption, risk, and volume variability are all factors to consider.

- 4) Geographical map depiction with the aim of:
  - Visualization of the total coverage of business operations.
  - Enable inventory visualization and information flow among various supply chain entities.
  - Enable the identification of what products or service packs are sold to which channel entities.
  - Adding financial data can identify where sales revenue and profitability are greatest in the supply chain.
  - Connection of the SCOR process with supply chain entities is possible.
- 5) Collecting performance data (high-level data) that is relevant to the Supply Chain improvement program and also finding the GAP performance where the Gap itself is found in which position.
- 6) Defining the scope of the improvement program and obtaining an agreement as meant is an agreement arising from the current supply chain conditions. The current supply chain condition is obtained from the current performance matrix and from there a gap will be obtained.
- 7) At this step, it is necessary to decide whether what is found in the process of setting the scope is approved or not by the research team (go, no go decision), to take further research decisions or not because they have found areas of improvement.
- c. Configure the Supply Chain

At this stage, the performance metrics and processes of the SCOR improvement program are determined, where there are 6 main tasks and 7 deliverables. The 6 main tasks are as follows:

1) Improvement for Program Kickoff

The aim is to instill optimism and excitement in the company, as well as provide a general understanding of the SCOR program. At a previous point, the scope was decided. Then begin at this stage. Kickoff meetings take the form of presentations that cover topics such as inspiration, reasons for making SCOR, engagement, structure, and an overview of the scope, which we then present to the management of CV Kay Nusa Bihaka.

2) Choose the SCOR performance attributes

The aim is to gain internal and external teams' support and dedication. The SCOR performance attributes that are used to assess supply chain performance was decided. After the kickoff, the next move is to select a performance from SCOR. The author chooses from performance gaps so that can choose gaps based on consensus or criteria when choosing performance gaps. The aim is to determine and choose the metrics that will be used to measure progress.

The first step is to train the team. The metrics in SCOR 12.0 and those in the company's supply chain may differ. As a result, it's important to first understand the description, how to calculate, and the SCOR 12.0 model so that you can make accurate measurements. The team then made a match between the SCOR criteria and the field conditions. So that the metrics used in the business and those used in the SCOR model are in agreement. Since SCOR has general characteristics and does not customize, if it is not yet appropriate, it must be modified, for example with some modifications.

Second, when assessing results, comparisons with rivals are made by matching data with benchmarks or established criteria. However, at level 1 return on supply chain fixed asset, it is suggested that the selected metrics be strengthened no more than three times. Then, if it's from a place of supply chain rivalry where you want to excel or from management advice and team consensus, the metrics would be chosen. You may also use benchmarks from industries that are close to yours. Then decide which of the gaps is the most important to close. Data from level 2 must be gathered before making a decision. Level 1 is chosen, and then level 2 is assessed.

3) Collecting detailing data

Identifying the owner of the data, collecting level 2 data, and then calculating it to find out what the percentage value from level 1 is presented in the Metrics Data Collection table. The value for level 1 is taken from the lowest level 2 value.

4) Benchmarking

Following the data collection, the next step is to conduct a benchmarking or standardization procedure against other rivals, to determine the objective and output evaluation in an enterprise of similar manufacturing organizations and processes. In CV Kay Nusa Bihaka, the author found that the benchmarking is based on the previous target data with the actual data that was already determined by the author.

5) Gap Analysis

This phase is used to decide where the actual supply chain stands concerning the goal. The aim is to complete the process of prioritizing metrics that can be used in the improvement process. Additionally, a Thread Diagram is used to illustrate a process, as well as modeling level 3 operations workflow, using a fishbone diagram to describe the sources of holes, gathering detailed metric gaps, and using Pareto diagrams to determine alternatives.

6) Plan for the next phase

At this stage, the team must carry out the decision-making process and agree in detail on the activities and sources that need to be improved.

d. Optimize the Project

During this stage, a list of all development initiatives completed in the previous stage is created, the benefit costs of these projects are assessed, the SCOR level 3 procedures are identified, the success discrepancies are linked to the projects, and the potential advantages or prospects of each project are recorded. At this stage, the next goal is to prioritize projects that need improvement. The following are the outputs or deliverables from this stage:

- 1) Initial project portofolio
- 2) Project portfolio
- 3) Plan for ready for implementation

#### These are the steps:

- Creating a matrix of the list of process issues or defects that have been prepared in the previous stage.
- Group performance issues into implementation projects that use a combination of SCOR processes.
- 3) Linking the benefits of each project.
- Sorting projects from those with the highest benefits to be selected and improved first using a matrix of impact, improvement, return on complexity, effort, risk.
- 5) Authorization and planning for the next stage, namely ready for implementation.
- e. Ready for Implementation

Conducting the simple production of chosen metrics as best practice by mixing level 3 and level 4 methods, then solving them in the selected concept type to be used as test material, pilot, and roll-out solution. The team reaches the execution preparation period after the proposal has been decided upon by the project team, which primarily has advantages and has a high impact, and already has a timeline and goals. The phases are as follows:

- 1) Start a project kickoff (project defined by the team).
- 2) Discuss from the project charter (this activity is more specific than set the scope). Like the improvement project charter which is more detailed than the set scope, because at this stage the improvement project is certain.
- 3) Define project scheduling.
- Assembly to SCOR level 3 and level 4 process based on best practice. If you already have best practices for improvement projects, then describe the

best practice processes at level 3. Next, we will go into more detail at level 4 the process using best practices in good industries. Level 4 process will serve as an activity to improve the process.

- 5) Then determine from the selected design approvals (six sigma, kaizen, lean, etc.)
- 6) Configure, test, pilot, and rollout solutions.
- 7) Just can start the next project.
- 6. Analysis and Discussion of the Proposed Performance Improvement

After processing the data, analysis and discussion were then carried out to determine suggestions for improving the overall performance of the SMEs supply chain according to the SCOR Racetrack method.

7. Conclusion and Recommendation

The conclusion contains the results of the collection, processing, and analysis of data to answer the research objectives that have been set. While suggestions are considerations and recommendations that can be given to improve further research.



#### **CHAPTER IV**

## **RESULT OF RESEARCH**

It's

Figure 4.1 Kay Leather Company's Logo

## 4.1 Pre-SCOR Program Steps

# 4.1.1 Company Profile

Figure 4.1 shows the CV. Kay Nusa Bihaka logo, CV. Kay Nusa Bihaka or which has the trademark Kay Leather is an SME that was founded on September 17, 2011, but has been initiated since 1994. This IKM is owned by Mr. Arifin Kustiawan and his wife, namely Mrs. Hilmy Istiqomah. In 1994, CV. Kay Nusa Bihaka only focuseD on tanning and trading the skins of sheep, goats, and cows for sale. Until starting in 2011, this SME began to be engaged in leather crafts with products in the form of shoes, bags, wallets, key chains, and others. This SME implements 2

production systems, namely, make to stock and repetitive make to order.

Genuin

CV. Kay Nusa Bihaka has 3 company locations. The first location is in East Java which focuses on tanning and trading the skins of sheep, goats, and cows. The second location is the office and warehouse located at Purimas Candi, Jl. Kaliurang KM. 12.5, Turen, Sardonoharjo, Ngaglik, Sleman Regency, Yogyakarta Special Region. The last location is the workshop which is located at Jl. Boyong, Pandan Puro, Hargobinangun, Pakem, Sleman Regency, Yogyakarta Special Region.

#### 4.1.2 Product



Figure 4.2 Kay Leather Product

Figure 4.2 shows the product from Kay Leather, CV. Kay Nusa Bihaka produces various kinds of products with the main raw materials of cow, goat, and sheepskin. Some of the products produced by the SME are bags, shoes, aprons, pouches, cardholders, pillows, key chains, and others. Besides, CV. Kay Nusa Bihaka also sells leather and is a leather supplier for SMEs engaged in the production of leather-based handicrafts.

# 4.1.3 Vission & Mission

The following is the Vision and Mission of CV. Kay Nusa Bihaka:

Vision:

"To be a supplier and producer of leather that provides benefits to the general public"

Mission:

1. Producing products that are beneficial to society

2. Always maintain quality to be able to compete in national and international markets

#### **4.1.4 Production System**

CV. Kay Nusa Bihaka uses Make to Stock (MTS) and Make to Order (MTO) for the production system. Make to Stock is used for the retail market, the buyer can buy with the existing product that is already made by Kay Leather. For the MTO production system, Kay Leather set the minimum order number which is 12 pieces. For the production process, Kay Leather uses leather produce by their sister company.

The leather tanning process starts with the application of salt to destroy bacteria that can weaken collagen and reduce water levels, causing skin moisture to decrease. After that, start the pre-tanning procedure. Hair, fat waste, and other contaminants are removed during this procedure. The skin is then immersed in water that has been chemically prepared to extract salt. After that, liming and scraping lime should be done. The acidification mechanism follows, which lowers the collagen pH to the lowest possible level to aid the tanning process. The tanning procedure is the next step. After the tanning process is over, quality control is performed to ensure that the leather meets the required standards. The coloring process is the last in the leather tanning stage at CV. Kay Nusa Bihaka.

After the raw materials are ready, then for the produce stuff, Kay Leather starts with preparing the raw materials. After the required raw materials are ready, the next step is the pattern processing on the raw material in leather in the form of square feet measuring 30 x 30 cm. After the pattern is made, the raw material is cut. The next process after cutting the raw material is the sewing process. After the product is sewn, the finishing process is carried out. Then the product goes into the quality control process to see whether the product passes the test or not. If the product conforms to the standard, it can be continued in the last process, namely packaging. However, if the product considered as not standard, it is returned to the sewing process for repairs.

#### 4.1.5 Business Process of Kay Leather

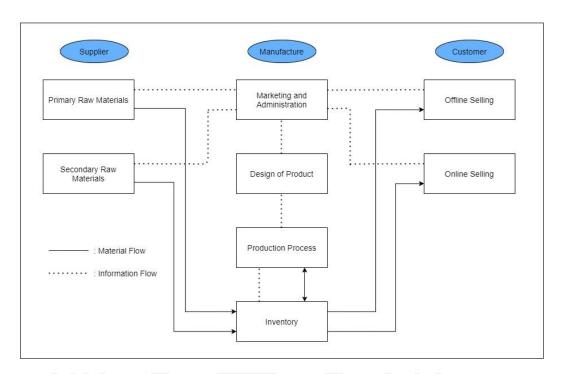


Figure 4.3 Kay Leather Business Process

Figure 4.3 shows the business process of Kay Leather, in general, the supply chain of CV Kay Nusa Bihaka started from selecting raw materials for the production process. For the primary raw materials, CV Kay Nusa Bihaka only has a single supplier of leather ordered from PT. Amsa Mulia Bersama. Supporting raw materials are only ordered when there is a custom order adjusted to the product design desired by the consumer. CV. Kay Nusa Bihaka makes orders and takes the necessary supporting raw materials himself. There is a flow of information between the main and supporting raw materials to the marketing and administration division of the company. If a supply of raw materials is necessary, this information pertains to transaction activities. In addition to information flow, there is material flow from suppliers to the warehouse, which includes delivery and storage of items from suppliers straight to the warehouse. Because the product is manufactured to order, there is a flow of information from marketing and administration to design. This information is connected to the design of the product that consumers want. After you've finished developing the design, go to the production area to see how the information is flowing. The manufacturing department creates things that the designer has created. From the production department to the inventory, there is a flow of information and materials. Information relates to the availability and demand for raw materials needed during the production process, while the material flow is the transfer of finished products to inventory for delivery to consumers. Furthermore, there is a flow of information from marketing and administration to consumers both online and offline, namely when consumers place orders. Meanwhile, there is also a flow of material from the inventory to the consumer when the finished product is delivered as requested by the consumer.

#### 4.2 Set the Scope

#### 4.2.1 SWOT Analysis

SWOT analysis is a method for identifying and assessing a problem, mission, or market model utilizing internal and external elements including strengths, limits, opportunities, and risks. SWOT analysis is based on the ability to see a company's internal and external capabilities in relation to rivals. The goal is to evaluate a scenario or situation in order to develop a company's strategy in the face of market rivalry.

a. Internal Factor Analysis Strategy (IFAS)

The purpose of evaluating a company's internal factors is to determine the company's strengths and weaknesses. The IFAS (Internal Factor Analysis Strategy) table is designed to put these internal strategic factors into context for the company's strengths and weaknesses. After undertaking analyses and interviews, the following are the IFAS influences in the Kay Leather showed in table 4.1 below:

No	Strength
1	Best quality of leather
2	Trustworthy company
3	Very good response and service time
4	Competent human resources
5	Good quality output

Table 4.1 Internal Factor Analysi	S
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No	Weakness
1	Lack of variation of marketing strategy
2	Marketing and development strategy handled by the owner
3	A small number of human resources
4	Lack of brand awareness
5	A promo given to the client is very limited

b. External Factor Analysis Strategy (EFAS)

EFAS analyzes external conditions from all aspects, at least based on political, economic, social, cultural, security factors from the external environmental conditions of the company (state or local government). Following are the EFAS factors in Kay Leather after conducting observations and interviews as in table 4.2 below:

No	Opportunity
1	Maximize the potential export abroad
2	Maximize the usage of e-commerce and social media
3	Many Companies to keep continuous innovation
4	A strategic workplace located in the central city
5	Client willing to pay more to deliver their innovation clearly
No	Threat
" <b>1</b>	Government regulations especially for tax
2	The massive development of internet marketing
3	Many competitors in the same field
4	Can not beat the strong brand image of the leather company
5	Many companies own great business communication division

Table 4.2 External Factor Analysis

# 4.2.2 Business Context Summary

Component	Description
	CV. Kay Nusa Bihaka or which has the trademark Kay Leather
	is an IKM that was founded on September 17, 2011 but has
	been initiated since 1994. This SME is owned by Mr. Arifin
	Kustiawan and his wife, namely Mrs. Hilmy Istiqomah. In
Business	1994, CV. Kay Nusa Bihaka only focuses on tanning and
Description	trading the skins of sheep, goats, and cows for sale. Until
	starting in 2011, this SME began to be engaged in leather
	crafts with products in the form of shoes, bags, wallets, key
	chains, and others.
170	
	Based on SWOT analysis these are the challenge and
	opportunities.
	Strength: Kay Leather has good quality products of leather
	stuff.
	Weakness: Kay Leather's brand can not compete with the
	other popular brand, thus they can not sell many products in
Challenge and	the retail market.
Opportunities	<b>Opportunity:</b> The market for a premium product made from
	leather still large, this opportunity can be maximized by Kay
	Leather to sell their premium product to the potential
	customer.
	Threat: Kay Leather doesn't have good strategy marketing,
	because of that they can not maximize the retail market and
	can not get much revenue from the retail market.
	Kay Leather serves the best quality product with the best raw
Value Preposition	materials comes from Javanese leather that is the best in the
Ŧ	world.

Table 4.3 Business Context Summary

Critical Issue	Kay Leather still does not maximize the social media branding to get engagement from potential customers. Lack of marketing strategy is also one of the critical issues because they can not maximize the supply chain due to low order from customers.
Risk	Based on SWOT, Kay Leather has a risk in the other competitor that has a strong brand image. The existence of Kay Leather is still low, that's why they need to give more marketing strategies to increase sales to compete with their competitors.
Financial Performance	Aimed the pandemic, Kay Leather lost its revenue by almost 70 percent. Sales numbers are extremely down and urges CV Kay Nusa Bihaka to expand their business to another sector. Fortunately, this strategy is successful which makes CV Kay Nusa Bihaka survive until now.
Internal Profile	CV. Kay Nusa Bihaka consists of the President Director, namely Mr. Arifin Kustiawan. Underneath there is the Leather Division with a total of 7 workers, the Production Division consisting of the Marketing and Administration Division with 1 worker, the Design Design Section with 1 worker, and the Production Section with 6 workers. Finally, there is the Education and Training Division with a total of 2 employees.
External Profile	CV. Kay Nusa Bihaka manages a collaboration with PT Amsa Mulia Bersama as the sole supplier of leather for Kay Leather. On the other hand, Kay Leather has a partnership with Disperindag Sleman to support a gallery and also an

expedition provider as a partner for shipping.

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### 4.2.3 Document Current Supply Chain

- a. Data Sourcing
  - 1) Customers and Markets

Customers from Kay Leather come from around Indonesia, there are three segments from Java, Kalimantan, and Sumatera. Each segment has a market in several cities in Java, Kalimantan, and Sumatera island. The cities are Jogjakarta, Jakarta, Cirebon, Lampung, Aceh, Kutai Kartanegara, and Pontianak. Besides those cities, Kay Leather also sells the product around Indonesia by the online method and international market by joining an exhibition hosted by the Ministry of Tourism and Arts.

2) Product

Kay Leather has several products that are made from leather, such as Bags, Wallets, Pouch, Home Accessories, Key chains, brackets, Apparel, and Brooch. Besides, producing a product made from leather they also expand their business in another sector during the pandemic era. They open Kay Foods, a business that provided groceries and parcels.

3) Suppliers and Channel Partners

Kay Leather uses a single supplier to supply leather as a raw material. Supplier of leather as a raw material for Kay Leather located in Bantul, Yogyakarta. Kay Leather only uses leather produced by PT. Amsa Mulia Bersama as a sole supplier. For channel partners, Kay Leather is supported by the government by providing showrooms in several places in Yogyakarta with another leather manufacturer.

4) Geography

Kay Leather has two plan, first is located in Purimas Candi, Jl. Kaliurang KM. 12,5, Turen, Sardonoharjo, Ngaglik, Kabupaten Sleman, Daerah Istimewa Yogyakarta designed as location for inventory and showroom of Kay Leather. While second plant is locatet in Jl. Boyong, Pandan Puro, Hargobinangun, Pakem, Kabupaten Sleman, Daerah Istimewa Yogyakarta. The location is designed for production and workshop for their employees. b. Prioritizing the Supply Chain

In the process of Prioritizing the Supply Chain, the aim is that the SCOR team recognizes that not all supply chains will provide value or benefits to a company, such as some supply chain networks that generate very high revenue but several supply chain networks are not so high in revenue that it is necessary the priority sort according to relevance.

	Revenue	Gross Margin%	#of SKUs	Unit Volume	Strategic Value	Rank
Java	3	3	2	3	3	1
Kalimantan	2	1	3	1	2	2
Sumatera	1	2	1	2	1	3

 Table 4.4 Supply Chain Priority

Based on table 4.4 above, it is shown Java is the biggest market of Kay Leather that indicated by the revenue of more than 50% comes from customers from Java island. Kalimantan is in second place and Sumatera is in last. From that observation, we can see the opportunity to maximize the potential market in Java island by formulating some strategies to get more customer segments in Java. But, this is not easy due to a lot of competitors in Java that have the same product and market.

c. Supply Chain Definition Matrix

Table 4.5 Supply Chain Definition Matrix

Suppliers	Kay Leather	Customers
• <u>PT. Amsa Mulia</u>	• Kay Leather Galery	Offline Customers
<u>Bersama</u> Supplier of leather as a raw material for Kay Leather located in Bantul, Yogyakarta. Kay	Located in Purimas Candi, Jl. Kaliurang KM. 12,5, Turen, Sardonoharjo, Ngaglik, Kabupaten Sleman, Daerah Istimewa Yogyakarta. Location for	Customers come to the showroom and workshop directly, usually comes from around Yogyakarta.

Leather only uses leather produced by PT. Amsa Mulia Bersama as a sole supplier.

• of Kay Leather.

Kay Leather Workshop Located in Jl. Boyong, Pandan Puro, Hargobinangun, Pakem, Kabupaten Sleman, Istimewa Daerah Yogyakarta. Location for and production also workshop for their employee.

# **Channel Partner**

<u>Market Place</u>

Kay Leather uses two platforms of a marketplace which is Tokopedia and PaDi UMKM.

• <u>Expedition</u>

Kay Leather use Pos Indonesia, JNE

Kay Leather ShowroomKay Leather is supportedby the government byproviding showrooms inseveralplacesinYogyakarta with anotherleather manufacturer.

**Online Customers** Customers order the product from Kay Leather through ecommerce and social media. Kay Leather sells the online to product cities in several Java, Sumatera, and Kalimantan islands.

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According to Table 4.5 the Supply Chain Definition matrix, it can be seen that Kay Leather has two places for production, the first place is located in Kaliurang street Km 12,5 used for inventory and gallery. The second place is located in Harjobinangun, Sleman used for the production process as well as a workshop for employees and visitors. Kay Leather uses a single supplier of leather that bought from PT Amsa Mulia Bersama. Based on the sales data in 2020, Kay Leather got results;

Product of Kay Leather	January	February	March
Bag	Rp14.608.000	Rp2.460.000	Rp3.200.000
Wallet	Rp5.885.000	Rp1.535.000	Rp0
Pouch	Rp716.000	Rp2.490.000	Rp3.160.000
Home Accessories	Rp300.000	Rp0	Rp0
Key Chain	Rp385.000	Rp225.000	Rp0
Bracklet	Rp45.000	Rp0	Rp0
Stationary	Rp500.000	Rp0	Rp0
Apparel	Rp3.700.000	Rp4.840.000	Rp0
Brooch	Rp0	Rp45.000	Rp0
Mask	Rp0	Rp0	Rp0
Necklace	Rp0	Rp0	Rp0
Groceries	Rp0	Rp0	Rp0
Parcel	Rp0	Rp0	Rp0
Total	26.139.000	11.595.000	6.360.000
Grand Total		44.094.000	

Table 4.6 Kay Leather's Revenue Q1

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Product of Kay Leather	April	May	June
Bag	Rp0	Rp1.200.000	Rp270.000
Wallet	Rp0	Rp1.010.000	Rp1.410.000
Pouch	Rp0	Rp0	Rp700.000
Home Accessories	Rp0	Rp0	Rp292.500
Key Chain	Rp0	Rp0	Rp0
Bracklet	Rp0	Rp0	Rp0
Stationary	Rp0	Rp125.000	Rp0
Apparel	Rp0	Rp0	Rp0
Brooch	Rp0	Rp385.000	Rp90.000
Mask	Rp550.000	Rp280.000	Rp3.385.000
Necklace	Rp0	Rp0	Rp0
Groceries	Rp11.896.800	Rp0	Rp0
Parcel	Rp4.409.300	Rp0	Rp0
Total	Rp12.446.800	Rp3.000.000	Rp6.147.500
Grand Total		Rp21.594.300	

Table 4.7 Kay Leather's Revenue Q2

Table 4.8 Kay Leather's Revenue Q3

Product of Kay Leather	July	Augstus	September
Bag	Rp0	Rp0	Rp8.400.000
Wallet	Rp1.010.000	Rp1.458.000	Rp0
Pouch	Rp575.000	Rp150.000	Rp0
Home Accessories	Rp0	Rp0	Rp0
Key Chain	Rp56.000	Rp70.000	Rp0
Bracklet	Rp0	Rp0	Rp0
Stationary	Rp0	Rp370.000	Rp1.020.000
Apparel	Rp0	Rp28.944.000	Rp3.800.000
Brooch	Rp0	Rp0	Rp775.000
Mask	Rp2.964.000	Rp258.000	Rp555.000
Necklace	Rp0	Rp0	Rp0
Groceries	Rp0	Rp0	Rp0
Parcel	Rp0	Rp0	Rp600.000
Total	Rp4.605.000	Rp31.250.000	Rp14.550.000
Grand Total		<b>Rp50.405.000</b>	

Product of Kay Leather	October	November	December
Bag	Rp4.022.000	Rp4.314.500	Rp5.705.000
Wallet	Rp0	Rp1.020.000	Rp4.022.000
Pouch	Rp0	Rp307.000	Rp0
Home Accessories	Rp0	Rp0	Rp0
Key Chain	Rp750.000	Rp2.080.700	Rp520.000
Bracklet	Rp0	Rp0	Rp115.000
Stationary	Rp381.900	Rp133.000	Rp9.973.435
Apparel	Rp0	Rp11.100.000	
Brooch	Rp480.000	Rp0	Rp194.000
Mask	Rp575.000	Rp300.000	Rp195.000
Necklace	Rp245.000	Rp0	Rp0
Groceries	Rp0	Rp0	Rp0
Parcel	Rp0	Rp0	Rp0
Total	Rp6.453.900	Rp19.255.200	Rp20.724.435
Grand Total		Rp46.433.535	

Table 4.9 Kay Leather's Revenue Q4

According to Table 4.6, Table 4.7, Table 4.8, and table 4.9 the sales data in the period 2020 in quarters 1, 2,3, and 4 Kay Leather sells thirteen different items with a total transaction of Rp 167.536.135. The total selling is obtained from two types of marketing strategy, offline and online sales. Kay Leather sells the product offline from their gallery and also showroom provided by the government. For online sales, Kay Leather has two kinds of strategy, e-commerce and also from social media platforms. Kay Leather has an account in Tokopedia and also PaDi UMKM (a platform that was provided by the Ministry of State Enterprise). Kay Leather has a forum on Facebook aimed to sell its product to the community. Besides using Facebook, Kay Leather also uses Instagram to post its products and get attention from potential customers. In the early pandemic, the owner of CV Nusa Bihaka said that their revenue was extremely down due to the pandemic situation. In the first quarter of 2020, Kay Leather only gets revenue 30% of the actual revenue. Because of that situation, Kay Leather expands its business to another sector which is in the food and beverage sector. Besides produce stuff made from leather, they also sell parcels and groceries. This strategy relatively effective to survive in the pandemic era, in the second and third quarters of 2020, the revenue of CV Kay Nusa Bihaka increase smoothly. Based on the data, the top three of the product in Kay Leather can be listed, as follows;.

# Table 4.10 Market Segmentation

	Custome	er: Java		Sumat	era	Kalimantan	
Kay Leather product	Jakarta	Jogjakarta	Cirebon	Aceh	Lampung	Kutai Kartenegara	Pontianak
Apparel	26	26					
Bags	4		12	6	4	6	4
Wallet	8.5	2					

# \*Sales in million rupiah

According to table 4.10 above, we can see the market of the top three products Kay Leather in three areas which are Java, Kalimantan, and Sumatera. Java is the biggest market for Apparel products, which Jakarta and Jogjakarta are the order comes from. Most of the order comes from company and organization, the order in large number and based on the Make to Order process. For bags, Cirebon is the biggest segment since there is a loyal customer who always orders Kay Leather's product. The wallet is in the last position, special for wallet Kay Leather has a lot of stock and that's why in the production process Make to Stock is implemented to produce wallets.



## 4.2.4 Geographical Mapping



Figure 4.4 Geographical Mapping

Figure 4.4 showed a geographical mapping of sales in Kay Leather, the customer segmentation of CV Kay Nusa Bihaka comes from several cities in Indonesia. CV Kay Nusa Bihaka provides a delivery service to send their product around Indonesia. Most of the buyer comes from around Yogyakarta and some cities in Java island. The owner said they already send their product to several cities in Java, Sumatra, and Kalimantan. In the future owner of Kay Leather wants to sell their product to the international market which means start to export their product to the international market.

# **4.2.5 Define the Scope**

Based on the previous discussion, the scope of this study was formulated, namely apparel products, which are currently the largest sales and become production priorities at Kay Leather for Jakarta market.

# 4.3 Configure the Supply Chain

# 4.3.1 Selection SCOR Performance Attribute

Based on interviews and observations conducted at Kay Leather, information was obtained that they had been devastated by the current pandemic. Kay Leather's income decreased dramatically in 2020 and resulted in experiencing losses. Many

orders were canceled and there was a lack of orders and requests from the retail market during 2020.

The problems that occurred at Kay Leather were based on observations and interviews, so a follow-up was carried out to improve performance. Based on SCOR Racetrack version 12.0, the performance attribute that corresponds to this problem is the responsiveness attribute which only has 1 (one) level 1 metric, namely AM.1.2 Return on Supply Chain Fixed Assets. Selection of attributes and level 1 as in the table below:

	Attribute	Level 1 Strategic Metrics
	Reliability	RL.1.1 Perfect order fulfillment
SL	Responsiveness	RS.1.1 Order fulfillment cycle time
ome		AG.1.1 Upside supply chain adaptability
Customer	Agility	AG.1.2 Downside supply chain adaptability
		AG.1.3 Overall value at risk (VAR)
		CO.1.1 Total supply chain management
	Cost	costs
ıal		CO.1.2 Cost of goods sold
Internal		AM.1.1 Cash-to-cash cycle time
In	Asset Management Efficiency	AM.1.2 Return on supply chain fixed
	Asset Management Effective y	assets
		AM.1.3 Return on working capital

Table 4.11 Selected Performance Attribute

Based on table 4.11, Asset Management Efficiency was chosen because Kay Leather wanted to increase its revenue. It is caused by the minimum income but their expenditure continues to increase and results in losses experienced by Kay Leather. Level 1 available in the attribute asset management efficiency is AM.1.1 Cash-to-cash cycle time, AM.1.2 Return on supply chain fixed assets, and AM.1.3 Return on working capital. From the three attributes, AM.1.2 was chosen to return on supply chain fixed assets since this attribute is the most suitable to solve the problems faced by Kay Leather.

#### **4.3.2** Collection Detail Data

Metric	Process	Owner	Due	Status
			date	
Supply Chain	AM.2.4	Administration	15-03-	Valid
Revenue	AWI.2.4	team	2021	
Supply Chain Fixed		Administration	15-03-	Valid
Assets	AM.2.5	team	2021	, und

Table 4.12 Collection Detail Data

Based on Table 4.12, it can be seen level 2 from AM.1.2 Return on Supply chain fixed assets which are AM.2.4 Supply Chain Revenue and AM.2.5 Supply chain fixed asset. The data were collected from January – December 2020. The table below shows the total supply chain revenue, total cost to serve, and supply chain fixed assets.

No	Item	Revenue
1	Bag	44.179.500
2	Wallet	17.350.000
3	Pouch	8.098.000
4	Home Accessories	592.500
5	Key Chain	4.086.700
6	Bracelet	160.000
7	Stationary	12.503.335
8	Apparel	52.384.000
9	Brooch	1.969.000
10	Mask	9.062.000
11	Necklace	245.000
12	Groceries	11.896.800
13	Parcel	5.009.300
	Total Revenue	167.536.135

Table 4.13 above shows the total revenue from Kay Leather in 2020, which is 167.536.135 million rupiahs. Those revenues are resulted from offline and online sales, in which Make to Order sales is almost 80% of the entire revenue. For the retail market, Kay Leather only fulfills around 20% of sales. Table 4.14 below shows the total cost of Kay Leather

Items	Nominal
Raw Materials	83.768.068
Production Cost	33.507.227
Overhead Cost	16.753.614
Labor Cost	41.884.034
Total	175.912.942
	Raw Materials Production Cost Overhead Cost Labor Cost

Table 4.14 Total Cost of Kay Leather

The total cost to serve from Kay Leather in the period 2020 is 175.912.942 million rupiahs that is showed in Table 4.14 and almost 50% comes from raw materials which are leather. If we can see the revenue and the total cost of Kay Leather experience the deficit, it means Kay Leather loss their profit in 2020. Several problems are caused by this issue. Table 4.15 shows the total cost of Kay Leather in 2020.

No	Item	Value
1	Building (Rent)	50.000.000
2	Machine	25.000.000
3	Display Cupboard	10.000.000
4	Website	1.000.000
5	Office Equipment (Printer, telephone, etc)	8.000.000
6	Workshop Equipment (cutter, scissors)	5.000.000
7	Raw Material (Leather)	50.000.000
8	Finish Good	20.000.000
9	Vehicle	200.000.000
	Total	369.000.000

Table 4.15 Total Asset of Kay Leather

Metric	Calculation	Result
AM 1.2 Return on Supply Chain Fixed Assets	$ROF = \frac{\text{Supply Chain Revenue} - \text{Total Cost to Serve}}{\text{Supply Chain Fixed Asset}}$ $ROF = \frac{167.536.135 - 175.912.942}{369.000.000}$	-0,02

Table 4.16 AM 1.2 Calculation

Based on Table 4.16 on calculation for AM.1.2 Return on Supply Chain Fixed Asset we can see the final result is -0,02 means -2%. The problem comes from the total cost to serve is bigger than supply chain revenue. Total revenue is 167.536.135 and the total cost is 175.912.924.

# 4.3.3 Benchmarking

Performance appraisal is carried out by applying gap analysis to the SCOR model. A gap analysis is obtained from the difference between the percentage of company performance achievement and the percentage of supply chain performance parameters. The percentage of performance achievement is measured from the actual percentage against the company's target. The table below presents a comparison between the targets the company wants to achieve with actual data

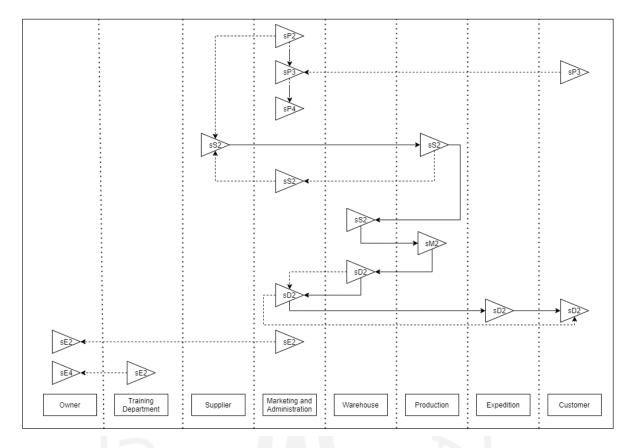
Attribute	Metric	Target	Actual Data	Gap
Assets	AM.1.2 Return on	11 1.	()	
Management	Supply Chain Fixed	10%	-2%	12%
Efficiency	Asset			

Table 4.17 Benchmarking of AM 1.2

From Table 4.17 above the author found the gap in AM.1.2 Return on Supply Chain Fixed Asset is 12%. The owner of Kay Leather targetted to get 10% from return on supply chain fixed asset and in 2020 Kay Leather got minus 2%, hence that improvement program are needed to solve the problem of Kay Leather.

### 4.3.4 Supply Chain Thread Diagram

Based on the business process in Kay Leather it can be minimized into a simple process called thread diagram. The thread diagram shows the entire process of producing a product start from the beginning until the end-product. Figure 4.6 below shows the thread diagram of Kay Leather.



# Figure 4.5 Thread Diagram of Kay Leather

Figure 4.5 above shows the thread diagram that demonstrates the cycle time of produce a producing in Kay Leather, there are several steps to produce a product in Kay Leather both for Make to Order and Make to Stock orders.

## 4.3.5 Fishbone Diagram

Fishbone diagrams are used to analyze the causes of gaps in several performance metrics. Fishbone diagrams are obtained based on interviews with the owner of Kay Leather and conduct real observations. The following is a fishbone diagram as shown in Figure 4.6 and Figure 4.7 below.

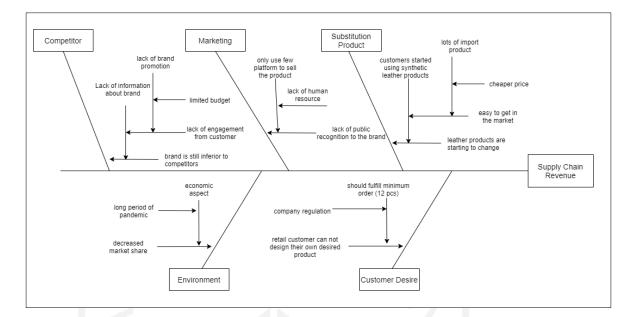


Figure 4.6 Fishbone Diagram of Supply Chain Revenue

According to Figure 4.6 above, the fishbone diagram shows five factors that caused a problem in the supply chain revenue. They are:

a. Customer Desire

Customer desire defined as is the needs of the customer on the product. In Kay Leather, the problem is emerged due to the regulation from the company that set the limit to order a product which is 12 pieces. This problem makes the customer unable to order in a small amount number, which means the retail market cannot be maximized.

b. Substitution Product

Synthetic-leather imported products are also one of the problem's caused of why the revenue of Kay Leather became low. Nowadays a lot of substitution products aret made from synthetic leather comes from abroad and it can be a challenge for leather SMEs like Kay Leather.

c. Environment

Covid-19 pandemic hit all sectors including leather SMEs, in 2020 Kay Leather deal with a difficult situation how to survive in the situation.

d. Marketing

Kay Leather still lacks a marketing strategy on how to sell the product. Kay Leather still uses the conventional method. That's why Kay Leather still can not get many order from the retail market. Mostly the order comes from a company partner order with a different brand.

e. Competitor

In the market, the brand of Kay Leather still can not compete with the popular brand. Publick recognition about Kay Leather still low regarding this brand. This is caused by Kay Leather still minimum conduct engagement and advertisement to the potential customers.

Figure 4.7 below is the fishbone of the total cost to serve and several factors that cause on why the total cost to serve of Kay Leather getting higher.

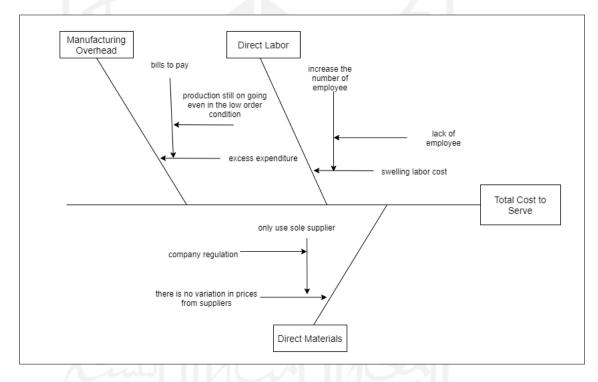


Figure 4.7 Fishbone Diagram of Total Cost to Serve

According to the fishbone above, three factors emerged as the causes of problem in the total cost to serve. They are:

a. Direct Labor

Labor cost is getting higher because Kay Leather has recruited new employee, but the orders are getting low. Kay Leather still pays the salary for their labor although the orders are low.

b. Direct Materials

For the direct materials, Kay Leather only uses a single supplier of leather that comes from a sister company. This can be a potential problem because Kay Leather can not find the best price from another supplier.

c. Manufacturing Overhead

Overhead costs in Kay Leather are increased because they are still doing a production process even when the orders are low. Bill should be paid although their revenue is low.

Based on the fishbone and discussion with the owner of Kay Leather about the main reason that influence the gap in the Return on Supply Chain Fixed Asset later the Table 4.18 below shows the detail:

	Table 4.18 Caused of Gap		
1	Metric	Caused of Gap	
9		#1 Marketing Strategy	
AM.1.2	Return on Supply Chain Fixed Assets	#2 Public Recognition	
		#3 Labor Cost	
_		/ / /	



# 4.4 Optimize the Project

This step is in the form of an analysis of the calculated data and benchmarking that have been carried out. This analysis aims to determine the performance priorities that allow improvements to be made and the benefits that could be obtained when carrying out the project. Following are the steps from the Optimize Project:

# 4.4.1. Project Portfolio

The project will be listed for enhancement at this time, before the creation of the Portfolio Project. Following the findings, a portfolio project is developed to identify and classify the metrics that will be used for progress. The method and the similarities of the problems were used to group the problems. Table 4.19 shows lists of the projects that have been identified:

Table 4.19 Project List

Level 1 Metrics	Level 2 Matrics	Project
AM.1.2 Return on Supply Chain	AM.2.4 Supply Chain Revenue	#1 Create a marketing strategy #2 Brand Awareness
Fixed Assets		#3 Budgeting Analysis

# 4.4.2 Grouping Issue

This stage is the grouping of the metrics based on the process and the similarity of the problems. The table grouping metrics (grouping issues) can be seen in Table 4.20 below:

Table 4.20 Grouping Issue

Group	Plan	Source Make	Deliver	Return	Enable
Production	#1 #2	#3	П		

# 4.4.3 Project List

Table 4.21 below is the description of the improvement project in Kay Leather.

Table 4.21 Project Description List

Project #	Project Description	SCOR Level 2 Metrics	
1	Create a marketing strategy to improve revenue	AM.2.4 Supply Chain	
2	Improve the brand awareness	Revenue	
3	Create a budgeting analysis		

# 4.5 Ready for Implementation

Ready for Implementation is the final stage of the SCOR Racetrack before the implementation of the project that was compiled in the previous stage. Here are the steps for the stage of Ready for Implementation:

# 4.5.1 Implementation Project Charter

The Implementation Project Charter is an activity to create a document that contains complete information that is included in a brief from an improvement project that will be carried out. As shown in Table 4.22.

Metric	Case	Plan Improvement	Benefits
AM.2.4	Decreasing the revenue and getting lost due to low of sales order in a period.	#1 Create a marketing strategy	Try to improve sales order numbers through several strategies to gain maximum revenue or achieve the target.
	Kay Leather still can not compete with other brands. People don't recognize the existence of kay leather in the market.	#2 Brand Awareness	Increase the public recognition of the Kay Leather brand. This is very useful to increase brand awareness and the sales order also will increase as well.
	In 2020 Kay Leather getting lost due to overbudgeting, they make the wrong decision in making a budget.	#3 Budgeting Analysis	To minimize the risk of getting lost at the end of the period. This also can help the owner to set the strategy to achieve the target.

Table 4.22 Implementation Project Charter

### 4.5.2 Readiness Check

Readiness Check is a checking activity before the implementation of improvements, divided into 5, namely, Vision, Incentives, Resources, Skills, and Action plans.

Project	Vision	Incentives	Resources	Skill	Action Plan	Result
#1	~	$\checkmark$	$\checkmark$	√	~	Change
#2	~		$ \land \land$	✓	✓	Change
#3	~	$\checkmark$	√	✓	~	Change

Table 4.23 Readiness Check

Based on Table 4.23 above, it is explained that the 6 (six) projects that have been proposed can be improved. Then the last stage is the Priority Matrix.

# 4.5.3 Prioritization Matrix

Prioritization Matrix is the last stage of Ready for Implementation, from the results of the previous analysis prioritizing improvements will be made from the opinion of the owner of the Kay Leather based on effort and risk. The results of the Priority Matrix analysis can be seen in Table 4.24.

Ta	ble	4.2	4 P	rior	itiz	atior	N	latri	Х

			Effort	$\mathbf{D}$	
Kay Leather –	1	2	3	4	5
1 ( <i>low</i> )	#3	#2	()	))	
2		<u> </u>	2 1	ा	
Risk 3	$\overline{\mu}$			#1	
4					
5 (high)					

Based on the Table 4.24 above it can be seen three project proposals with the classification of effort and risk in each project. Project 1 which creates a marketing strategy is the prioritized project in the project kick-off. Creating a marketing strategy will give high effort and also the risk in the level medium. The other project

is unprioritized for this time to maximize the efforts in the prioritized project which is to create a marketing strategy for Kay Leather.

### 4.6 Project Kick-off

## 4.6.1 Marketing Strategy

This phase is designed to break down the marketing strategy, which will be used to determine the best marketing strategy for Kay Leather. The project has six approaches which are Segmenting, Targeting, and Positioning (STP), Marketing Mix and Selling, Effective Communication Technique, Business Writing, Business Model Canvas, and Advertising Strategy. Those strategies are used to maximize the revenue and also create a strong brand for Kay Leather.

### 4.6.1.1 Segmenting, Targeting, and Positioning

STP stands for segmentation, targeting, and positioning in marketing. It's a three-step method that helps Kay Leather to create a targeted and actionable marketing plan. STP is used as the main step to determine the needs and the next step to create a marketing strategy for Kay Leather.

### A. Segmenting

Segmenting is the process of dividing a market into smaller segments based on similar characteristics of customer behavior, and then determine which segments want to served. These are the breakdown of segmenting attributes;

### a. Demographic Segmentation

The target for Demographic Segmentation of Kay Leather is determined by several categories which are gender, age, job, and income. Table 4.25 below shows the demographic from Kay Leather.

Demographic	Target
Gender	Male and Female
Age	17-60 years old
Job	University students

# Table 4.25 Demographic Segmentation

Demographic	Target			
	Businessman			
	Corporate's Employee			
	State Employee			
	Doctor			
	And others			
Income	More than Rp 3.500.000			

Table 4.25 above shows the demographic segmentation for Kay Leather for the retail market or business to the customer market. For the business-to-business market Kay Leather is targeting orders from a company or organization with a high amount of orders.

# **b.** Geographic Segmentation

To set the geographic segmentation target for Kay Leather the author use previous data on selling price from Kay Leather. Table 4.26 below shows the market of Kay Leather.

	Customer: Java			Sumatera 1		Kalimantan	
Kay Leather product	Jakarta	Jogjakarta	Cirebon	Aceh	Lampung	Kutai Kartenegara	Pontianak
Apparel	26	26					
Bags	4		12	6	4	6	4
Wallet	8.5	2					

Table 4.26	Geographic	Segmentation
------------	------------	--------------

According to the data above, it is shown that Java island is the highest market for Kay Leather. Kalimantan and Sumatera are potential markets for Kay Leather, that's why the product targeting in Java market should be more intense by using advertising especially in the Jakarta, Jogjakarta, and Cirebon cities. Kay Leather also should take Sumatera and Kalimantan into consideration as the potential market Kay Leather growing buyers.

### c. Psychological Segmentation

For the psychological segmentation, Kay Leather has a premium product with the best quality product of leather stuff. Because of that, the segment for Kay Leather is for the middle-up class. Customers from the middle-up class concern with the quality of the product rather than the price. This is the opportunity for Kay Leather to take this market.

### d. Behaviour Segmentation

The behavior of the user that used leather stuff is to find the best quality of leather and also has a long life period. Kay Leather should encourage the tagline "made from the best leather in the world" as tagline from Kay Leather to gain attention from the buyer and also to compete with the other competitor. Kay Leather also should maintains the buyer to get loyalty from the customer.

### **B.** Targeting

Targeting is the process of evaluating each of the interests of each market segment and select one or more segments for penetration. The targeting process is used to set the goals or the target for Kay Leather. These are the breakdown of targeting.

#### a. Profitability

Kay Leather's product is a premium product and has priced a bit expensive. To get profitability from selling the product, Kay Leather should sell the product to the middle-up class. Kay Leather also should target the community leather lover and abroad market to gain more profit.

#### b. Size and Growth Potential

The potential market from Kay Leather is the digital market and the abroad market. That market is very potential because a lot of potential buyers that might be can be loyal customers in Kay Leather.

#### **C.** Positioning

Positioning is defined as company design its offering and image so that it accommodates different and meaningful competitive positions in the minds of customers. Kay Leather should position its brand as premium quality with good service. Kay Leather should encourage the tagline "*made from the best leather in the world*". This tagline can be the assurance that the product from Kay Leather is high quality and also to make customers memorize Kay Leather with that tagline. Kay Leather also should improve their service to give the best service to the customers.

### 4.6.1.2 Marketing Mix and Selling

### A. Marketing Mix

The marketing mix refers to a company's combination of actions, or techniques, for promoting its brand or product in the marketplace. Price, Product, Promotion, and Place are the 4 Ps that make up a conventional marketing mix. As a premium product, Kay Leather not only sells the product but also its their brand and quality. Table 4.27 below shows the strategy marketing mix that should be implemented by Kay Leather.

Marketing Mix	Strategy				
Place	<ul> <li>Kay Leather should have a channel partner in some big cities in Indonesia to increase brand awareness.</li> <li>Kay Leather should have a gallery that is easy to access.</li> <li>Kay Leather should have a cozy gallery to make its visitors feel comfortable.</li> <li>Kay Leather must be reachable around Indonesia through offline or online platforms.</li> </ul>				
Product	<ul> <li>Assurance system for each product from Kay Leather.</li> <li>Kay Leather should give each product a certificate of authenticity.</li> </ul>				

Table 4.27	Marketing	Mix	Strategy

Marketing Mix	Strategy
	- Kay Leather should design its product with aesthetic and futuristic products.
	<ul> <li>Kay Leather should give the detail about their product.</li> </ul>
	- Increasing services both by online and offline platforms.
	- Kay Leather should design good packaging to increase its brand.
	- Kay Leather should give warranties with their product.
E .	- Increase the sales promotion through the online and offline approach.
Promotion	<ul> <li>More endorsement to increase band awareness.</li> <li>Give a special offering to the potential customers.</li> </ul>
	- Create a trend.
Price	<ul> <li>Give special price and discount to the customer.</li> <li>Kay Leather should give rewards to the customer to make them be loyal customers.</li> </ul>
	customer to make them be toyal customers.

Based on the table above there are several strategies in the marketing mix based on the aspects of place, product, promotion, and price. As a premium product, Kay Leather should improve in the service and hospitality when they sell the product,

# **B.** Selling

Selling is a tactic for creating long-lasting relationships long with customers through products company. Each buyer has a different selling strategy, depending on the scope and the product that would be sold to the customers. Figure 4.8 below shows the type of selling strategy.

TYPE OF SALE	KEY OBJECTIVES	TYPICAL SALES STRUCTURE	ORGANIZATIONAL LINKAGES/ ALIGNMENT
TRANSACTIONAL	<ul> <li>Sell the product</li> <li>Minimize cost</li> <li>Facilitate acquisition ease and convenience</li> </ul>	<ul> <li>Sales Call</li> <li>Offer-sector-based direct sales force</li> </ul>	<ul> <li>Efficient order fulfillment</li> <li>Standard service value package</li> <li>Flexible application and delivery</li> <li>Customization capability</li> </ul>
CONSULTATIVE	<ul> <li>Sell the problem-solving relationship</li> <li>Support individual customer value creation</li> </ul>	• Account Sales Team	<ul> <li>Experience value package</li> <li>Function-to-function relationships</li> </ul>
ENTERPRISE	<ul> <li>Sell the institution</li> <li>Leverage core competencies and total assets for strategic customers</li> </ul>	<ul> <li>Senior management led cross- functional and cross-company teams</li> <li>Online spare-parts sales</li> </ul>	<ul> <li>Joint staffing</li> <li>Top priority from both parties</li> <li>Transformation value package</li> </ul>

# Figure 4.8 Selling Strategy

According to Figure 4.8 above, there are three types of selling. Kay Leather can use those strategies to sell the product. The transactional approach can be used to sell the product to the retail customer with the common specification of the product. This type is used for Kay Leather to selling the product through offline and online methods. A transactional method is an easy way to sell products and it's effective for business process records.

The next type is the consultative approach, different from transactional, consultative is more complex and has a different way. Kay Leather can use this type to sell their signature product because they have a high value. To sell a premium product is not only sell the product but also Kay Leather should sell the value and the philosophy of the product. This approach is not only for the selling process but also for the after-sales process and to maintain a relationship with the buyer.

The last type is the enterprise approach, transactional and consultative is for personal selling. The enterprise approach is the most complicated process because our client is an organization or a company. This transaction has high value and that's why Kay Leather should put more attention. Kay Leather must convince the company or organization to believe in their product. Kay Leather must prepare all the documents that might be needed in this transaction. Kay Leather also must prepare the SOP and MoU with the customer. The enterprise transaction is very crucial because it can represent Kay Leather's commitment and the brand of Kay Leather.

#### 4.6.1.3 Effective Communication Technique

Communication is a process by which we assign and convey meaning in an attempt to create shared understanding (Baumeister & Leary). In business communication is very important, as one of the key success to run a business. Communication is a way to deliver a message from customer to seller and seller to the suppliers. Kay Leather should implement effective communication techniques to maximize their business. There are four communication techniques, which are emotive, directive, reflective, and supportive. Table 4.28 below shows the characteristics of each style of communication.

Communication Style	Characteristic
	- Optimistic
	- Quick response
Emotive	- Spontaneous
	- Expressive
	- Happiness
	- Focus
	- Commando
Directive	- Competition
	- Directive
	- Logic
	- Innovative
Reflective	- Accuracy
	- Formal
	- Humble
<b>G</b>	- Peace
Supportive	- Full of attention
	- Kinship

Table 4.28 Effective Communication Technique

According to Table 4.28 above Kay Leather should implement all styles of communication and put it based on the target of the respondent. For emotive style,

Kay Leather can implement to the retailer customer. The characteristic of the emotive style is very suitable for the individual buyer or first buyer. Emotive style can give a good impression to the customer about Kay Leather services in the order process. The second is the directive style suitable for communication with the supplier or partner from kay leather. This communication style is matched because Kay Leather can directly deliver the message or needs. Reflective style is a match for communication with an organization or company. Communication with a client from the company needs a formal way, thus Kay Leather needs to implement a reflective style when communicating with those clients. Last is the supportive style, Kay Leather can implement it to the loyal customers. The characteristic of a supportive style can increase engagement between loyal customers to Kay Leather. The supportive style also can be a way to maintain communication of Kay Leather with the loyal customer to make them always use Kay Leather product.

### **4.6.1.4 Business Writing**

Business Writing is a form of written communication that is for business purposes or official affairs to achieve predetermined goals. Business writing is very important because it involves data records, data flow, and legal documents of a company. In this strategy, Kay Leather should implement business writing well, it can be used for evaluation of Kay Leather to improve the weak performance. Business writing also can increase the reliability of Kay Leather. From business writing clients can see the capability of Kay Leather. Business writing includes an official letter, business letter, MoU (Memorandum of understanding), quotation letter, and inquiry letter. Kay Leather should give attention to detail regarding this issue due to its cruciality in runing the business. Business writing can represent how professional a company is and show its reputation.

### 4.6.1.5 Business Model Canvas

The Business Model Canvas is a strategy implementation tool for creating and documenting new business models. It generates a visual chart that depicts components of a company's or product's marketing strategy, equipment, customers, and finances, assisting companies in aligning their operations by displaying future commerce. The nine components of the business model canvas reflect the business model canvas from Kay Leather.

A. Customer Segment

According to Osterwalder & Pigneur a business model will assign one or many customer segments. An organization should be aware of the decisions that customers will be served or ignored about the specific needs of customers. The customer segments portray a group of people or different organizations who wish to reach or be serviced by the company.

Customer segmentation is the practice of dividing a customer base into groups of individuals that are similar in specific ways relevant to marketing, such as age, gender, interests, and spending habits. The segmentation is divided into gender, age, job, and geography. The table below shows customer segmentation from Kay Leather.

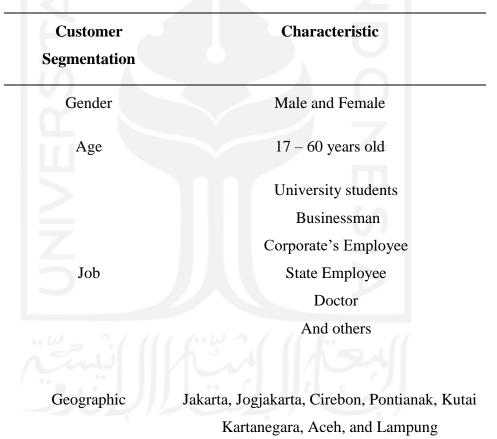


Table 4.29 Customer Segmentation of Kay Leather

The table above shows the customer segmentation from Kay Leather. Kay Leather's products are used by all gender with a range of 17-60 years old. Mostly products of Kay Leather are categorized as premium product, thus the target of buyers is people middle-up class people with ceratain jobs. For the geographic target, Kay Leather' targeting is to sell the product in Jakarta, Jogjakarta, Cirebon,

Pontianak, Kutai Kartanegara, Aceh, and Lampung. Also Kay Leather plans to accomplish the sales target to Papua because the potential market is so huge.

B. Value Proposition

According to Osterwalder & Pigneur, Value Proposition is the reason that makes customers switching from one company to another company. Of course, the value proposition will determine the selected customer segments or vice versa. Value proposition or simply a product is offered to the target consumer. The value proposition is a clear, simple statement of the benefits, both tangible and intangible, that the company will provide, along with the approximate price it will charge each customer segment for those benefits.

The value proportion of Kay Leather is the capability to serve a product from the best raw materials in the world. This value is used by Kay Leather because they use Javanese leather that is claimed that as the best leather in the world. From the best raw materials, Kay Leather can make a premium product of leather stuff.

The proposed value proposition that the researcher recommended is Kay Leather should raise the issue of eco friendly. Kay Leather should commit to the environmental issue and make sure all the product are made from organic product. Kay Leather gives assurance that its products is will not cause pollution to the environment.

#### C. Channels

Channels refer to how the company delivers the product to the customer. According to Osterwalder, a media Channel is a company communicating with its customers to deliver value from its proportions. Kay Leather has a gallery and is also used for displaying and selling the product. Kay Leather also sells its product with a collaboration scheme. To maximize the selling process Kay Leather sell their product in the e-commerce. Those channels chose to maximize the selling process and to introduce their product to potential customers.

The researchers suggest Kay Leather expand their business into export. Kay Leather should join the international trade community to expand the connection.

The researcher believes that Kay Leather's product can be accepted by the international community and can compete with another brand.

D. Customer Relationship

CV. Kay Nusa Bihaka should also gives rewards to customers in the form of points. The customers will earn points by performing transaction. The discount can be regular discount and special discount. CV Kay Nusa Bihaka also should give a reward for the customer that has a lot of points, by earned point of each transaction.

The researchers suggest the company to establish communities for costumer as a medium for sharing purposes, a well as to identify customer's preference and value given by Kay Leather. Furthermore, it can help to attract new clients to understand more about the value that the company provides. Kay Leather can launch the communities on its official website and social media.

E. Revenue Streams

Revenue Streams are the amount of money a business earns from the sale of goods or provision of services. In Kay Leather, the revenue comes from the selling of products Kay Leather. It also spend money for paying the employee and bills for water, electricity, and monthly maintenance. The total revenue of CV Kay Nusa Bihaka is Rp 167.536.135.

F. Key Resources

Key resources are the building block describing the most important assets needed to make a business model work. There are two kinds of key resources in Kay Leather which are physical and human. The physical assets of this company are the product as the raw material, the building as the place to execute the business and the latest technology to provide company value deliver clearly to the clients.

Kay Leather should add their key resources by starting to build company intellectual by remaking official website, new client communities, being a promotional consultant company, and adding more partnerships.

G. Key Activities

The definition of Key Activities according to Osterwalder & Pigneur, is the most important action taken so that companies can operate with success. Just as much as the key resources, key activities are also needed to create and deliver the value proposition, market reach, maintain a customer relationship and earn income. Uni Lien is the problem solution and production-based enterprise. The key activities of this enterprise are provided consultation on how clients should deliver their business promotion to their desired customer clearly and designing that result through a product and producing it. In these activities, Kay Leather starts with choosing raw materials and design the product before the production process. In the production process, the quality control department will inspect each process to make sure the product is the same as the specification. After finishing, the product will be re-checked once to ensure the absence delivering it to the customers.

Adding key activities in the form of a platform or network will be better for Kay Leather. Remaking official websites and new client communities, can open opportunities for the company to expand its business through online media. Also, to expand the product to the export market.

H. Key Partnership

A key partnership is the network of suppliers and partners that make the business model work. The key partnership of Kay Leather is PT Amsa Mulia Bersama as the sole supplier for leather. Kay Leather and PT Amsa Mulia Bersama have already become partners since CV Kay Nusa Bihaka was established. PT Amsa Mulia Bersama always gives the best quality of raw materials and constantly provides the best price for Kay Leather.

The researcher suggests to Kay Leather to maximize digital marketing. Digital marketing and new client communities, to be exact. The company should find online network or platform partnership that can increase opportunities to expand its business through online media

I. Cost Structure

Cost structure refers to the various types of expenses a business incurs, and it is typically composed of fixed and variable costs. The cost structure of Kay Leather consists of building cost and machinery cost as a fixed cost, the total is Rp 75.391.261. Building cost is paid at the first time the company was built. Besides, it also contains variable costs which are raw material, employee's salary, and company tax, the total is Rp 83.768.068. Also for overhead cost is Rp 16.753.614. The more materials bought, the more money paid. Nevertheless, the more

employees are hired, the more salary should be paid. The company tax should be paid because Kay Leather includes middle-up small-medium enterprises.

There are consequences of the new proposed business model such as the new development of the official website, new community platform, new online advertising, new partnership, and effort for expanding business through the online platform. The cost structure also raised in both fixed and variable costs.



Business Model Ca	Company Name: Kay Leather				Date: 07/06/2021		
Key Partners	Key Activities	Value Proposi	tion	Customer	Relationships		Customer Segments
PT Amsa Mulia Bersama (Leather sole supplier)	PT Amsa Mulia Bersama Produce the Product		y Best Leather in the World (Javanese Leather) Best Quality (Premium Quality) Environmental Friendly (can be decomposed)		Discount for Loyal Customer (Regular and special discount) Point (Earn point each transaction) Channels Offline (Gallery in Sleman) Online (Tokopedia, PaDi UMKM, and Bukalapak)		Male and Female (17 - 60 years old) Middle-up class (> Rp 3.500.000) Geography (Java, Sumatera, and Kalimantan)
Cost Structure Fixed Cost ( Rp 75.391.261)	6.753.614)	Revenue Stream           614)         Selling the Product (Rp 167.536.135)					
Variable Cost (Rp 83.768.068)					-		

Figure 4.9 Business Model Canvas of Kay Leather

### 4.6.1.6 Advertising Strategy

An advertising strategy has become a campaign created to convey product and service ideas to potential customers to persuade them to purchase such goods and services. Other business factors (total budget, brand awareness initiatives) and aims (public image enhancement, market share increase) will be reflected in this plan if it is designed sensibly and logically. To achieve goals, Kay Leather should implement an advertising strategy both for online and offline media.

### A. Offline Advertising Strategy

An offline advertising strategy is any type of advertising or promotion that employs traditional offline media. This can be seen on television, radio, billboards, print, and in-person events. Offline marketing tactics are regularly used to supplement or support online efforts. Although internet advertising is increasingly prevalent nowadays, offline advertising is still a successful approach. Networking, speaking engagements, print publishing, direct mail, cold calls, and trade shows are examples of offline advertising techniques that are ideal for Kay Leather.

### 1. Networking

Kay Leather needs to expand the networking to the potential customers. Kay Leather needs to build networking with the potential market which is 17-60 years old within the location based on the geography that is already determined in the segmenting strategy. Kay Leather needs to make more networking with the community in the Jakarta, Jogjakarta, Cirebon, Pontianak, Kutai Kartanegara, Aceh, and Lampung.

Kay Leather needs to build networking with organizations or communities in the scope area of their potential market. Kay Leather needs to give good treatment to reach their good networking with their potential target market in Jakarta, Jogjakarta, Cirebon, Pontianak, Kutai Kartanegara, Aceh, and Lampung. It is important to join a public organization that has good value for Kay Leather's business could support can expandsion their business scope.

### 2. Speaking Engagement

For a variety of reasons, in-person speaking engagements are a fantastic marketing opportunity. Speaking engagements bring the topic in front of a highly focused and engaged audience that is already prepared and ready to listen to what the subject has to say. To implement it Kay Leather needs to speak with the subject based on the effective communication technique which is emotive, directive, reflective, and supportive.

Speaking engagement needs to be improved by Kay Leather to reach engagement between seller and customer and also seller between suppliers. Good communication can improve the attention and impression toward each other.

#### 3. Printed Publication

Publication through print media is still an effective way to promote the product by offline approach. Print publication can be a marketing strategy, especially in the public area. Kay Leather needs to make a print publication such as a pamphlet, magazine, and catalog. Kay Leather needs to make an interesting print publication to gain the attention of the potential buyer.

The print publication is needed because some buyers or customers like to watch or read the media that interest them to buy the product. Interesting media can attract potential buyers, especially in the event or some exhibition. Publication through printing media need to be made professional to make a good result and as a marketing media for Kay Leather.

# 4. Direct Mail

Direct mail still becomes an effective way as marketing strategy. Members of the target audience may appreciate receiving direct mail because it seems more personalized. Kay Leather can use direct mail to the potential customers to inform the product and offering toward Kay Leather's product. Through direct mail, Kay Leather and the potential customers can interact with each other and it can build engagement of them.

Email blast is needed to make the customer or potential buyers aware of the updates made by Kay Leather. Through email, customers can assess information from Kay Leather about the new product, offering, and any information about Kay Leather. Direct mail also can be a platform to build engagement with the customers and also effective media for marketing strategy.

#### 5. Cold Calls

Cold calls, like direct mail, provide a human touch that appeals to many potential customers. Phone conversations are more personal than emails, and they require an immediate response, which can be beneficial or detrimental. Kay Leather can implement cold calls to loyal customers or customers that potential to be loyal customers for Kay Leather. Through cold calls, Kay Leather can identify customers' preferences that can be a basis for future development. Kay Leather also can use a cold call to keep being engaged with their loyal customer.

# 6. Exhibition

Trade shows may be an excellent way for implementing the most efficient offline marketing tactics. In addition to face-to-face networking, you may also distribute printed materials and even be a keynote speaker. Trade show is also one of the media to expand networking and also associated with potential customers. Kay Leather needs to join as much as a trade show to increase its existence and brand awareness. Kay Leather needs to join a trade show in the potential market locations which are Jakarta, Jogjakarta, Cirebon, Pontianak, Kutai Kartanegara, Aceh, and Lampung as the biggest market of Kay Leather.

### **B.** Online Advertising Strategy

A marketing approach that aims to raise customer knowledge of a product, create demand for it, and encourage them to buy it. All online advertising methods are designed to educate and persuade online consumers to purchase a product or service. These advertisements might be found on social media, online advertisements, blogs, or other information websites. The most effective and efficient approach to promote is through online advertising. Online marketing is critical for product promotion, especially in this epidemic era. As a result, Kay Leather will need to establish an online advertising plan, with web hosting, advertisements management, and social media marketing being the best options.

### 1. Web Hosting

Web hosting is a platform that allows people and businesses to publish a website on the Internet. A web host, also known as a web hosting service provider, is a company that offers the technology and services required to access a website or webpage on the Internet. Websites are kept on servers, in which computers are dedicated to host websites. All Internet visitors need is input website URL or domain into their browser to visit site. After that, their machine will be connected to the server, and the websites will be transmitted with them through the browser. A website can be used as a platform for Kay Leather to sell the product. Today, Kay Leather does not affect the usage of its website is not only can be used for sell the product but also it can be used for branding and giving information about Kay Leather.

To control the website, the author suggests that Kay Leather use a web hosting provider. Using a web hosting provider can minimize the budget and also assure security issues. Kay Leather needs to use a web hosting provider because it can increase the traffic of users and impact the potential customer that wants to buy Kay Leather's product. Kay Leather can customize the website based on their needs through a web hosting provider. Kay Leather can maximize the promotion through a website hosted by a web hosting provider to reach its potential customer.

#### 2. Ads Manager

Ads manager is a tool to do a campaign through social media. Ads Manager generates an account and guides users through setting up the user's first ad campaign. Ads managers can guide the users to do campaigns based on the target audience in social media. Kay Leather needs to do a campaign for their product through the ads manager on Facebook and Instagram. Facebook and Instagram were chosen due to their popularity with a million users in Indonesia. Campaign through ads manager are also relatively cheaper and it can be more effective because users can set the target audience. Kay Leather needs to set the advertisement based on its target market. Kay Leather can set the campaign for age 17 - 60 years old, with an area in Jakarta, Jogjakarta, Cirebon, Pontianak, Kutai Kartanegara, Aceh, and Lampung. Kay Leather needs to put a campaign in ads manager on Facebook and Instagram because both applications are the platforms used by Kay Leather to sell their product.

### 3. Social Media Marketing

The social media platforms are used to engage with audience to promote your brand, improve sales, and drive website traffic is known as social media marketing. This includes creating compelling content for social media profiles, listening to and connecting with followers, evaluating your outcomes, and executing social media ads. Social media account can represent the value and also the image of some organization. Kay Leather can implement a social media marketing strategy to create their social media account based on their segment. Kay Leather targets its segment for University students, businessmen, corporate's employee, state employees, and. Kay Leather also needs to build their social media that can be accepted by all genders which are for male and female users. Kay Leather should encourage their values which are good quality product that is made from the best leather in the world and environmentally friendly applied for all its products.



#### 4.6.2 Design Product

The second project to be implemented in this research is to develop distinctive packaging for bag items utilizing the Quality Function Deployment (QFD) approach, based on observations and discussion with owner Kay Leather and his staff. This project chosen because CV Kay Nusa Bihaka doesn't have good packaging to package bags to the customers. The QFD process begins with the customer's voice and progresses through four major activities: product planning, product design, process planning, and process control planning (Gaspersz 2006). The identification of customer demands is the first and most essential stage in the Quality Function Deployment (QFD) approach of product creation. The information gathered will be entered into the product planning matrix (Quality Function Deployment).

To start the second project the researcher will spread a questionnaire to the customers of Kay Leather as a voice of customer questionnaire. The questionnaire has aimed to identify the response and advice about the future packaging design from Kay Leather. The data collection of the voice of customers will be delivered into a questionnaire by google form in the sessions.

### **4.6.2.1 Data Collection of Quality Function Deployment (QFD)**

### 1. Customer Need Questionnaire

The purpose of the original questionnaire given to respondents was to determine consumer requests and wants in order to create a product design. The questionnaire was sent to 30 persons, including employees, housewives, entrepreneurs, public authorities, physicians, and students. This survey generates a list of recognized consumer wants and aspirations for future product designs, especially unique packaging designs for Kay Leather bags. As indicated in Table 4.30, a list of recognized consumer wishes and needs was compiled from the distribution of the original questionnaire:

No	Customer Needs
1.	Elegant color design (gold)
2.	Tough and sturdy box
3.	Waterproof type of material and mildew

No	Customer Needs
4.	Thick cardboard box material
5.	Exclusive and elegant box model
6.	There is an elegant paper bag
7.	Strong paper bag strap
8.	There are gift cards
9.	There is a dust bag
10.	Comes with a ribbon on the box
11.	Comes with product care brochure

From Table 4.30, following the identification of customer requirements and aspirations, a second questionnaire was circulated, in which respondents were asked to select the qualities they preferred in the packaging design that would be developed. A total of 30 people responded to the second questionnaire. The following are the findings of the second questionnaire:

No	Customer Needs	Total Score
1.	Elegant color design (gold)	23
2.	Tough and sturdy box	17
3.	Waterproof type of material and mildew	15
4.	Thick cardboard box material	9
5.	Exclusive and elegant box model	10
6.	There is an elegant paper bag	13
7.	Strong paper bag strap	8
8.	There are gift cards	14
9.	There is a dust bag	13
10.	Comes with a ribbon on the box	10

Table 4.31 Customer Needs Score

No	Customer Needs	<b>Total Score</b>
11.	Comes with product care brochure	9

Table 4.31 calculates the overall score based on the number of respondents who selected these qualities. For instance, 23 people picked an exquisite color scheme. After receiving the 11 consumer voice qualities listed above, the questionnaire was put to the test utilizing validity and reliability testing. The validity test is important for determining whether or not the qualities utilized in a study are accurate (Sugiyono, 2011). While the reliability test refers to the measurement findings' consistency, dependability, constancy, stability, and trustworthiness, which includes the definition of measurement accuracy (Azwar, 2007). A reliability test is useful to show the extent to which the questionnaire can be trusted or reliable. The results of the reliability test of this questionnaire can be seen in the following table 4.32:

C	Case Process	ing Summ	ary
		Ν	%
Cases	s Valid	30	100,0
	Excluded <sup>a</sup>	0	,0
	Total	30	100,0

In the Case Processing Summary table which is the output of the reliability test, it can be seen that the number of samples analyzed is N as many as 30 respondents, because there are no empty data or all respondents' answers are filled in, then the valid number is 100%.

Table 4.33 Reliability Statistic

itenability s	latistics
Cronbach's Alpha	N of Items
,591	11

From the Reliability Statistics shown in Table 4.33 above, it can be seen that the questionnaire is 11 questions with a Cronbach's Alpha value of 0.591. According to Hinton, there are four points for reliability including excellent reliability (excellent) with Cronbach's Alpha value > 0.90, high reliability (high) with Cronbach's Alpha value 0.70-0.90, moderate reliability (moderate) with Cronbach's Alpha 0.50-0.70 and low reliability (low reliability) with Cronbach's Alpha <0.50 (Hinton et al, 2014). Thus, based on the output of the reliability test in the Reliability Statistics table, it can be concluded that 11 statements on the questionnaire belong to moderate reliability or average consistency. Then, the results of the validity test can be seen in the following Table 4.34:

					,	Correlatio	ns						
		Q1	Q2	Q3	Q4	Q5	Q.6	Q7	Q8	Q.9	Q10	Q11	Total
Q1	Pearson Correlation	1	,472	,394	-,155	,223	,323	,154	,042	-,154	,056	-,155	,440
	Sig. (2-tailed)		,008	,031	,414	,236	,081	,415	,825	,417	,770	,414	,01
	N	30	30	30	30	30	30	30	30	30	30	30	3(
Q2	Pearson Correlation	,472	1	,336	,132	,048	,493	,071	,413	-,050	,048	-,015	,614
	Sig. (2-tailed)	,008		,069	,486	,803	,006	,709	,023	,794	,803	,939	,000
	Ν	30	30	30	30	30	30	30	30	30	30	30	3(
Q3	Pearson Correlation	,394	,336	1	,073	,141	,336	,151	,134	,202	,283	,073	,649
	Sig. (2-tailed)	,031	,069		,702	,456	,069	,426	,481	,285	,130	,702	,000
	N	30	30	30	30	30	30	30	30	30	30	30	3(
Q4	Pearson Correlation	-,155	,132	,073	1	,154	,161	,263	,262	,161	-,154	,206	,431
	Sig. (2-tailed)	,414	,486	,702		,416	,394	,160	,161	,394	,416	,274	,017
	N	30	30	30	30	30	30	30	30	30	30	30	3(
Q.5	Pearson Correlation	,223	,048	,141	,154	1	,095	,213	-,094	,238	-,050	,000	,398
	Sig. (2-tailed)	,236	,803	,456	,416		,617	,258	,619	,206	,793	1,000	,03
	N	30	30	30	30	30	30	30	30	30	30	30	3
Q6	Pearson Correlation	,323	,493	,336	,161	,095	1	,233	,396	,050	,095	,015	,666
	Sig. (2-tailed)	,081	,006	,069	,394	,617		,215	,031	,794	,617	,939	.00
	N	30	30	30	30	30	30	30	30	30	30	30	3
Q7	Pearson Correlation	,154	,071	,151	,263	,213	,233	1	,191	-,071	,213	,099	,502
	Sig. (2-tailed)	,415	,709	,426	,160	,258	,215		,311	,709	,258	,604	,00
	N	30	30	30	30	30	30	30	30	30	30	30	3
Q8	Pearson Correlation	,042	,413	,134	,262	-,094	,396	,191	1	-,144	-,094	-,029	,439
	Sig. (2-tailed)	.825	.023	,481	,161	,619	.031	.311		.448	,619	.878	.01
	N	30	30	30	30	30	30	30	30	30	30	30	3
Q.9	Pearson Correlation	-,154	-,050	,202	,161	,238	,050	-,071	-,144	1	-,048	,015	,25
	Sig. (2-tailed)	,417	,794	,285	,394	,206	,794	,709	,448		,803	,939	,16
	N	30	30	30	30	30	30	30	30	30	30	30	3
Q10	Pearson Correlation	,056	,048	,283	-,154	-,050	,095	,213	-,094	-,048	1	-,154	,24
	Sig. (2-tailed)	,770	,803	,130	,416	,793	,617	,258	,619	,803		,416	,19
	Ν	30	30	30	30	30	30	30	30	30	30	30	3
Q11	Pearson Correlation	-,155	-,015	,073	,206	,000	,015	,099	-,029	,015	-,154	1	,21
	Sig. (2-tailed)	,414	,939	,702	,274	1,000	,939	,604	,878,	,939	,416		,26
	Ν	30	30	30	30	30	30	30	30	30	30	30	3
Total	Pearson Correlation	,440	,614	,649	,431	,398	,666	,502	,439	,259	,245	,211	
	Sig. (2-tailed)	,015	,000	,000	,017	,030	,000	,005	,015	,167	,192	,263	
	N	30	30	30	30	30	30	30	30	30	30	30	30

Correlation is significant at the 0.05 level (2-tailed).
 Correlation is significant at the 0.05 level (2-tailed).

Table 4.35 Validity Test Result

No	Customer Needs	<b>R</b> Calculation	Note
1.	Elegant color design (gold)	0,440	Valid

No	Customer Needs	<b>R</b> Calculation	Note
2.	Tough and sturdy box	0,614	Valid
3.	Waterproof type of material and mildew	0,649	Valid
4.	Thick cardboard box material	0,431	Valid
5.	Exclusive and elegant box model	0,398	Valid
6.	There is an elegant paper bag	0,666	Valid
7.	Strong paper bag strap	0,502	Valid
8.	There are gift cards	0,439	Valid
9.	There is a dust bag	0,259	Not Valid
10.	Comes with a ribbon on the box	0,245	Not Valid
11.	Comes with product care brochure	0,211	Not Valid

Based on Table 4.35 of validity test results above, there are only 8 valid indicators. The minimum requirement to be considered valid is the calculated r-value > from the table r value. The R table value for N = 30 at 5% significance is 0.361. While the 3 invalid indicators are not used in the next questionnaire. Thus, the results obtained from the second questionnaire are in the form of 8 consumer wants and needs for exclusive packaging designs which can be seen in the following Table 4.36:

No	Customer Needs	<b>Total Score</b>
1.	Elegant color design (gold)	23
2.	Tough and sturdy box	17
3.	Waterproof type of material and mildew	15
4.	Thick cardboard box material	9
5.	Exclusive and elegant box model	10
6.	There is an elegant paper bag	13
7.	Strong paper bag strap	8
8.	There are gift cards	14

Table 4.36 Customers Need Result

The total score in Table 4.36 is obtained from the number of respondents who chose these attributes. For example, 23 respondents chose an elegant color design. The consumer wants and needs in Table 4.43 will be used as input to find the importance rating value in the third questionnaire, and the product comparison value in the fourth questionnaire.

2. Importance Rating

The importance rating data are obtained from the distribution of the third questionnaire which contains questions about the level of importance of each exclusive packaging design attribute based on each respondent. The questions are posed to the respondents consisted of 9 questions obtained from the recapitulation of the second questionnaire. In this third questionnaire, a scale of 1, 3, 5, 7, and 9 is used which is defined as follows:

- 1 = Very Unimportant
- 3 = Less Important
- 5 = Important
- 7 = More Important
- 9 = Very Important

The formula that is used to calculate the importance rating value is as follows:

Importance Rating = 
$$\frac{\sum(\text{total respondent x scale})}{\text{total respondent}}$$

The importance rating value for each attribute can be seen in the following table

No	Customer Needs	Importance Rating
1	Elegant color design (gold)	6,8
2	Tough and sturdy box	7,2
3	Waterproof type of material and mildew	6,46
4	Thick cardboard box material	5,73
5	Exclusive and elegant box model	6

Table 4.37 Imp	ortance Rating
----------------	----------------

6	There is an elegant paper bag	5,46
7	Strong paper bag strap	4,86
8	There are gift cards	6,26

The significance rating value is calculated in Table 4.37 above by multiplying the scale with the number of respondents and then dividing it by the total number of respondents. The result of multiplying the scale with the responses is 204 in the exquisite color design characteristic, thus the total respondents are 30 and the importance rating value achieved is 6.8. By distributing the third questionnaire after getting the importance rating value of each feature, the next stage is to give a comparison value between the packaging design that will be developed and the package design of competing items.

3. Competitor Comparison Data

The final questionnaire provides information on the comparison of package designs developed by Kay Leather to rival items. This fourth questionnaire includes questions that evaluate the package design of the to-be-created bag product to that of rival items. The respondents were asked with eight questions, which were derived from the second questionnaire's recapitulation. Because not all companies have the qualities to be compared. The comparison conducted in this study is a comparison of package designs, thus each comparison is not with the same brand. Figure 4.10 is a comparison of the Kay Leather box design with competitors A and B are used in the questionnaire for the attributes of an elegant color design, a waterproof and anti-mildew box, a paper bag, thick cardboard material, and a gift card:

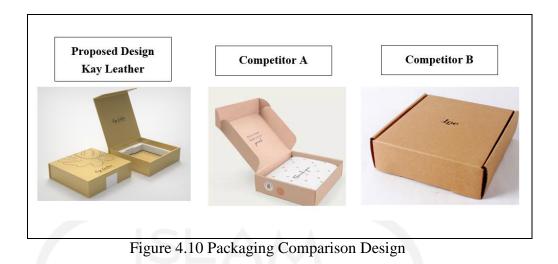


Figure 4.11 below showed the comparison design of paper bags from Kay Leather and with the two competitors which are competitor A and competitor B.



Figure 4.11 Paper Bag Comparison Design

Figure 4.12 below shows the comparison design of gift cards from Kay Leather and with the two competitors which are competitor A and competitor B.



Figure 4.12 Gift Card Comparison Design

To obtain the value of each attribute, a scale of 1 to 5 is used with the following information:

1 = Very Bad 2 = Bad

3 = Enough

4 = Good

5 = Very Good

The formula used to calculate the comparison value is as follows:

$$Value \ comparission = \frac{\sum(amount \ of \ respondent \ x \ scale)}{total \ respondent}$$

The recapitulation of the comparison value for each attribute can be seen in the appendix. From the results of the recapitulation of the third questionnaire that has been given to 30 respondents, it is found that the comparison value of packaging designs that will be developed with competitors' packaging is shown in the following graph:

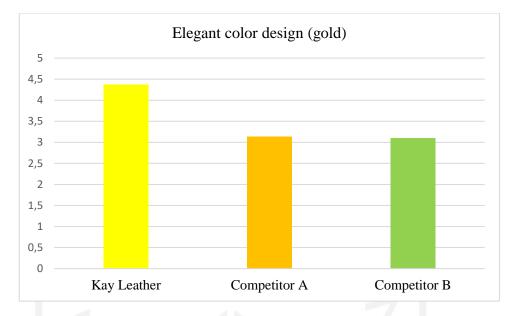


Figure 4.13 Graph of elegant color design

Based on Figure 4.13, the comparison value of the elegant color design attributes on the Kay Leather box is 4.36, competitor A's value is 3.13, and competitor B's value is 3.1.

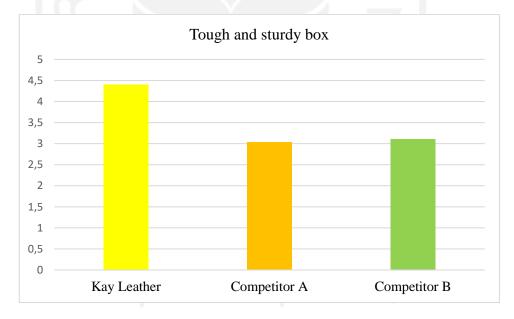


Figure 4.14 Graph of a tough and sturdy box

Based on Figure 4.14., the comparison value of tough and sturdy box attributes on the Kay Leather box is 4.4, competitor A's value is 3.03, and competitor B's value is 3.1.

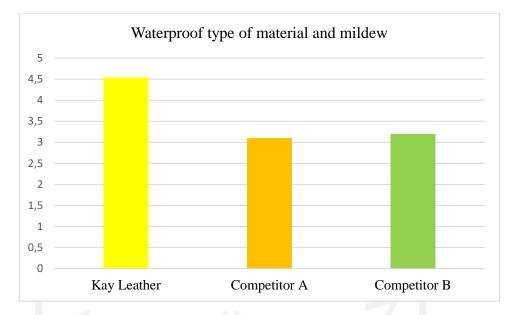


Figure 4.15 Graph of waterproof type of material and mildew

Based on Figure 4.15, the comparison value of the Waterproof type of material and mildew attributes on the Kay Leather box is 4.53, competitor A's value is 3.10, and competitor B's value is 3.2.

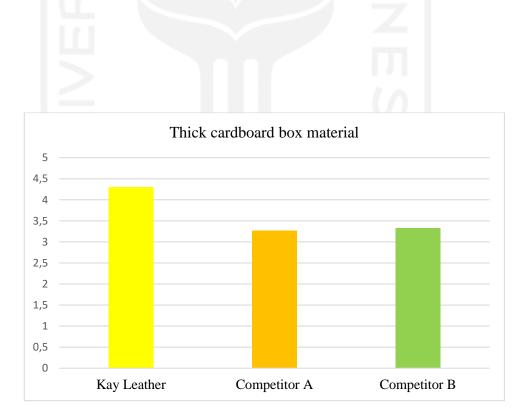


Figure 4.16 Graph of Thick cardboard box material

Based on Figure 4.16, the comparison value of thick cardboard box material attributes on the Kay Leather box is 4.3, competitor A's value is 3.26, and competitor B's value is 3.33.

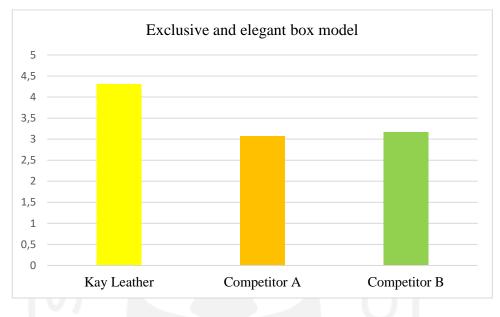


Figure 4.17 Graph of Exclusive and elegant box model

Based on Figure 4.17, the comparison value of exclusive and elegant box model attributes on the Kay Leather box is 4.3, competitor A's value is 3.06, and competitor B's value is 3.16.

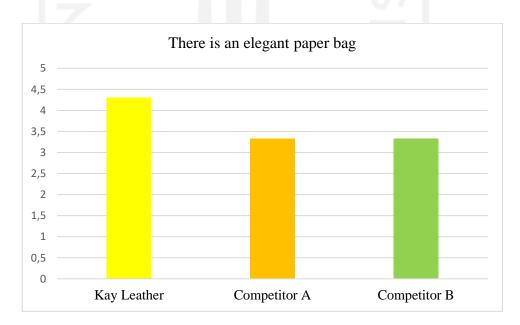


Figure 4.18 Graph of the elegant paper bag

Based on Figure 4.18, the comparison value of exclusive and elegant box model attributes on the Kay Leather box is 4.3, competitor A's value is 3.16, and competitor B's value is 3.13.



Figure 4.19 Graph of gift card

Based on Figure 4.19, the comparison value of the Kay Leather thank you card attribute is 4.47, competitor A's value is 3.33, and competitor B's value is 3.2. This questionnaire is the last questionnaire given to respondents. The results of questionnaire 1, questionnaire 2, and questionnaire 3 will be calculated and processed to build the HOQ.

## 4.6.2.2 Data Collection and Create House of Quality

a) Identification of Consumer Wants and Needs

To find out the consumer's desire for Kay Leather's exclusive packaging design, the first questionnaire was distributed to 30 respondents, then the second questionnaire to 30 respondents. From the results of the first and second questionnaires, it can be identified the reference and needs of consumers as follows:

- 1. Elegant color design (gold)
- 2. Tough and sturdy box
- 3. Waterproof type of material and mildew
- 4. Thick cardboard box material

- 5. Exclusive and elegant box model
- 6. There is an elegant paper bag
- 7. Strong paper bag strap
- 8. There are gift cards
- b) Determine Importance Rating

The relevance of this characteristic is determined by utilizing a priority scale acquired from the third questionnaire to assign weight to each attribute. Each detected consumer demand is assigned a value between 1 and 9, with 1 denoting the least important, 3 denoting the least important, 5 denoting the most important, 7 denoting the most important, and 9 denoting the most important.

No	Customer Needs	Importance Rating
1	Elegant color design (gold)	6,8
2	Tough and sturdy box	7,2
3	Waterproof type of material and mildew	6,46
4	Thick cardboard box material	5,73
5	Exclusive and elegant box model	6
6	There is an elegant paper bag	5,46
7	Strong paper bag strap	4,86
8	There are gift cards	6,26

Table 4.38 Importance Rating	

In the above Table 4.38, after the importance rating of each attribute is identified, the next step to build a HOQ, which is designed to translate each consumer's needs into technical characteristics so that the packaging design required by consumers can be designed.

c) Determine Technical Requirement

Technical requirements contain technical explanations given to respond the consumer requirements. In this section, there are technical requirements that will be determined based on customer needs. Based on customer needs, technical requirements can be given as follows:

No	Customer Needs	Technical Requirement
1	Elegant color design	Exclusive color
2	Tough and sturdy box	Material according to specifications
3	Waterproof type of material and mildew	Material according to specifications
4	Thick cardboard box material	Carton quality
5	Exclusive and elegant box model	Design according to specifications
6	There is an elegant paper bag	Exclusive color
7	Strong paper bag strap	Material according to specifications
8	There are gift card	Gift card

 Table 4.39 Techincal Requirement

Based on Table 4.46, it can be seen that 5 technical requirements can be provided to meet customer needs. The relationship between customer needs and technical requirements can be seen in the following explanation:

- 1. Elegant color design can be obtained by using an elegant color, namely gold.
- 2. A tough and sturdy box can be obtained by using material according to specification, which is using ivory carton as a material to make a box.
- 3. The type of material that can be waterproof and mildew can be obtained by using material as a specification which is ivory carton.
- 4. Thick cardboard material can be obtained by using a good-quality carton so that the quality of the box can be maintained.
- 5. Exclusive box models can be obtained by using the box model by using a design by specification, which dimension 35 cm x 35 cm x 10 cm and gold as a color for the box.
- 6. Elegant paper bags can be obtained by using an elegant color which is gold with some design.
- 7. A strong paper bag strap will be getting by using good material based on the specification.
- 8. Gift cards can be obtained by providing a card in the box.

After obtaining 5 technical requirements, the next step is to determine the relationship between customer needs and technical requirements.

d) Relationship of Consumer Needs with Technical Characteristics

This step involves examining the link between customer demands and technical requirements to determine whether customers desire a strong, moderate, or weak relationship with their technological qualities. To evaluate whether the link between technical requirements and client demands is solid, you'll need a keen eye and a thorough understanding of everything about bespoke package designs. The following symbols are used to represent the degree of connection between customer and engineering requirements:

- •: A full circle indicates a strong relationship, worth 9
- o: An empty circle indicates a medium relationship, value 3
- $\Delta$ : A triangle shows a weak relationship, worth 1

The relationship between each consumer's needs and technical characteristics can be seen in the matrix of the relationship between consumer needs and technical characteristics as follows:



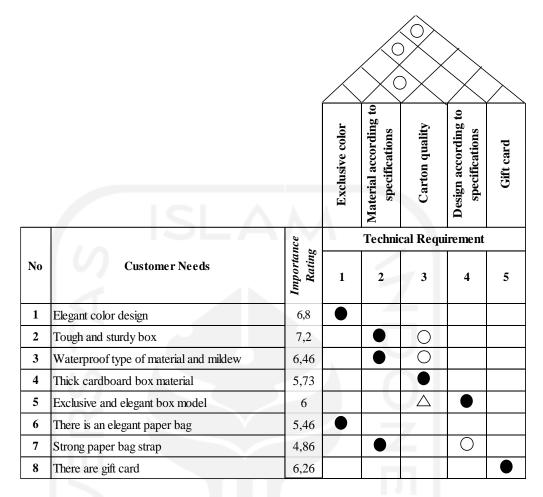


Figure 4.20 Matrix Relationship of Consumer Needs with Technical Characteristics

Figure 4. 20 Matrix of Relationship between Consumer Needs and Technical Characteristics. The value of each symbol in the image above will be used for the next calculation process, namely the calculation of column weights.

e) Colom Weight

In product design development, column weighting is a method of obtaining information and levels. The significance rating is multiplied and added to the value of the connection matrix between customer demands and technical attributes to get the column weight value. The following formula may be used to determine the value of column weights:

$$Colom Weight = \sum Importance Rating x Technical Requirement$$

The following is the column weight value for each technical characteristic:

		e	,	Technical Requirement							
No	Customer Needs	Importance Rating	1	2	3	4	5				
1	Elegant color design	6,8									
2	Tough and sturdy box	7,2			0						
3	Waterproof type of material and mildew	6,46			0						
4	Thick cardboard box material	5,73									
5	Exclusive and elegant box model	6			$\triangle$						
6	There is an elegant paper bag										
7	Strong paper bag strap	4,86				0					
8	There are gift card	6,26									
	Target		Using gold color	Using thick carton	Using ivory carton	Size 35 cm x 35 cm x 10 cm	Exclusive design card				
	Column Weight	110,34	166,7	98,55	68,58	56,34					

Table 4.40 Result of Colum Weight

Based on Table 4.40, it is shown the result of the calculation between customer needs and technical requirements.

f) Matric Correlation

The correlation matrix is a triangular table that is used to show the relationship between one technical characteristic and another. The symbols used to indicate the relationship between technical characteristics is as follows:

o: shows a positive correlation

×: shows a negative correlation

The relationship between technical characteristics can be seen in the correlation matrix as follows:

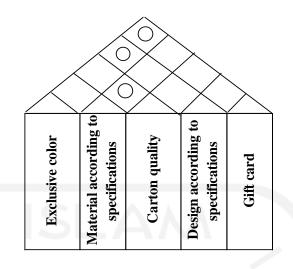


Figure 4.21 Matrix Correlation

Based on Figure 4.21, it can be seen the relationship between the technical characteristics with each other. For example, elegant colors have a positive effect on exclusive packaging shapes and colors on packaging and gift cards.

g) Position Value of Packaging Design

At this stage, the value of the packaging design position of KayLeather, competitor A, and competitor B is calculated. The following is a table of the position values of the three packaging designs mentioned in Table 4.41:

No	Customer Needs	Kay Leather	Competitor A	<b>Competitor B</b>
1	Elegant color design (gold)	4,36	3,13	3,1
2	Tough and sturdy box	4,4	3,03	3,1
3	Waterproof type of material and mildew	4,53	3,1	3,2
4	Thick cardboard box material	4,3	3,26	3,33
5	Exclusive and elegant box model	4,3	3,06	3,16
6	There is an elegant paper bag	4,3	3,33	3,33
7	Strong paper bag strap	4,3	3,16	3,13
8	There are gift card	4,43	3,33	3,2

Table 4.41 Position Value of Packaging Design

To see the position of the packaging design that will be created compared to competing products, see the comparison chart below:

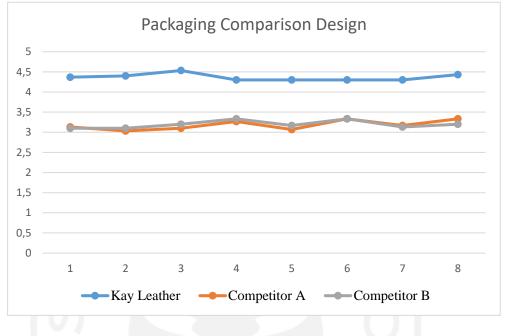


Figure 4.22 Packaging Comparison Design

In Figure 4.22, it is shown a comparison of the position of the packaging design that will be created against competitors can also be seen in the image from the HOQ, with the symbol () representing the product being developed, the symbol () representing competitor A's product, and the symbol () representing the competitor's B product. The following is a comparison of the packaging design position with competitors in the HOQ:



		Customer Comparison								
No	Customer Needs	1	2	3	4	5				
1	Elegant color design				<b></b>					
2	Tough and sturdy box				<b></b>					
3	Waterproof type of material and mildew				<b></b>					
4	Thick cardboard box material				<b></b>					
5	Exclusive and elegant box model				<b></b>					
6	There is an elegant paper bag				<b></b>					
7	Strong paper bag strap				<b></b>					
8	There are gift card		7		<b></b>					

Figure 4.23 Comparison Between Customer

The values of the packaging design position that will be created by Kay Leather, competitor A, and competitor B in Figure 4.23 will be used as the basis for determining goals.

h) Priority Identification Calculation

At this stage, several calculations can be used to assist the process of prioritizing, including:

- Goal: the target value of satisfaction to be achieved for each consumer need. Goals can be measured on a scale of 1 to 5.
- Sales Point: contains information on how capable consumer needs are in providing selling value to the product design that has been planned. The sales point value consists of, 1 = no sales point; 1,2 = average sales point; 1.5 = strong sales point.
- 3. Improvement Ratio: The improvement ratio value shows how much improvement or improvement must be made in developing the product. The way to find out the value of the improvement ratio is as follows:

 $Improvement Ratio = \frac{Goal}{Position Value Kay Leather}$ 

The following is a table of results from the calculation of the improvement ratio for each consumer need:

No	Customer Needs	Position Value	Goals	Improvement Ratio
1	Elegant color design	4,36	4	0,91743
2	Tough and sturdy box	4,4	5	1,13636
3	Waterproof type of material and mildew	4,53	5	1,10375
4	Thick cardboard box material	4,3	4	0,93023
5	Exclusive and elegant box model	4,3	3	0,69767
6	There is an elegant paper bag	4,3	5	1,16279
7	Strong paper bag strap	4,3	5	1,16279
8	There are gift card	4,43	3	0,6772

Table 4.1 Improvement Ratio Calculation

- 4. Row weights: obtained by multiplying the importance rating, improvement ratio, and sales point. The results of the row weights will then be used for the calculation of the priority percent.
- 5. Percent Priority: After identifying the value of the row weights and column weights that have been searched previously, then the priority percent calculation is carried out with the following formula:

Percent Priority = 
$$\frac{raw/column \, weight}{total \, raw/column \, weight} x100\%$$

The priority percent value will be used to determine the priority actions taken by Kay Leather. The order of priority on consumer needs that must be met by Kay Leather in creating an exclusive packaging design for bag products which are, elegant color design, tough and sturdy box, waterproof type of material and mildew, thick cardboard box material, exclusive and elegant box model, there is an elegant paper bag, strong paper bag strap, and there are gift cards. As for the order of priority, the technical characteristics most needed to meet consumer needs are exclusive color, material according to specification, carton quality, design according to the specification, and gift card.

i) House of Quality

The House of Quality (HOQ) is one of the frameworks for the QFD approach to management design. In general, this matrix is an attempt to translate the customer's

voice directly into the technical requirements of the final product. Because there comprises whats (customer needs/voice of customer), hows (technical requirements), relationship matrix, competitive evaluation, and importance rating, HOQ is the first home and most comprehensive element of product creation. Consumer demands, technical qualities, aims, comparisons of produced goods with rival products, and so on are all included in the HOQ.



			Exclusive color	Material according to specifications	Carton quality	Design according to specifications	Gift card											
			10	Technic	al Requi	rement			Custom	er Com	parison		S	oint	ment	eight	tage ity	ner iority
No	Customer Needs	Importance Rating	1	2	3	4	5	1	2	3	4	5	Goals	Sales point	Improvement ratio	Row Weight	Percentage Priority	Customer Need Priority
1	Elegant color design	6,8	•								<b></b>		4	1,5	0,375	3,825	21%	1
2	Tough and sturdy box	7,2			0						<b></b>		5	1,2	0,24	2,0736	11%	3
3	Waterproof type of material and mildew	6,46			0						<b></b>		5	1,2	0,24	1,86048	10%	6
4	Thick cardboard box material	5,73			•					-	<b></b>		4	1,2	0,3	2,0628	11%	4
5	Exclusive and elegant box model	6			$\triangle$						<b></b>		3	1,2	0,4	2,88	16%	2
6	There is an elegant paper bag	5,46									<b></b>		5	1,2	0,24	1,57248	8%	7
7	Strong paper bag strap	4,86				0					<b></b>		5	1,5	0,3	2,187	12%	3
8	There are gift card	6,26									<b></b>		3	1	0,33333	2,08667	11%	5
	Target		Using gold color	Using thick carton	Using ivory carton	Size 35 cm x 35 cm x 10 cm	Exclusive design card											
	Column Weight			166,7	98,55	68,58	56,34											
	Percentage Priority			33%	20%	14%	11%											

Figure 4.1 House of Quality

### 4.6.2.3 Elegant Design Packaging

Based on the results of the HOQ, an exclusive packaging design for bags for Kay Leather can be created, which consists of packaging boxes, paper bags, and gift cards. The following is a design image for Kay Leather's exclusive packaging series for bag products.

# Kay Leather 2. Design for Paper Bags Kay Leather

# 1. Design for Packaging

# 3. Design for Gift Card



### **CHAPTER V**

### **RESULT AND DISCUSSION**

### 5.1 Analysis of Improved Performance Attribute

CV Kay Nusa Bihaka has dealt with the problem of losing 50% of the demand in 2020. The cost of production is also over 5% of the budget. That situation leads to unbalance financial aspect of CV Kay Nusa Bihaka. According to the Institute of Asset Management (2017), asset management involves balancing cost, opportunities, and risk against the desired performance of an asset to achieve the organization's objective. Because of that reason, asset management efficiency was chosen as the performance that will be improved. Improving asset management efficiency will help CV Kay Nusa Bihaka to fix the current problem and achieve its goals.

## 5.2 Analysis Proposed Project to CV Kay Nusa Bihaka

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Metric	Calculation	Result
AM 1.2 Return on Supply Chain	$ROF = rac{ ext{Supply Chain Revenue} -  ext{Total Cost to Serve}}{ ext{Supply Chain Fixed Asset}}$	-0,02
Fixed Assets	$ROF = \frac{167.536.135 - 175.912.942}{369.000.000}$	

Table 5.0.1 Asset Management Calculation

In Table 5.1 above, the result of the matrix A.M.1.2 Return on Supply Chain Fixed Asset shows the total supply chain revenue of Rp 167.536.135, and the total cost to serve is Rp. 175.912.942. Based on the calculation, CV Kay Nusa Bihaka gets a loss of -0,02 or 2%. The profit target of CV Kay Nusa Bihaka in 2020 is 10%, thus the total loss is 12%. To minimize the problem, the solution is to increase sales and minimize the cost. In the current situation, the demand for CV Kay Nusa Bihaka is low, then a marketing strategy is needed to increase the revenue of CV Kay Nusa Bihaka. Craven, Piercy, and Prentice (2015) discovered that marketing strategy provides a competitive advantage for the company by increasing value-added to the business' customers.

### **CHAPTER VI**

### CONCLUSION AND RECOMMENDATION

### 6.1 Conclusion

Based on data processing and discussion, the conclusion could be drawn as follows:

- 1. Performance attributes that need to be improved in the CV Kay Nusa Bihaka based on the SCOR Racetrack model are on asset management efficiency attribute (1 A.M.1.2 Return On Supply Chain Fixed Assets).
- 2. In the calculation of AM.1.2 Return On Supply Chain Fixed Asset the result is -12% it means that CV Kay Nusa Bihaka gets a loss of -12% in 2020. Based on the descriptive analysis the project proposal that will be implemented in the CV Kay Nusa Bihaka is by creating a marketing strategy and product design as asecond project.

### 6.2 Recommendation

Based on the analysis and discussion, the researcher suggests the CV Nusa Kay Bihaka and for future research, as follow bellows:

1. For CV Kay Nusa Bihaka

The author suggests to the CV Kay Nusa Bihaka to maximize sales through online media and to make an innovation in the marketing strategy process. The author also encourages the owner of CV Kay Nusa Bihaka to give training to the employee on how to manage sales through online media. Last, the author recommendes that marketing strategy can be implemented in the CV Kay Nusa Bihaka and it can increase the revenue, brand awareness, and also loyalty of customers.

2. For future research

The suggestion for the next research is how to maximize the usage of marketing strategy in the CV Kay Nusa Bihaka and others leather companies. The author believes that a correct marketing strategy can improve the performance of the company and other beneficial impacts.

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### ATTACHMENT

# **Questionnaire Interview SCOR Racetrack Program Research 2021** Validation: Date: 22 April 2021 Signature: Locatioan: CV Kay Nusa Bihaka List of Question 1. What is the business runs for CV Kay Nusa Bihaka? 2. How long CV Kay Nusa Bihaka run the business? 3. What are the product of CV Kay Nusa Bihaka? 4. What the current situation of CV Kay Nusa Bihaka? 5. What is the current problems that faced by CV Kay Nusa Bihaka? 6. How CV Kay Nusa Bihaka run the supply chain management process? 7. Where CV Kay Nusa Bihaka produce the product? 8. How CV Kay Nusa Bihaka get the materials for production? 9. How many plant that CV Kay Nusa Bihaka haved? 10. When the production process started in the CV Kay Nusa Bihaka? 11. What is the best seller product from CV Kay Nusa Bihaka? 12. Where is the market of CV Kay Nusa Bihaka? 13. How CV Kay Nusa Bihaka send the product to the customers? 14. How long CV Kay Nusa Bihaka produce a product? 15. What is the value of CV Kay Nusa Bihaka? 16. How CV Kay Nusa Bihaka maintain relationship between customers? 17. How CV Kay Nusa Bihaka response the complain from customers? 18. What do you know about SCOR 12? 19. How about your respond about this research? 20. What is your expectation about this research? 21. Do you agree if the research conducted in the CV Kay Nusa Bihaka? 22. What is the rules that must be followed during the research process? 23. Are you agree if this result of the research will be published in the journal? 24. Do you agree to implement the result of the research in the CV Kay Nusa Bihaka? 25. Is there any question relating this research?