ISSN No:-2456-2165

Analysis Supply Chain Management Performance Using SCOR Method in Compressor Distributor Company at PT. Pola Petro Development

David Sinaga[1)], Sugiyono Madelan[2)], Ahmad Badawi Saluy[3)]
Operational Management, Magister Manajemen, Mercubuana University, Indonesia

Abstract:- Supply chain management analysis is one of the activities required in the supply chain of a company. PT.Pola Petro Development (PT.PPD) as a distributor of compressor machines must improve its services in line with complaints from customers such as delays in requested items and goods sent do not match what was ordered. This research aims to determine supply chain performance at PT.PPD by the Supply Chain Operation Reference (SCOR) method. The analysis technique used in this study uses a metric system to assess the performance of the supply chain consisting of level 1, level 2 and level 3. This research shows that supply chain performance is not efficient because the results of level 1 metric measurement are Perfect Order Fulfillment (POF) and Order Fulfillment Cycle Time (OFCT) is below the set benchmark value. The actual POF value was 89.98% under the superior benchmark value of 98% and OFCT actual 89 days is below the superior benchmark value of 60 days. Analysis to find the root of the problem using a fishbone diagram, and identify solutions to problems that occur.

Keywords:- *SCOR Model, Supply Chain Management, Fishbone Analysis.*

I. INTRODUCTION

Currently the competition in the business world is so tight, all companies compete with each other to market their products with various types of promotions and the best service. In an internet age, especially since the world is hit by the Covid19 pandemic, businesses today lie in how a company is able to create products or services that are cheaper, more qualified, and faster available compared to its business competitors. So that it forces the company to improve the performance of its company in order to be able to provide satisfactory service to all its customers, in other words the company that can meet the wishes of customers, then the company will be superior.

Aside from the price, speed of delivery and suitability of goods shipped is a factor that is often complained by customers. This is also the case with PT. Pola Petro Development(PT. PPD) as a compressor engine sales company under the brand Sullair, often get complaints about the inseriance of goods sent with demand and delays in delivery.

Based on data collected from January 1, 2017 to December 31, 2019, PT. PPD experienced some complains such as incompatipati an inappropriate item being sent and a delay in the goods being shipped. Here is a summary of the mistakes that have occurred in 2017 to 2019.

Tabel 1.1. Late goods data

YEAR	TYPE OF UNIT		QTY LATE (UNIT)	QTYORDER (UNIT)	PERCENTAGE (%)
	COMPRESSOR	DRYER			
2017	13 UNIT	3 UNIT	16	278	5.8%
2018	19 UNIT	9 UNIT	38	317	11.9 %
2019	14 UNIT	2 UNIT	16	297	5.4 %

YEAR	TYPE OF UNIT		QTY DELIVERY	REMARKS
	COMPRESSOR	DRYER		
2017	3 UNIT	2 UNIT	278 UNIT	Order type DLQ 1200XHC, but sent type DLQ 1200XHHC
2018	8 UNIT	4 UNIT	317 UNIT	Order type WS 3710, but sent type WS3708. Order type SRCG3890WE but sent type SRCG 3890E
2019	4 UNIT	-	297 UNIT	Order type voltage motor 6000 VAC, but sent type 380 VAC, Type DS-250HWC

Table 1.2. Incorrect goods on delivery

From the table above shows that the problem is not only in the delay of delivery, but in the case of the wrong type of goods sent from the factory is also a problem that must be addressed immediately because it results in loss and loss of customer trust to PT. PPD. One way to measure the performance of Supply Chain Management (SCM) as a whole is to use the SCOR (Supply Chain Operation Reference) method. SCOR is a reference model of Supply Chain operations designed by the Supply Chain Council (SCC). SCOR is able to map part of the Supply Chain series of activities in detail.

The preliminary study was conducted by conducting an interview with customers PT.PPD to see how important the urgency to do research using SCOR. In addition to the interview process, questionnaires will also be distributed to respondents who are key persons in the Supply Chain PT. PPD, such as sales branch managers and marketing.

Based on the formulation of existing problems, the objectives obtained from this research, namely as follows:

1. Measuring the performance of the Supply Chain Management division at PT. PPD.
2. Find the cause of performance problems in the Supply Chain Management division at PT. PPD.
3. Provide alternative solutions to the performance problems of the Supply Chain Management division at PT. PPD.

II. LITERATUR EREVIEW

2.1. Performance Measurement

Performance measurement is basically a key factor in developing an organization effectively and efficiently, because it is supported by better policies or programs on the resources used in the organization. According to Wahyudi (2002) Performance measurement is a systematic description or description of the associated strengths and weaknesses of a person or group. According to Simamora (2004) Performance measurement is a process used by organizations to evaluate the implementation of employees' individual work. Whittaker and Simons (2000) define Performance measurement as a method of assessing progress that has been achieved compared to a set goal.

From the explanation above, it can be concluded that performance measurement is a measurement action that is carried out on various activities in the value chain in the company. The measurement results are then used as feedback that will provide information achievements of the implementation of a plan and the point at which the company requires adjustments to planning and control activities.

2.2. Supply Chain Management

The term Supply Chain Management (SCM) began to appear in the late 1980s which then began to be widely used in the 1990s. Before that, the company used more terms like "logistics" and "operations management" than the terms SCM (Hugos, 2003). By combining various definitions developed by several sources, the definition of Supply Chain is obtained as "a network consisting of several companies (including suppliers, manufacturers, distributors and retailers) that cooperate and engage both directly and indirectly in meeting customer demand, where the companies perform the function of material procurement, the process of transforming materials into semi-finished products and finished products, and distribution of finished products to the end customers. While the definition of SCM by Geraldin, Pujawan, and Dewi (2007) "material flow management is information and financial through a network of organizations (suppliers, manufacturers, logistic providers, wholesalers / distributors and retailers) that aims to produce and deliver products or services to consumers effectively and efficiently".

2.3. *SCOR(Supply Chain Operations Reference).*

According to Pujawan (2005), Supply Chain Operations Reference (SCOR) is a reference model of supply chain operations. SCOR is a process-based model. SCOR divides supply chain processes into five processes consisting of:

1. Plan (Planning Process), which is a process that balances demand and supply to determine the best action in meeting the needs of procurement, production, and delivery.
2. Source (Procurement Process), namely the procurement process of goods and services to meet the demand.
3. Make (Production Process), which is the process to transform raw materials into products that customers want.
4. Deliver (Delivery Process), which is a process to meet the demand for goods and services that include order management, transportation, and distribution.

5. Return, the process of returning or receiving product returns for various reasons.

SCOR is developed and supported by an independent non-profit called the Supply Chain Council (SCC). SCC institute of prtm consulting agency and McGrath from AMR Research. (Robin Todd: 1996). SCC became developed due to the formation of a consortium by 70 practitioners from companies located in the American West. In general, industry practitioners define SCM as a definition of the desired process and measurement between consumer and supplier.

The SCOR model's ability to define the relationship between the process and what elements are influential in that process and the scope covered encompasses all existing demand elements. SCOR models are based on descriptions that occur in the supply chain with inter-organizational, industrial and geographic approaches.The objectives of implementing the SCOR model in the company according to SCC (Council 2010) are:

1. Evaluation of the performance of the supply chain.
2. Can identify gaps of performance.
3. Efficiency in redesigning supply chain network and optimization.
4. Enlarge/increase operational control of the core standard of the process.
5. Reporting management and organizational structure are more efficient / faster.
6. Equation of competence of team skills in the supply chain with strategic objectives
7. Detailing the game plan for launching (introducing) new businesses and products
8. Systematic merging of supply chains that capture the advantages of the project.

For more details can be seen in figure 2.1. about Supply Chain Operation Refrence (SCOR) as below:

	Level		Examples	Comments
	#	Description		
Within scope of SCOR	1	Process Types (Scope)	Plan, Source, Make, Deliver, Return and Enable	Level-1 defines scope and content of a supply chain. At level-1 the basis-of-competition performance targets for a supply chain are set.
	2	Process Categories (Configuration)	Make-to-Stock, Make-to-Order, Engineer-to-Order Defective Products, MRO Products, Excess Products	Level-2 defines the operations strategy. At level-2 the process capabilities for a supply chain are set. (Make-to-Stock, Make-to-Order)
	3	Process Elements (Steps)	• Schedule Deliveries • Receive Product • Verify Product • Transfer Product • Authorize Payment	Level-3 defines the configuration of individual processes. At level-3 the ability to execute is set. At level-3 the focus is on the right: • Processes • Inputs and Outputs • Process performance • Practices • Technology capabilities • Skills of staff
Not in scope	4	Activities (Implementation)	Industry-, company-, location- and/or technology specific steps	Level-4 describes the activities performed within the supply chain. Companies implement industry-, company-, and/or location-specific processes and practices to achieve required performance

Figure 2.1. Level SCOR

2.4. Tools Of SCOR

There are several tools used in applying the SCOR model to evaluate supply chain performance. The following is a brief explanation of some of these tools.

1. *Gap Analysis*

Gap analysis is used when performing level 1 analysis, which is to calculate the amount of value of improvement (oppportunity) if the target set for each metric can be achieved. The amount of opportunity for internal metrics can be calculated directly. But for customer-facing the amount of opportunity is calculated using one of the following 3 methods (Bolsstorff, 2006)

• The Lost Opportunity Measure
• The Cancelled Orderd Measure
• The Market Share Measure

2. *Fishbone Analysis*

Fishbone diagram is one of the methods or tools in improving quality. Often this diagram is also called a Cause-And-Effect diagram. The inventor was a Japanese scientist in the '60s. Named Dr. Kaoru Ishikawa, a scientist born in 1915 in Tokyo Japan who is also an alumnus of chemical engineering At the University of Tokyo. So it is often also called the Ishikawa diagram. The method was originally more widely used for quality management. Fishbone diagrams are used when we want to identify possible causes of problems and especially when a team tends to fall thinking on routines (Tague, 2005, p. 247). Fishbone diagrams will identify the

various potential causes of a single effect or problem, and analyze the problem through discussion and brainstorming sessions.

In the analysis process level 3. SCOR model uses additional tools, namely fishbone analysis. In Bolsstorf (2006) it is explained that fishbone analysis is used to trace the root cause in one of the processes (plan, source, make, deliver, return) with the lowest performance based on the evaluation results of level 2. Fishbone analysis or causal diagram is depicted in the form of fish bone diagram as seen in Figure 2.2. below.

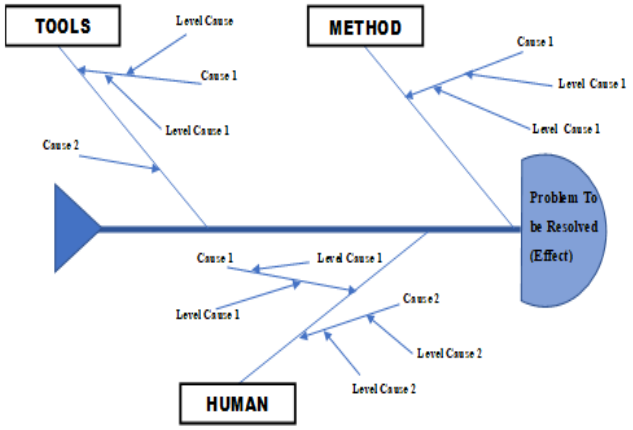


Figure 2.2. Fishbone diagram

III. RESEARCH METHODOLOGY

3.1. Design and Research Type

This research is a discovery due to delays in the delivery of compressor engines that are analyzed and found potential causes, then control and monitoring of the variables so that it can properly reduce the delay of delivery and incompatipati something sent to the customer's order. Data created by Supply Chain Operation References (SCOR) approach is poured in the form of Standard Operating Procedure (SOP) in each line.

This type of research will be done with descriptive methods. The data used is qualitative data, where in the research process used includes an overview of research objects and problems that occur in the research object and based on and mapping the SCOR 11.0 process from level 1 to level 3.

The population in this study is a number of employees who are directly involved in the process of company activities that began from the time the order was received from the customer, ordering goods to the factory, the process of receiving goods from the factory to the PT warehouse. PPD until the process of shipping goods from the warehouse PT. PPD to customer. Employees who are directly related to the activities that are being conducted research amounted to 36 people consisting of: Director, General Manager, Procurement Manager, Delivery Supervisor, Warehouse Supervisor, Inventory Control of 1 person each, Division Manager as many as 2 people, Branch Marketing Manager 6 people, Procurement Admin as many as 4 people and Sales Marketing as many as 18 people.

Interview data to 20 resource persons and secondary data, namely delivery data from 2017 to 2019 from the delivery section that becomes the basis of data processing in the research needed for variable calculation in SCOR method.

3.2. Analysis Method and Processing Data

Data management and analysis methods needed to make it easier for researchers to manage data, and create the targets needed in research. Both primary and secondary data that are successfully collected, the data will be separated from quantitative data in the form of numbers, or qualitative data is sorted from quantitative data and then ready to be analyzed. Data analysis techniques used to manage and analyze the data that has been collected consists of stages of data management. Calculations used using standard calculations listed in the performance of SCOR are as follows:

2.4.1. Perfect Order Fulfilment (POF)

POF is the percentage of orders sent complete and in time in accordance with customer demand and goods sent do not haveeven quality. How to determine POF is as follows:

$$POF = \frac{\text{Qty Order} - \text{Qty Order Problem}}{\text{Qty Order}} \times 100\ \%$$

2.4.2.Order Fulfilment Cycle Time(OFCT)

OFCT is the amount of time (days) required from the order received until the product is received at the customer's place. The amount of OFCT value can be measured from the average number of days needed, ranging from customers ordering goods to goods to the hands of customers.

2.4.3.Cost OfGood Sold (COGS)

COGS is the direct cost for materials and the cost of wages needed to make a product. COGS is defined as The Cost of Sales.

2.4.4.Cash To Cash Cycle Time (CTCCT)

This metric (Table 1) measures the speed at which the supply chain converts inventory into money. The shorter the time it takes, the better the supply chain. Good companies have short cash-to-cash cycles. Three (3) components, CTCCT is calculated as follows:

$$CTCCT = \textit{inventory days of supply} + \textit{average days of account receivable} - \textit{average days of account payable}$$

2.4.5.Gap Analysis

Gap analysis is used when performing level 1 analysis, which is to calculate the amount of value of improvement or opportunity if the target set for each metric can be achieved.

2.4.6.Fishbone Analisys

Fishbone analysis is carried out by gathering several supply chain experts who have adequate experience and expertise regarding problems occurring in the performance of the supply chain, as well as providing views and opinions in identifying all considerations why the problem occurs.

IV. RESULT AND DISCUSSION

4.1. Overview Of Supply Chain at PT.PPD

PT. Pola Petro Development(PT. PPD) is an air and gas compressor service provider in Indonesia, vertically integrated from production or assembly, fabrication, distribution and after-sales service of marketed products. The company offers solutions to air and gas needs problems for all companies that require wind or gas energy in their company's operations. PT.PPD was established in mid-2005 which aims to coordinate thoroughly to three companies distributors of compressor machines and beverage packing machines that have been established first.

Because the company is engaged in distributors, in its operation PT PPD does not conduct the production process. PT PPD is only a company that sells products produced by outside companies and marketed in Indonesia. As an overview of the supply chain of PT. PPD can be seen in figure 4.1. below.

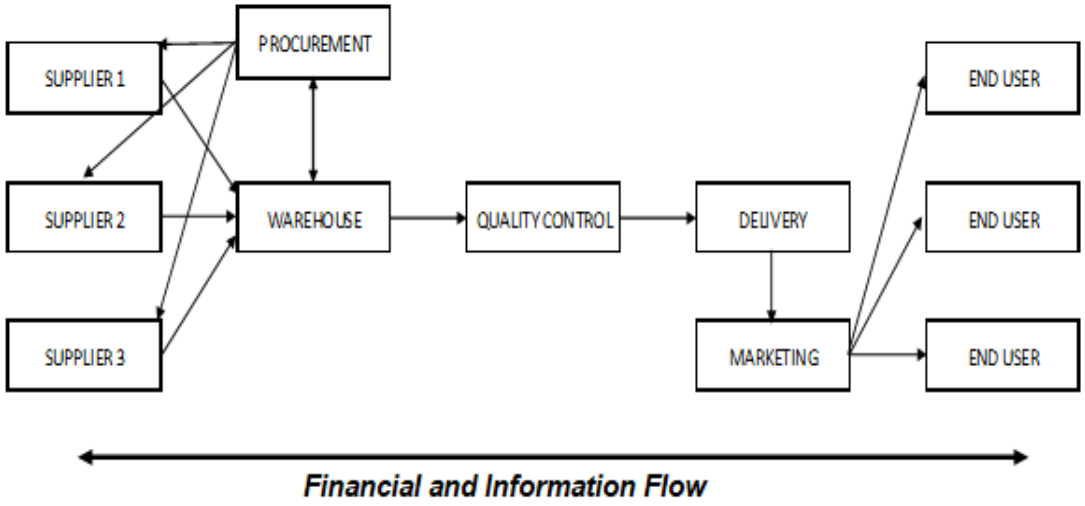


Figure 4.1. Work Flow Supply Chain Management PT. PPD

Supply chain in PT. PPD begins with the request to purchase machines from the marketing department to the procurement department both for stock and goods that are in accordance with the customer ordered directly based on the purchase order (PO) to the marketing section. The procurement department will make a purchase to the factory according to the goods ordered by the marketing department and the marketing department provides information to the warehouse if the goods ordered from the factory will arrive at the warehouse at least 2 (two) days before the estimated goods arrive. After the goods arrive at the warehouse, the warehouse department provides information back to the procurement section that the machine ordered has come and the data is immediately entered into the ERP system (Enteprise Resource Planning) so that the marketing department also knows that the ordered goods are available in the warehouse. After the machine data is entered in the ERP system, the marketing department makes a request through the ERP system to the warehouse to deliver the machine to the customer.

4.2. Analysis Performance Supply Chain Management PT.PPD.

Analysis and evaluation of supply chain performance in PT PPD is conducted using SCOR Model version 11.0. The analysis will be done through several stages or levels that are interconnected with each other. The following is an analysis for each level at PT PPD.

4.2.1.Level 1 (Bussines Objective)

Analysis conducted at level 1 begins with defining the company's business objectives. To find out the business objectives of PT. PPD, conducted a series of interviews to several company leaders, namely Division Manager Unit, Division Manager Product Support (Technician &Sparepart), Branch Manager Marketing and Warehouse Supervisor and obtained answers that the business objectives of PT. This PPD is providing the best level of service to all customers, namely:

1. Provide the best service level to all customers without errors and delays in delivery by using delivery performance indicators and responsiveness to customer demand.
2. Increase the company's profit (profit) by using indicators of supply chain cost and asset management efficiency.

After knowing the above business objectives, the next step is to measure the metrics on SCOR that fit the business

objectives. . For the first business purposes the data available are Perfect Order Fulfillment (POF) and Order Fulfillment Cycle Time (OFCT) and for the second purpose the available data are Cost of Goods Sold (COGS) andCash to Cash Cycle Time (CTCCT) metrics as shown in table 4.1 below.

Table. 4.1. Actual and benchmark data performance measurement

NO	Performance Attributes	Metrics	Actual Data	Benchmark Data		
				Superior	Advantage	Parity
1	*Supply Chain Reliability*	POF	89,98%	98%	96%	93%
2	*Supply Chain Responsiveness*	OFCT	89 days	60 days	65 days	70 days
3	*Supply Chain Cost*	COGS	55,93%	40%	50%	60%
4	*Supply Chain Asset Management*	CTCCT	98 days	75 days	85 days	95 days

Based on table 4.1. above that the POF metric value in the actual data is still far below parity, while the main objective of the company is a high level of service with a POF target of 98%, this means that the company does not provide a great opportunity for errors in terms of delivery. Similarly, the OFCT metric is still above parity value, which means that the increase in speed in delivery must be further improved. Both of these metrics should be able to be in a superior position because both are in line with PT's main business objectives. PPD is providing the best level of service to its customers.The metric for the second business objective is to increase the company's profit, with THE COGS metric in the actual data being between parity and advantage values, while CTCCT in the actual data is above parity value.

After setting the target performance, the next step is to perform a Gap Analysis that aims to calculate the difference between the actual and targeted conditions. In the Gap Analysis table that will be presented first determines the opportunity. Based on the SCOR Model there are several methods used to calculate the amount of opportunity for POF and COGS metrics. The method chosen to calculate POF and COGS metrics in this study was The Lost Opportunity Measure Method. With this method it can be known the amount of opportunities lost to earn certain income with performance-based POF and COGS at this time.. The decrease directly indicates an increase in gross profit or operating profit as seen in Table 4.2. below:

Table. 4.2. Opportunity performance measurement

No	Performance Attribute	Metrics	Actual Data	Benchmark Data			Gap	Oppurtinity
				Superior	Advantage	Parity		
1	*Supply Chain Reliability*	POF	89,98%	98%	96%	93%	8,02%	Rp 6.360.023.799,24
2	*Supply Chain Responsiveness*	OFCT	89 days	60 days	65 days	70 days	29 days	Improving Goods Delivery Services
3	*Supply Chain Cost*	COGS	55,93%	40%	50%	60%	5,93%	Rp 737.508.994
4	*Supply Chain Asset Management*	CTCCT	98 days	75 Hari	85 days	95 days	13 days	Reducing Interest Expense

4.2.2.Level 2

In level 2 mapping, each core process in the SCOR Model is displayed in more detail than the company's supply chain processes. In the SCOR process there are three major parts of the process, namely planning, execution and enable. In this section, a detailed description of the processes in the supply chain of PT will be presented. PPD, starting from the process related to the purchase of compressor machines to suppliers, warehouse activities to the process of delivery of machines received by customers. The mapping done at level 2 is then analyzed all the existing parts and to get the right information, the author conducts interviews with people who know the process in their respective sections. The level 2 mapping can be seen in the Chart Figure 4.2 Level 2 mapping below.

Causes of untimely delivery of goods at PT. PPD can be traced through delivery and source process which can be seen in table 4.3. below:

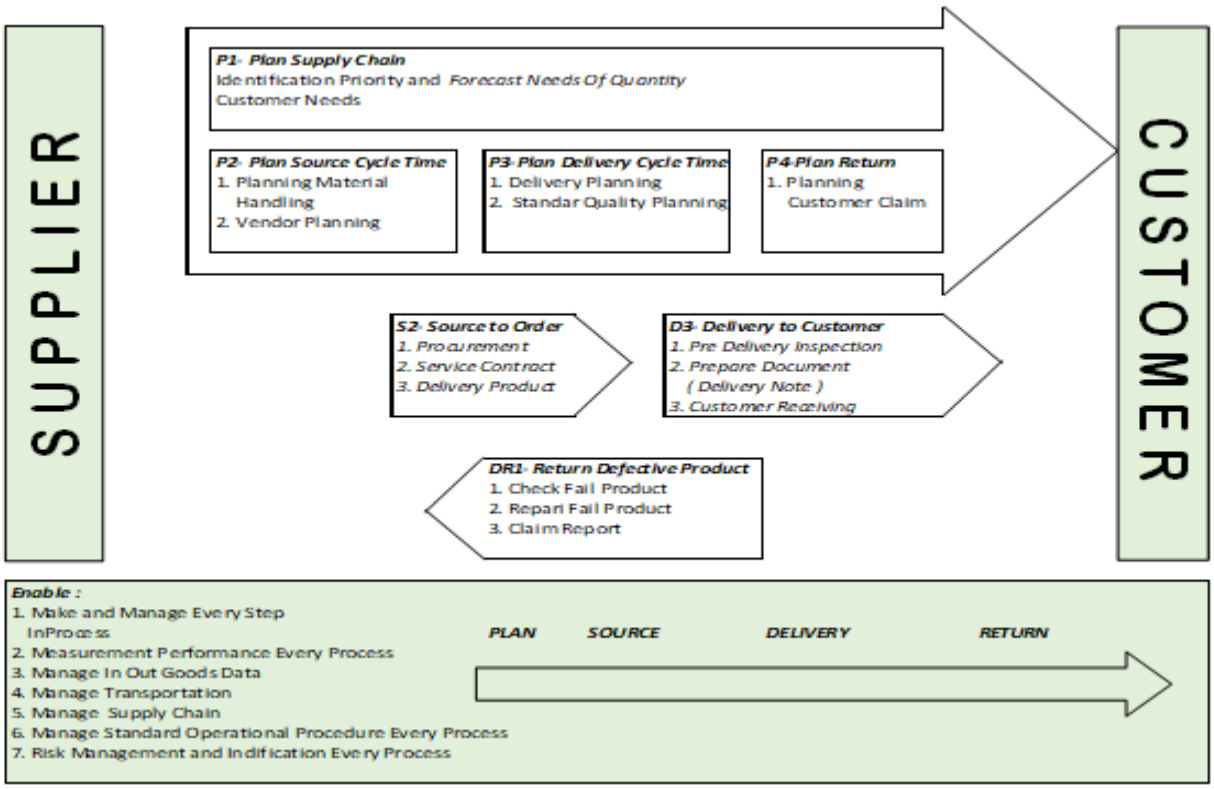


Figure. 4.2. Opportunity performance measurement

Table. 4.3. POF and OFCT, delivery & source

No	Performance Attributes	Metrics	Actual Data		Benchmark Data		
			Delivery	Source	Superior	Advantage	Parity
1	*Supply Chain Reliability*	POF	89,98%	94%	98%	96%	93%
2	*Supply Chain Responsiveness*	OFCT	89 days	85 days	60 days	65 days	70 days

In table 4.3. it appears that the POF value process on delivery is about 89.98% and OFCT 89 days. While in pof source by 94% and OFCT 85 days. It can be seen that the value on the source is slightly better than the delivery. But the cause of the amount of delivery value depends on the source. If the source is problematic then delivery will also be problematic. But if compared with superior value, both from the source value and delivery still have not reached or approached the superior value. To determine the root cause that occurs in the source process is needed a tool called Fish Bone, and analysis of the root cause will be done at level 3 in the SCOR method.

4.2.3. Level 3

Level 3 mapping analysis is done to see more detailed source process, because it has low performance based on level 2 analysis. In the level 3 mapping will be explained in more detail the problems that occur over all activities in the source process as seen in Figure 4.17 below. Current configuration (as is process). The picture shows the management of the process of ordering compressor machines to the factory until the arrival of goods in the pt warehouse. PPD consisting of inputs, process elements and outputs.

Based on the results of the interview obtained information that the most problems in the process elements are sections S2.2, S2.5, S2.8 and S2.16 so that the part will be analyzed with fish bone diagrams. More detailed explanation of the four source processes in level 2 mapping above will be explained in more detail below.

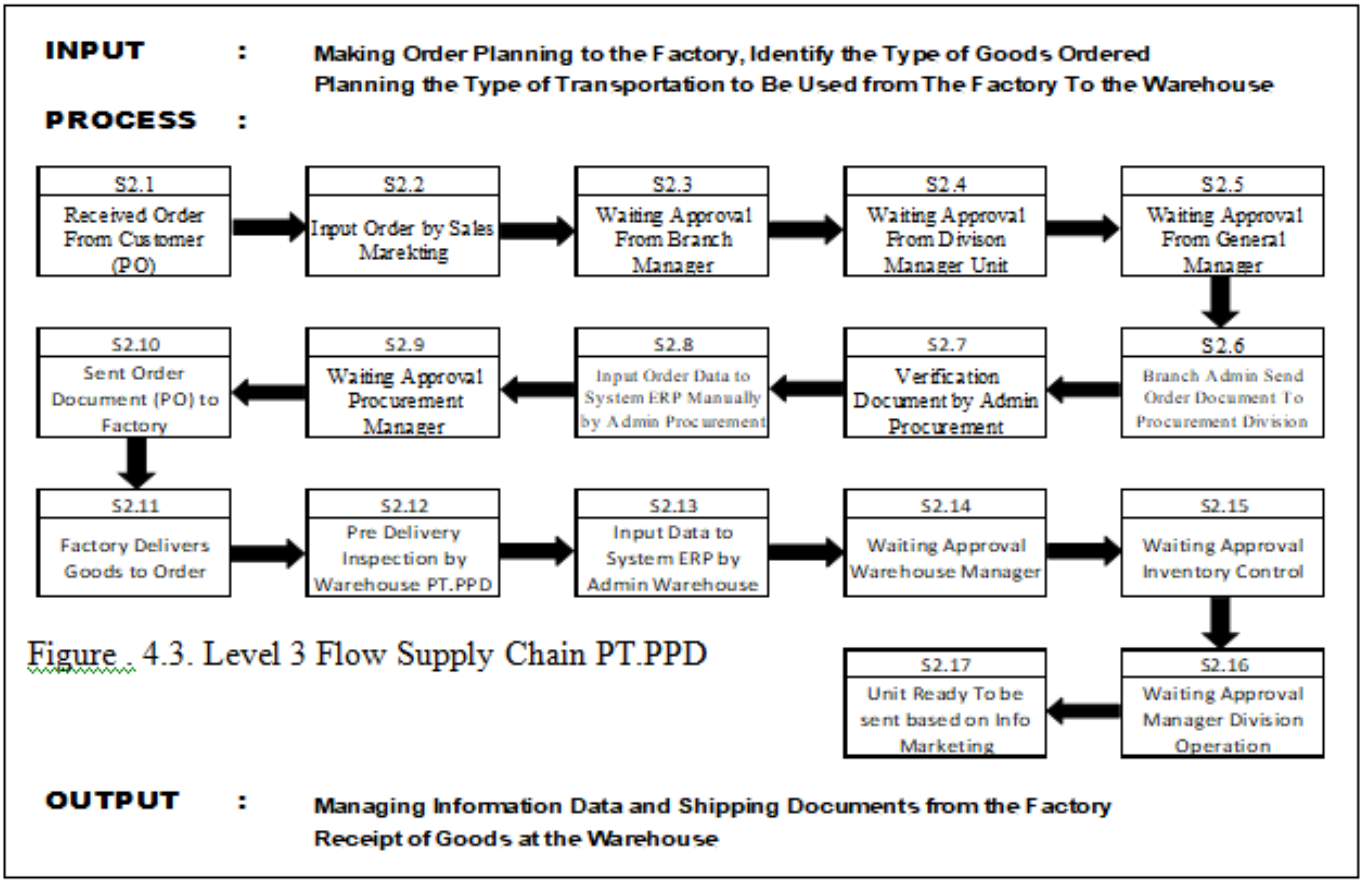


Figure . 4.3. Level 3 Flow Supply Chain PT.PPD

Figure . 4.3. Level 3 Flow Supply Chain PT.PPD

4.2.3.1. Process S2.2

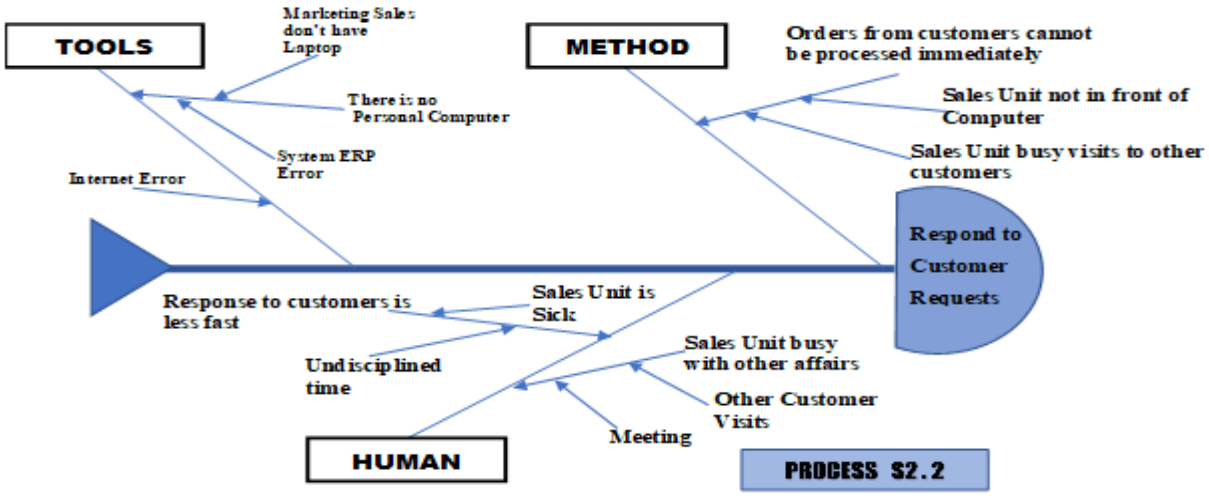
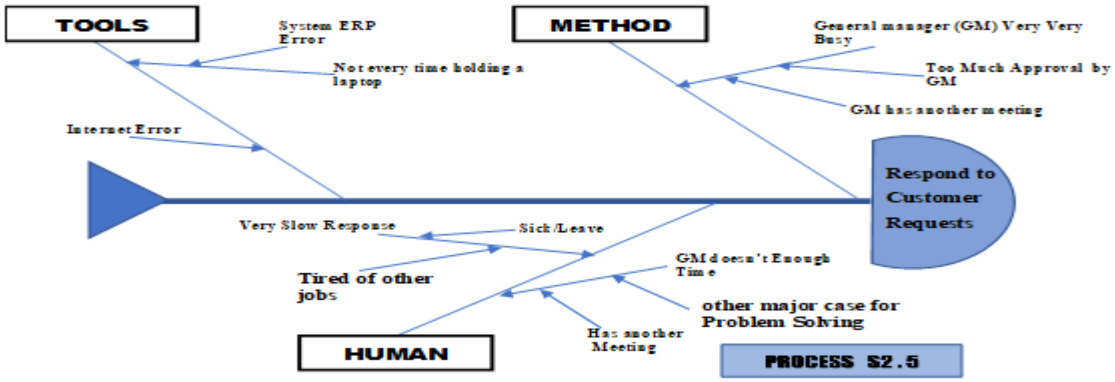


Figure . 4.4. Fishbone diagram process S2.2

If seen from the fish bone diagram, it can be seen that sales marketing can not directly make a purchase order compressor machine because it is constrained by equipment that is not available when needed and in terms of methods constrained by the system that must be done through applications located on the computer. While from the human side, the sales marketing also can not manage well because there is a relatively long distance difference and this makes a sales marketing there is a sense of tiredness and cendrung do delay until it is in the office again.

4.2.3.2. Process S2.5



Gambar . 4.5. Fishbone diagram process S2.5

In the S2.5 process, it is seen that the position of General Manager (GM) causes the long-lasting factor of bookering goods to pbarik to be longer. This is because each booking document must go through a GM while GM time is always busy with other affairs for the company.

4.2.3.3. Process S2.8

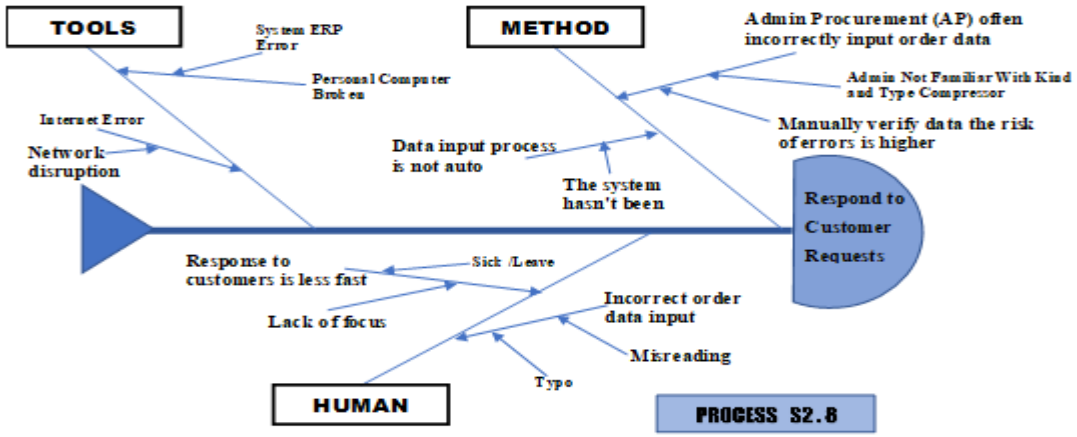


Figure . 4.6. Fishbone diagram process S2.8

In the process S2.8 factor of errors in ordering goods kepabrik because the order data that has been made by sales marketing retyped manually by the purchasing admin. If seen from the human side then this is the cause of the error factor because man must have limited ability that can not guarantee what he did everything without mistakes.

4.2.3.4. Process S2.16

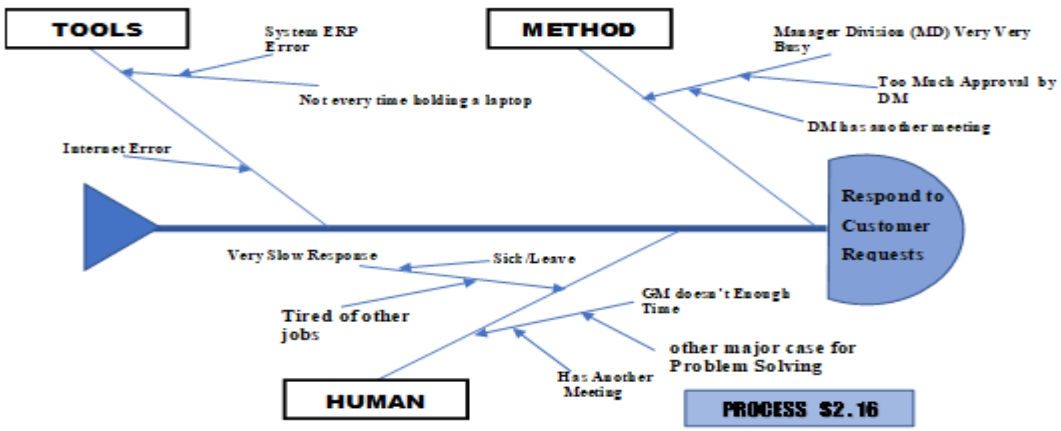


Figure . 4.7. Fishbone diagram process S2.16

In this S2.16 process, the problem is almost the same as the S2.5 process, which distinguishes only in the position of office. If at S2.5 in the position of GM, then in the process of S2.16 this happens in the position of manager of Dvision Operation.

After it is known that some problems that occur in the source part that causes the delivery part to be disrupted and identification of the main cause of the problem, then continued by finding solutionsapplied and approved by management to be able to improve the process and performanceof supply chain management PT. PPD is especially the delivery part but that is caused by the source process. So what needs to be done improvement is on the source process, namely the process of ordering goods to the factory.

In table 4.4. below shows the main problems and causes of the problem and proposed improvements offered based on the results of the root cause search using fish bone analysis.From the fishbone summary table it can be seen that the biggest factor that causes delays in ordering the goods kepabrik is the length of the administrative system that must be passed only to issue a booking document plus the personnel who are responsible in the process of publishing the document is not always be ready to do his job because there are other tasks to do. Plus if there is one of the personnel who is in a state of illness or leave can not immediately be replaced quickly to be replaced his status as a responsibility of the process, because it is not supported systemically but must be done by outside parties as the operator of the erp system that already has a cooperation agreement with the company PT. PPD.

Table. 4.4. Fishbone summary

No	Problem	Causes Of Problem	Proposed Improvements
1.	Sales Unit for too long to create booking documents into erp system	Sales Unit does not have a personal computer (laptop) to make booking documents after obtaining a PO from the customer so it must set the time to return to the office after traveling to the customer to use the office computer.	Sales unit is given a personal laptop and provided internet facilities services or data input process is not done by the sales unit but done by the admin who also gets cc email PO Customer then admin only verify by phone with sales unit regarding the data of goods ordered.
		Sales Unit can not divide its time with discipline between customer visits by inputting order data for customers who have done PO	
2.	The approval process from the General Manager is too long so there is a waiting time for the issuance of the booking documents	General Manager is too busy with other work	The approval process of ordering goods does not have to go through the General Manager, just until the Marketing Manager only.
		General Manager approval process is too much so it does not focus on the order dokmen made by the sales unit	
		If the General Manager is sick/ on leave then no one replaces him if the General Manager does not have time or forgets to inform the replacement approval process	Created a system if there is a leave / sick then sipenanggung approval process can move the approval process to a person he trusts without having to go through the process of changing the system by the erp operator because this will buth a long time, because the erp operator is on the outside side of the company.

No	Problem	Causes Of Problem	Proposed Improvements
3.	Frequent errors in the input type of goods by the procurement admin to place an order to the Factory	Data is inputted mannually and can cause read errors or typos by procurement admins	Data must be withdrawn automatically based on data created by sales unit and re-verified by procurement admin
		There is no verification process of data created by the procurement admin to be sent to the Factory	Procurement Manager must re-check any data made to be sent to the factory whether it is in accordance with the order and criteria desired by the sales unit or not
4.	Approval process from Division Manager Operatiion is too long so even though the goods have arrived at the warehouse but can not be directly carried out the delivery process	Division Manager Operation is too busy with other work	Approval process of goods input from admin ware house does not need to go through Divison Manager, just through Warehouse Manager and Inventory Control only
		Division Manager Operation approval process is too much so can not focus with the approval input of goods into the system	
		If Division Manager Operation Sakit / Cuti then no one replaces it if division manager operation does not have time or forget to inform the replacement approval process	Created a system if there is a leave / sick then sipenanggung approval process can move the approval process to a person he trusts without having to go through the process of changing the system by the erp operator because this will take a long time, because the erp operator is on the outside side of the company.

V. CONCLUSIONS

The results of the study illustrate that the performance of the supply chain management part of PT. PPD is less effective and efficient. Based on opportunity in gap analysis, the increase in revenue that can be achieved is able to increase the annual target of 3.6% and 0.42% per year of the company's total revenue.In level 2 mapping with SCOR method, it is known that the low value of POF and OFCT metric compared to superior value in benchmark data has occurred in the source process.In level 3 mapping with SCOR method, it is known that the cause of problems that occur in the source process that causes low value of POF and OFCT metrics that are measured

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