

Implementation of SCM Procurement Process In PT. Semarang Garment Manufaktur

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ABSTRACT

PT. Semarang Garment Manufaktur is manufacturing company which engaged in exports and imports of garment productions. Competition among garments company is growing rapidly, it's makes every company must reorganize their supply chain network. Supply chain management can increase production by minimizing production cost, improve customer satisfaction and increase profit. The procurement process is an activity of supply chain which support company's business process. The procurement process is still done by telephone and email in this company. This paper presents the design of supply chain business process according to supply chain strategy of this company using SCOR(Supply Chain Operation References) Framework. SCOR can identify the best practise to improve supply chain in PT. Semarang Garment Manufaktur (SGM).

Keyword

Supply Chain, SCOR, Procurement process.

1. INTRODUCTION

Technology development today requires every company must able to improve the quality of their productions to face of rapidly increasing global competition. SGM Company is one of private enterprise which is engaged in exports and imports garment manufacturing or production shirt. SGM company makes import to get raw materials as fabric and accesories from outside Indonesia and export garment product as the result of the production. SGM customer is coming from foreign retail companies such as Nike, Colombia, Elcorte, Wall Mart, DND, etc. SGM should be able to reorganize its management well and continuous make innovation to improve product quality so SGM can give much satisfaction for customers.

Supply Chain Management (SCM) is a process for supply goods from supplier to the process of supplying goods to the customer. Startegic SCM is expected to help company for achieve their purposes and goals. The goal is to get a quality product according to customer orders and generates higher profit by minimizing production costs. The procurement process is one of supply chain activity. This process is carried out by customer order. Number of procurement is depend on customer demand, time of order, the type of products demanded and market of the product.

The procurement process of raw material as fabrics, yarns and accesories is done by import and local process. This process purpose is to fulfillment demand target of the product according to customer desires. Ordering process to supplier is done by telephone and email. This process is the vital activity for support production activity in effort to provide raw materials. Without raw material, production activity can not be implemented. The

calculation of inventory in warehouse must be properly taken into account, the right account can streamline the procurement costs to supplier and avoid stock out of raw materials in Warehouse Department. SGM must manage the management of the production well. SCM is needed to manage SGM production.

This paper is intended to describe, understand and evaluate the procurement process as one of important process in the supply chain activity using SCOR Framework. SCOR Framework is using to assess the quality and design the most appropriate supply chain for procurement process in SGM company so SGM can fulfill production department need and provide product on time for giving satisfaction for customers.

2. PROBLEMS IDENTIFICATION

Issues to be discussed in this study are:

1. Analyze the procurement process on the implementation of Supply Chain Management in PT. Semarang Garment Manufaktur.
2. Identify the best way to improve supply chain procurement process in PT. Semarang Garment Manufaktur by using the SCOR (Supply Chain Operations References) framework.

3. RESEARCH PURPOSES

The purpose of this study is able to analyze and design the procurement process that occurs in the implementation of Supply Chain Management in PT. Semarang Garment Manufaktur using SCOR (Supply Chain Operations References) Framework.

4. RESEARCH METHOD

Methods of data collection conducted in this study in order to obtain accurate data to analyze and design the procurement process with the implementation of Supply Chain Management is done by several ways:

- a. Interview
Interview is question and answer process from the responden about the relevant things which connect with procurement process in PT. Semarang Garment Manufaktur.
- b. Observation
Observation is the process of observations made directly to find out the procurement process in PT. Semarang Garment Manufaktur Ungaran.
- c. Studies litelatur
Litelatur studies is a process for collecting the data or information relating to research by reading books, journals, references, procedures related to Supply Chain Management and the procurement process, and others.
- d. Analysis of the procurement process with the implementation of Supply Chain Management.

Process analysis was conducted to determine the procurement process with the implementation of Supply Chain

Management and the factors that affect the procurement of strategy to be adopted in the procurement process in PT. Semarang Garment Manufaktur.

- e. The design of the procurement process with the implementation of supply chain management. Supply Chain management design process in the procurement process using the Supply Chain Operations References (SCOR) Framework in PT. Semarang Garment Manufaktur.

5. LITELATUR REVIEW

5.1. Supply Chain Management

Supply Chain Management is the coordination of all supply activities of an organization from its suppliers and delivery of products to customers [2]. There are main member of the supply chain are the organizations that manufacture a product and/or deliver a service as illustrated in figure 1.

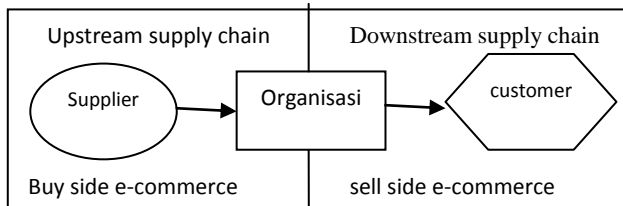


Fig 1 : Members of SCM

The primary objectives of SCM are to reduce supply costs, improve product margins, increase manufacturing throughput, improve Return On Investment (ROI) [9] and effective supply chain practices can increase information processing capacity [7]. Supply Chain decisions can be classified into three level : (1) Strategic level : having a long-lasting effect, e.g, (numbers, capacities and flow of materials). (2) Tactical level : update anywhere within a year e.g., (production and purchasing), (3) operational : day to day decisions e.g., (scheduling, routing, loading, etc) [12]. Supply chain within an organization can be viewed from a systems perspective as the acquisition of resources (input) and transformation (process) into products and services (outputs) which are sent to the customer. The advantage of the supply chain is to improve service, cut costs, increase profits, get products to market, get new customer, product, and to suppress competition, improving management decision, adding new channels in the market, increase stockholder value, new suppliers, and others [5]. Company must provide 5 strategy to design SCM (Supply Chain Management) strategy, there are operation strategy, channel strategy, outsourcing strategy, customer strategy and assets network [13]. Operation strategy can describe in table 1 [13].

Table 1. Type of Operational Strategy & SCM Strategy

Operation Strategy	Purpose	SCM Strategy
Make To Stock	Large number of Standart product had been sold	Efficiency of SCM, standarization metdoh and frequency tool, EOQ, ROP
Make To Order	Product accordance with customer order, possible reordering in low frequency	Responsive SCM, target and time scheduling is very important, many method and tools must be prepared
Configure to order	Standart product with last product has been accordance with customer demand	From factory to outlet (efficiency of SCM), from outlet to customer (Responsive SCM)

goods so as to know how the supply chain management

Engineer to order	Complex product and unique for customer need	Responsive SCM, method and tools are need negotiation and special contract.
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Value chain is a model that considers how supply chain activities can add value to products and services delivered to the customer [5]. Michael Porter's Value Chain is a well-established concept for considering key activities that an organizations can perform or manage with the intention of adding value for the customer as products and services move from conception to delivery to customer [11].

5.2. SCOR Framework

Supply Chain Operations References (SCOR) was first introduced in 1996 by Supply Chain Consultants Company Pittiglio Rabin Todd & McGrath (PRT, www.prtm.com) and AMR Research (www.amrresearch.com) and was discovered by The Supply Chain Council (SCC, www.supply-chain.org). SCOR model is developed to understand, describe and evaluate the supply chain. SCOR is only focused on the evaluation [10]. SCOR Framework is a single framework that integrates the concept of business process engineering, benchmarking, and the practice of supply chain consisting of the plan, source, make, deliver and return from suppliers to consumers through a number of processes in manufacturing entirely in line with operational strategy, material, jobs/processes and the flow of corporate information [2]. SCOR is a powerful aid in organizing the process data toward process improvement [6] and as a systematic approach to identifying, evaluating and monitoring supply chain performance [8,1].

The SCOR Framework also have restrictions ranging from the supplier of the supplier to the customer from the customer. SCOR Framework is a standart terminology and metrics that can be use for evaluating, positioning and implementing supply chain processes [14].

There are 3 levels in the SCOR process. The first level contains the plan, source, make, delivery and return, the second level consists of the plan, execution and enable.

The first level based on five management process are:

- a. Plan : planning and management of demand/ provision.
- b. Source : "the procurement of products supply" (sourcing stocked), make to order and engineer to order.
- c. Make : the processes of transform product to a finished state according to planned or actual demand
- d. Delivery : management order, warehouse, transportation and installation for product inventory, "make to the order" and "designed according to the order".
- e. Return : the return of materials and receipt of return of the finished product.

The second level based on three processes :

- a. Plan : a process that aligns resources according to demand.
- b. Execution : a process that is triggered by a demand for the planned or actual, which changed the status of material goods.
- c. Enable : a process that prepares, maintains or manages information or relationships in which the planning and execution count on.

The third level describes the SCOR process categories at the second level in more detail, including process flow, input and output, the source of the input and output purposes [3]. SCOR performance indicators consist of five attributes such as reliability of supply chains, responsiveness supply chain, agility, supply chain costs and supply chain asset management [3].

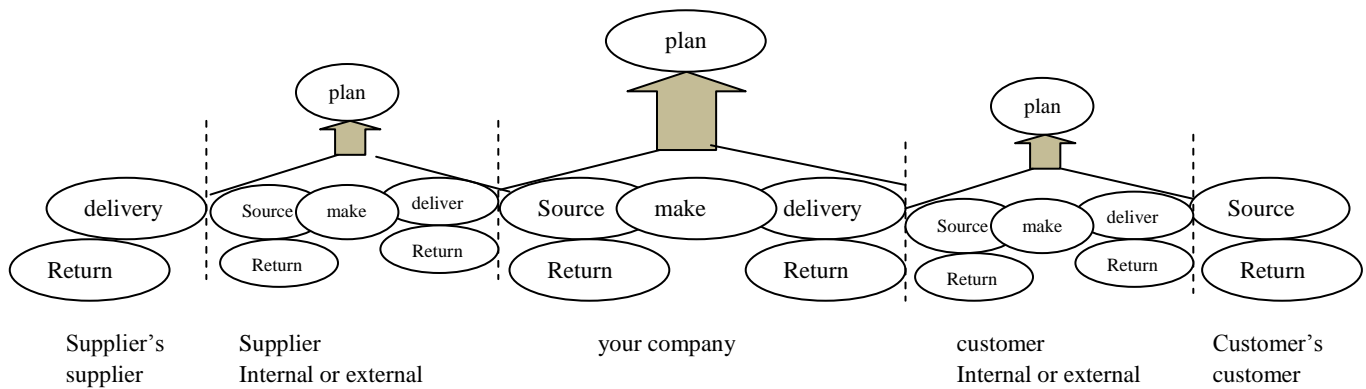


Fig 2 : Supply Chain Model

6. ANALYSIS & DISCUSSION

6.1. Supply Chain Procurement Process

Business processes in PT. Semarang Garment Manufaktur is the production of garment. Raw materials such as fabric and accessories obtained through the import process and local suppliers are provides types of yarn and accessories local. The order to local suppliers is made after sample fabric is sent from Korea is accepted by the Procurement Department. Business processes that take place can be sorted as follows, namely the ordering process from the customer, make demand for goods to the supplier, the fulfillment of goods by the supplier, the payment by the accounting process, the delivery of goods to the warehouse, the process of fulfilling the goods to the production unit (sample, cutting, sewing , Embroider, finishing Department) and the final form of garment products shipped to the customer who has an order. Function of each part can be explained by using the value chain are defined by Porter.

that require raw material (sample department, cutting department, quality department control department, sewing, embroider department, finishing department) and the customer who orders the goods, which can be described as figure 4.

In the implementation of corporate operational strategy is adjustable to goals of the company. The company goals are improve produces quality and innovative products at affordable prices by minimizing the costs associated with production such as transportation costs, labor costs, equipment costs, etc.

The efforts for supply products which need by Production Department (Sample, Cutting, Sewing, Embroider, Finishing), Procurement Department always adapt with the customer demand. Fabric, yarns and accessories stock is provided in accordance with production requirements at the time of order, but the implementation of production will be hampered if the customer found the type of fabric, fabric color and type of accessories are not in accordance with customer demand.

Human Resources & Development (HRD)						
Accounting Department						
Procurement Department						
Equipment Department						
Export Import Department						
Marketing Department						
Warehouse Dept.	Sample Dept.	Cutting Dept.	Quality Control Dept.	Sewing Dept.	Embroider Dept.	Finishing Dept.

Fig 3 : Value Chain Model

Figure 3 shows that warehouse department, sample department, cutting department, quality control department, department of sewing, embroidery department, finishing departement are directly involved in primary activities conducted at PT. Semarang Garment Manufaktur. Department of Human Resources & Development (HRD), Finance, Equipment, Export Import, Marketing and Procurement Department are departments whose activities became an important to support the implementation of the primary activities.

Implementation of SCM involves the customer in the company became the main driver of the ordering goods process from the supplier. SCM actors involved are Department of Procurement, supplier, Warehouse Department, accounting, and departments

urement Department shall provide a report to Korea to order back to the types of fabrics requested by the customer.

Time for ordering materials import and shipping back to the company can reach 15 days to 1 month and for local materials takes 4-14 days. Customer plays an important role in the implementation of production at PT. Semarang Garment Manufaktur, this means that the implementation of operational activities to implement the strategy the company should **make to order** the product that is made must be in accordance with customer orders (innovative products) and SCM strategies is **Market Responsive Process** because the company will make orders in accordance with customer needs so demand for goods to the supplier can not be defined or difficult to predict any time,

therefore the SCM procurement process must be able to fulfill the target and always on time.

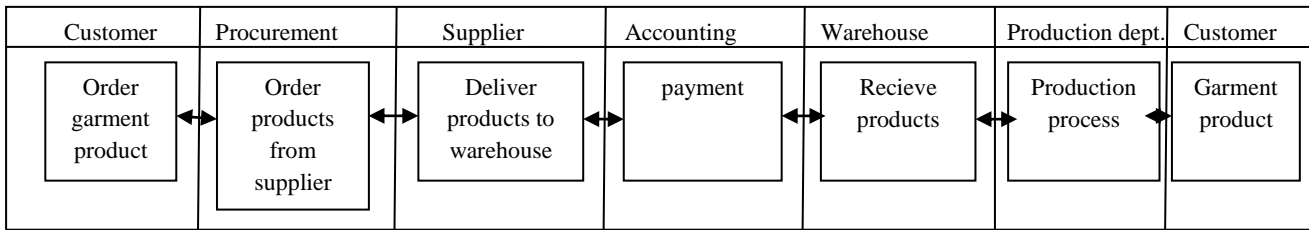


Fig 4 : Actors of SCM Process

6.2. Procurement Process with SCOR Framework

In the procurement process in PT. Semarang Garment Manufaktur can be explained by using the SCOR framework. Indicator of The SCOR Framework are the reliability of performance indicators SCOR is a supply chain performance to meet customer orders on time, responsiveness is the order fulfillment cycle time is the dexterity and agility in responding to market changes [10] .

The procurement process in PT. Semarang Garment Manufacturing can be explained as follows:

- a. Fulfillment orders for goods ordered by the customer is adjusted for the reservation of garment products that have been ordered. Customer make order directly to KukDong as a Head Office in Korea, Kukdong has made the order directly to the supplier in accordance with the calculation of the amount of raw materials (fabric and accesories) needed to produce the required number of garment products. The demand for local raw materials such as yarn is adjusted for the PO (purchase order) that have been determined from the Head Office in Korea. During these raw materials are ordered or appropriate in accordance with the amount needed. Obstacles encountered in the process of checking if the type of fabric or fabric colors are not in accordance with customer orders, Procurement Department must made report to Kukdong Korea for make new order to the supplier. It will delay the fulfillment of customer orders, but delays in the production process has been agreed with the customer. Required product is not available in the warehouse so demand of goods must be made back to the supplier.
- b. Time of ordering goods to Warehouse Department by the KukDong and Procurement Department fulfillment of goods occurs when there is an order made by the customer. Whereas

if there is damage to raw materials will be made order back to the supplier for a 15 days - 1 month and for local ordering is for 4-14 days.

- c. In general, the goods is come from the supplier to the warehouse is properly accounted accordance with customer orders, but companies often do not take account for the event of damage at the time of production or delivery of goods so that the raw materials needed are often stock out, therefore it is necessary to order returned to the supplier with goods order fulfillment period of time.

Procurement process with the SCOR framework at level 1 can be described as figure 5. Figure 5 described the activities carried out at level 1 of SCOR Framework. Suppliers activities is delivery goods for PT. Semarang Garment Manufaktur and return goods, because suppliers provide many items needed by the company and make delivery of goods to the company. Activities of Procurement, Accounting and Warehouse Departments are source, deliver and return. The purchasing activities from the supplier is done by Procurement Department, the payment is done by accounting department dan delivery/return by Warehouse Department, if Warehouse Department found damage of goods order, they can be returned to the supplier but if goods are fine, Warehouse Department can bringing goods to Sample Department for review the fabric to beginning production processing (Make) by Production Departments (Cutting, Sewing, Embroider and Finishing Department) and if goods are not in accordance with the order from customer, Production Department will return goods (Return) to Warehouse Department and Warehouse Department will return it to the supplier. The result of activities is done by the finishing department is sending the product to the customer who ordered the product. SCOR Level 2 describes the mapping of supply chain management quality measured and describe the processes in more detail than level 1

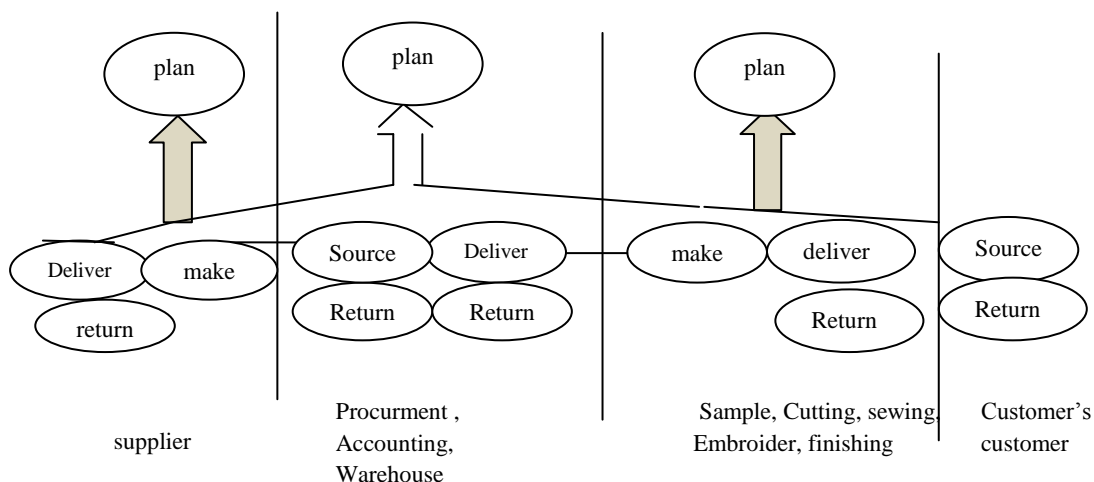


Fig 5. Level 1 Process of SCOR Framework

Table 2. Level 2 Process of SCOR Framework

	Plan	Source	Make	Deliver	return
Plan	(P1) Planning : - Supply Chain Team	(P2) Planning Process for purchasing of raw material : - Purchasing raw material is in accordance with customer order. - Ways to purchasing raw material - Ways to payments raw materials.	(P3) Planning process for process raw material to product : - Schedule of Production process. - Result product, test product, packing of products. - Product finishing is in accordance with customer order.	(P4) Planning process of delivery products to Production Departments (Sample, Cutting, Sewing, Embroider, Finishing) or to customer who order: - Schedule of receive products. - Checking products in Warehouse Department. - Delivery Products to Sample Department. - Delivery products to customers who orders.	(P5) Planning process of return/change products to suppliers.
Execution		(S1)Make to order - Determine schedule of delivery product to production department (Sample, Cutting, Sewing, Embroider, Finishing). - Make order to suppliers in accordance with customer orders. - Receiving products by Warehouse Department - Checking products by Warehouse department - Purchasing Authorization. - Payment Authorization. - Checking product by customer	(M1)Make to order - Determine schedule of productions process based on customer time ordering. - Process of productions - Packing of products.	(D1)Deliver to order - Receiving product order from customers. - Delivery products to production department (Sample, Cutting, Sewing, Embroider, Finishing) - Receiving product by Production department. - Payment process to suppliers. - Delivery products to customers.	(D2) Delivery return order - Authorization of return/change products order. - Notification to Warehouse Department about Return/change products. (SR1) Source Return order : - Notification to Procurement Department about Return/change products. - Authorization of canceling/change products. - Return product to suppliers.
Enabled	(E1) - Management of Supply Chain Team.	(E2) - Stock Management - Management of business order - Management of suppliers networks. - Management of export-import - Management of data - Management of capital asset.	(E3) - Management of production process procedure - Management of facility and equipment. - Management of transportation. - Management of productions network.	(E4) - Management of data customer order - Management of data production department order. - Management of customer payment.	(E5) management of return Order / goods conversion.

Table 2 describes that there are three processes that occur at level 2 : plan, execution and enabled. Planning activities of goods is due to the orders that come from the customer (make to order), suppliers also provide goods if there are orders from the company (make to order). Each process on the level 1 as plan, source, make, deliver, and return are described more detail in level 2. SCOR Level 3 at a level that provides the information needed for the successful planning and set goals to improve the supply chain [4]

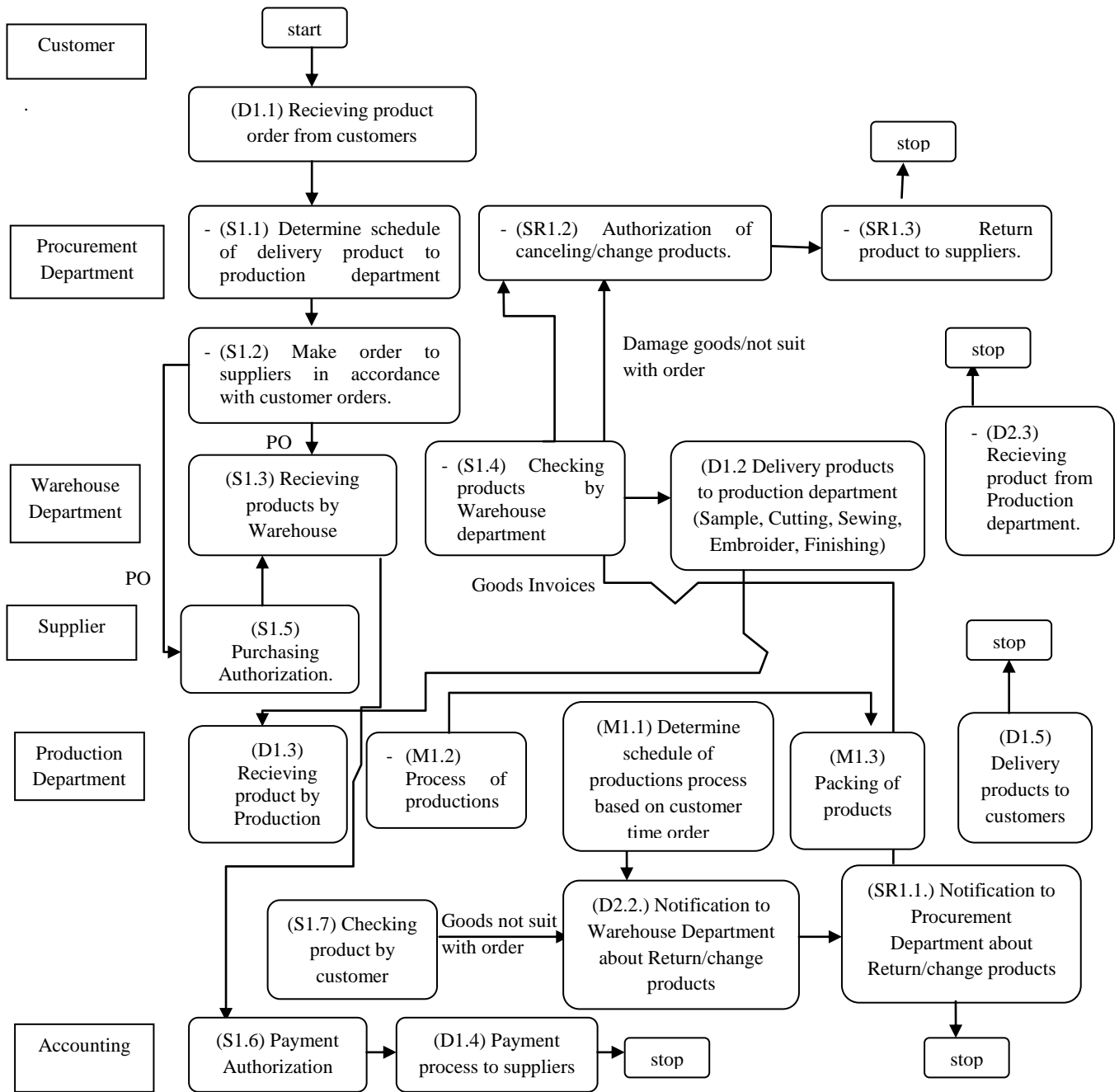


Fig 6 : Level 3 Process of SCOR Framework base on Supply Chain Actors

Figure 6 is describes the procurement process based on supply chain actor (Customer, procurement department, Supplier, Production Department) using SCOR Framework at third level. In this level, procurement process has been described more detail for input and output process based on activities of every supply chain actor.

7. CONCLUSION

Supply Chain Management help PT. Semarang Garment to be able to improve its services to Production Departments and in particular to the customer. Business processes is take place in PT. Semarang Garment is *Make To Order* and the strategy adopted is *Market Responsive Process*. Using the SCOR Framework, PT. Semarang Garment can help companies to understand, evaluate supply chain processes that occur in the Company.

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