CHAPTER 4
SUPPLY CHAIN MANAGEMENT

BASIC COMPETENCIES

Students are able to understand and apply the concept of supply chain management, analyze supply chain operational processes and procedures, and communicate supply chain procedures in English with appropriate terminology in accordance with global industry standards (Chopra & Meindl, 2016).

LEARNING OBJECTIVES

After studying this chapter, students are expected to:

1. Understand and use supply chain management terminology in a procedural context
2. Read and interpret the procedure text on supply chain operations
3. Identify the structure and characteristics of procedure texts in the context of supply chain
4. Write procedure text for supply chain processes using proper English
5. Analyze and evaluate supply chain procedures for continuous improvement

PHASE 1: PRE-ACTIVITY

Discussion Starter

Think about how a product reaches you:

1. What steps are involved in getting a smartphone from raw materials to your hands?
2. How many companies and countries are involved in this process?
3. What procedures must be followed at each stage?

Key Insight: Understanding these procedures is the essence of Supply Chain Management!

Pre-Assessment

Rate your current knowledge (1-5):

- Understanding of logistics procedures: _____
- Knowledge of inventory management processes: _____
- Familiarity with distribution procedures: _____
- Ability to write procedural instructions: _____

PHASE 2: INPUT & EXPLORATION

PROCEDURE TEXT: INVENTORY REPLENISHMENT PROCESS

Source: Adapted from Chopra & Meindl (2016)

Goal: To maintain optimal inventory levels while minimizing holding costs and preventing stockouts.

Materials/Equipment Needed:

- Inventory management system (IMS)
- Demand forecasting data
- Supplier contact information
- Purchase order forms
- Quality inspection checklist

Steps:

1. **Monitor Inventory Levels:** First, access the inventory management system daily to check current stock levels against the reorder point. The reorder point is calculated using the formula: Reorder Point = (Average Daily Demand × Lead Time) + Safety Stock.
2. **Analyze Demand Forecast:** Next, review the demand forecast for the upcoming period. Compare historical sales data with projected demand to determine the optimal order quantity using the Economic Order Quantity (EOQ) formula.
3. **Generate Purchase Requisition:** Then, create a purchase requisition when inventory reaches the reorder point. Include product specifications, quantity required, preferred delivery date, and any special handling requirements.
4. **Select Supplier:** After that, evaluate available suppliers based on price, quality, reliability, and lead time. Select the supplier that offers the best value while meeting quality standards.
5. **Issue Purchase Order:** Subsequently, convert the approved requisition into a purchase order. Send the PO to the selected supplier and obtain confirmation of order acceptance.
6. **Track Shipment:** Following this, monitor the shipment status using the tracking system. Communicate with the supplier if there are any delays or issues.
7. **Receive and Inspect Goods:** Upon arrival, inspect the received goods for quality and quantity. Compare the shipment against the purchase order and packing slip.
8. **Update Inventory Records:** Finally, update the inventory management system with the new stock. Record the receipt date, quantity, and any discrepancies for future reference.

Warning/Caution:

- Always verify supplier certifications before placing orders.
- Never accept goods without proper inspection to avoid quality issues.

COMPREHENSIVE QUESTIONS

Task 1. Read the procedure text above and answer the following questions:

A. Literal Comprehension

1. What is the main goal of the inventory replenishment process?
2. List the materials and equipment needed for this procedure.
3. How many steps are involved in the inventory replenishment process?
4. What formula is used to calculate the reorder point?

B. Interpretive Comprehension

1. Why is it important to monitor inventory levels daily?
2. Explain the significance of safety stock in the reorder point calculation.
3. What could happen if step 7 (inspection) is skipped?

C. Critical Thinking

1. How might this procedure differ in a just-in-time (JIT) inventory system?
2. What role does technology play in modern inventory replenishment procedures?
3. Design an improvement to this procedure that could reduce lead time.

BUILDING VOCABULARY

Source: Chopra & Meindl (2016); Christopher (2016)

A. Core Supply Chain Terms

No.	Term	Definition	Example in Context
1	**Supply chain**	Network of organizations involved in producing and delivering products	*"The supply chain includes all parties from raw material suppliers to end customers."*
2	**Procurement**	The process of obtaining goods and services	*"First, initiate the procurement process by identifying qualified suppliers."*
3	**Lead time**	Time between order placement and receipt	*"Calculate the lead time before setting reorder points."*
4	**Inventory**	Stock of goods held for future use	*"Monitor inventory levels daily using the IMS."*
5	**Logistics**	Management of flow of goods and information	*"Then, coordinate logistics to ensure timely delivery."*
6	**Reorder point**	Inventory level that triggers new order	*"Generate a PO when stock reaches the reorder point."*
7	**Safety stock**	Buffer inventory to prevent stockouts	*"Maintain safety stock to handle demand variability."*
8	**Stockout**	Situation when inventory is depleted	*"A stockout can result in lost sales and customer dissatisfaction."*
9	**EOQ**	Economic Order Quantity - optimal order size	*"Use EOQ to minimize total inventory costs."*
10	**Upstream/Downstream**	Direction in supply chain (toward supplier/customer)	*"Communicate upstream with suppliers about delays."*

B. Vocabulary Exercise

Exercise 1. Fill in the blanks with the appropriate terms from the vocabulary list:

1. The _____ is the time between placing an order and receiving the goods.
2. A _____ occurs when demand exceeds available inventory.

3. _____ is maintained as a buffer against demand uncertainty.
4. The _____ formula helps determine the optimal order quantity.
5. _____ activities move goods toward the end customer.

GRAMMAR FOCUS:
IMPERATIVE AND SEQUENCE MARKERS

Source: Swales & Feak (2012)

A. Imperative Verbs in Procedure Text

Procedure texts typically use imperative verbs (command form) to give instructions. The imperative form uses the base form of the verb without a subject.

Base Verb	Imperative Form	Example
monitor	**Monitor**	*Monitor inventory levels daily.*
calculate	**Calculate**	*Calculate the reorder point.*
verify	**Verify**	*Verify the shipment against the PO.*
update	**Update**	*Update the inventory records.*

B. Sequence Markers

Sequence markers indicate the order of steps in a procedure. They help readers follow the logical flow of instructions.

Position	Sequence Markers	Example
Beginning	First, To begin, Initially	*First, access the inventory system.*
Middle	Next, Then, After that, Subsequently	*Next, review the demand forecast.*
Continuation	Following this, Afterwards	*Following this, monitor shipment status.*
End	Finally, Lastly, In conclusion	*Finally, update the inventory records.*

C. Grammar Exercise

Exercise 2. Rewrite the following sentences using appropriate sequence markers and imperative verbs:

1. You should check the inventory levels. → _____
2. The purchase order needs to be sent. → _____
3. It is necessary to verify the shipment. → _____
4. The system must be updated at the end. → _____
5. Records should be maintained properly. → _____

PHASE 3: PRACTICE & APPLICATION

TASK 2: Procedure Text Analysis

Analyze the structure of the Inventory Replenishment Procedure text by completing the table below:

Element	Your Answer
Goal/Aim	
Materials	
Number of Steps	
Sequence Markers Used	
Imperative Verbs	
Warnings/Cautions	

TASK 3: Supply Chain Mapping

Choose a product you use daily and map its supply chain. Then write the procedure for one stage.

Tier	Description	Your Product
Tier 3 Suppliers	Raw materials	
Tier 2 Suppliers	Components	
Tier 1 Suppliers	Sub-assemblies	

Tier	Description	Your Product
Manufacturer	Final assembly	
Distribution	Warehouses, DC	
Retail	Stores, Online	

PHASE 4: PRODUCTION

TASK 4: Writing a Procedure Text

Write a complete procedure text for **Supplier Selection Process** using the template below. Include all essential elements of a procedure text.

PROCEDURE: SUPPLIER SELECTION PROCESS

Goal: _____

Materials/Equipment: _____

Steps:

1. First, _____
2. Next, _____
3. Then, _____
4. After that, _____
5. Subsequently, _____
6. Finally, _____

Warning: _____

PHASE 5: ENRICHMENT

Task 5. Case Study: Amazon's Supply Chain Procedures

Amazon has developed one of the most efficient supply chain systems globally. Their procedures include predictive inventory positioning, where algorithms forecast demand and pre-position products in fulfillment centers closest to predicted customers. This procedure reduces delivery time significantly.

Source: Christopher (2016); Chopra & Meindl (2016)

Analysis Tasks:

1. Identify three procedures that make Amazon's supply chain efficient. (200 words)

2. Write a procedure text for "Order Fulfillment at Amazon Warehouse." (300 words)
3. Compare Amazon's procedures with traditional retail supply chains. (250 words)

PHASE 6: REFLECTION & SELF-ASSESSMENT

Rate your achievement of learning objectives (1-5):

- Understanding supply chain terminology: _____
- Reading and interpreting procedure texts: _____
- Identifying procedure text structure: _____
- Writing procedure texts: _____
- Using imperative verbs and sequence markers: _____