



**Supply chain management is comprised of key functions and activities that must be integrated. Level One of CSCMP’s SCPro™ Certification highlights these key supply chain functions. The premise is that these functions are the foundation of the plan-buy-make-move-return supply chain management spectrum. CSCMP Certification Level One is designed to ensure that a supply chain professional has a solid understanding of these key functions prior to moving forward in the certification process.**

## **Learning Block 1: Supply Chain Management**

### **Abstract**

Interest in supply chain management, both in the private and public sectors, has grown rapidly over the last two decades. Leading organizations now recognize the positive outcomes — enhanced competitive strategy, increased market share, and greater shareholder value — that can be achieved through effective supply chain management.

These organizations are taking steps to achieve a competitive advantage through supply chain management, and they need skilled individuals who can design, execute, and manage their supply chains. For these individuals, skill development begins with having a solid foundation of knowledge in supply chain management concepts and principles.

### **Description**

The goal of this learning block is to assess certification candidates’ knowledge of the essential components of a supply chain and the fundamental concepts and principles of supply chain management. The content provides insight into the key roles that supply chain management plays in improving customer service, reducing operating costs, and improving financial performance for organizations small or large, national or global. In addition, supply chain management processes, strategies, tools, and technologies are introduced.

### **Learning Objectives**

After completing the content in this learning block, certification candidates should be able to:

1. Describe the basic concepts of supply chain management and its essential role in an organization
2. Identify the key elements and processes of a supply chain and how they interact
3. Identify principles and strategies for establishing efficient, effective, and sustainable supply chains
4. Explain the critical roles of technology in supply chain planning, visibility, and execution
5. Define the requirements and challenges of moving products across global supply chains
6. Discuss how to assess the performance of supply chains using standard metrics and frameworks

## Learning Block 2: Demand Planning

### Abstract

This learning block focuses on sales and operations planning, demand planning, and demand forecasting.

Sales and operations planning (S&OP) is a decision-making process to balance supply and demand by integrating demand and sales forecasts with operational plans from suppliers, production, and logistics. The goal of the S&OP process is to integrate demand forecasts with capacity forecasts, so that the supply chain operations are integrated with the marketing and sales functions.

Demand planning is a key step in the sales and operations planning process. The demand plan specifies what should be sold and when given the organization's supply capabilities and constraints. The goal of demand planning is to estimate orders for products and services over some future time period using information such as historical sales data, information about planned promotions, and market intelligence.

Demand forecasting is a key step in the demand planning process. The goal of demand forecasting is to accurately estimate future, expected orders. Accurately estimating demand is very difficult, and there are a variety of forecasting methods which can be used. These methods are typically either a qualitative or a quantitative approach. However, some organizations use a combination of the two approaches.

### Description

The goal of this learning block is to assess candidates' knowledge of the essential S&OP, demand planning, and demand forecasting processes in the supply chain.

- For S&OP, the content focuses on the critical inputs to the S&OP process, including the demand plan and the capacity plan, which is a projection of future supply capabilities. The S&OP process produces three critical plans — the operational plan, the demand plan, and the financial plan. The demand and capacity plans are reconciled through the financial plan that evaluates resource costs against performance projections.
- For demand planning, the content focuses on the systems, models, and approaches organizations use to better understand the demand for their products and services, and how they use this information to integrate supply and production to satisfy the expected level of demand.
- For demand forecasting, the content focuses on the different approaches to demand forecasting and the role of the demand forecast in managing the supply chain.

### Learning Objectives

After completing the content in this learning block, certification candidates should be able to:

1. Describe the basic concepts of S&OP, demand planning, and demand forecasting and their essential roles in an organization
2. Identify the key elements and processes in S&OP, demand planning, and demand forecasting and how they interact
3. Identify principles and strategies for establishing efficient and effective S&OP, demand planning, and demand forecasting
4. Explain the critical role of technology in managing S&OP, demand planning, and demand forecasting processes
5. Define the requirements and challenges of operating S&OP, demand planning, and demand forecasting processes on a global basis
6. Discuss how to assess the performance of S&OP, demand planning, and demand forecasting processes using standard metrics and frameworks

## Learning Block 3: Procurement & Supply Management

### Abstract

Strong relationships with trading partners can be developed through successful supplier relationship management programs and supply management processes that integrate the procurement function with other internal functions and external supply chain partners. These relationships can be the key to increasing the efficiency and effectiveness of several supply chain business processes.

The purchase of materials, work-in-process, finished goods, and services by the procurement function is a critical business process within all supply chain operations. The procurement processes can provide organizations with a sustainable competitive advantage through lower costs, higher quality, and better service for both internal and external customers.

### Description

The goal of this learning block is to assess certification candidates' knowledge of the management of supply processes and operations in the supply chain. The content focuses on the importance and leadership role of procurement within organizations, the basic steps and key success factors in the evaluation, selection and maintenance of supplier relationships, and the need for the procurement function to integrate with internal business functions and external supply chain partners in sourcing materials and services.

### Learning Objectives

After completing the content in this learning block, certification candidates should be able to:

1. Describe the basic concepts of supply management and its essential role in supply chain operations
2. Identify the key elements and processes in managing supply operations and how they interact
3. Identify principles and strategies for establishing efficient, effective, and sustainable supply management operations
4. Explain the critical role of technology in managing supply operations and material flows
5. Define the requirements and challenges of sourcing materials and services on a global basis
6. Discuss how to assess the performance of supply management operations using standard metrics and frameworks

## Learning Block 4: Manufacturing & Service Operations

### Abstract

To be successful in manufacturing and service operations, managers should possess both technical and behavioral skills. They should apply these skills to achieve improved transformational processes and outputs in operations management contexts throughout the supply chain. This includes manufacturing, warehousing, and all related business service processes, such as inventory management and customer service.

### Description

The goal of this learning block is to assess candidates' knowledge of the essential management of manufacturing and service operations in the supply chain. The content focuses on planning, organizing, controlling, directing, motivating and coordinating all the activities that are used to produce goods and services. Manufacturing and service operations decisions include:

- Long-term strategic decisions on issues such as facility location, capacity determination, and service delivery network
- Mid-term tactical decisions on issues such as determination of inventory levels and service-level labor requirements
- Short-term operational decisions on issues such as operational scheduling and job assignments

## Learning Objectives

After completing the content in this learning block, certification candidates should be able to:

1. Describe the basic concepts of manufacturing and service operations and its essential role in meeting customer expectations
2. Identify the key elements and processes in manufacturing and service operations and how they interact
3. Identify principles and strategies for establishing efficient, effective, and sustainable manufacturing and service operations
4. Explain the critical role of technology in managing manufacturing and service operations
5. Define the requirements and challenges of manufacturing and service operations on a global basis
6. Discuss how to assess the performance of manufacturing and service operations using standard metrics and frameworks

## Learning Block 5: Transportation Management

### Abstract

Transportation involves the physical movement of people and goods between origin and destination points. From a business standpoint, transportation links geographically separated partners and facilities in an organization's supply chain — customers, suppliers, channel members, plants, warehouses, and retail outlets. Whether by truck, train, plane, ship, pipeline, or fiber optic wire, transportation facilitates the creation of time and place utility in the supply chain.

### Description

The goal of this learning block is to assess certification candidates' knowledge of the management of transportation processes and operations in the supply chain. The content focuses on the key principles, strategies, and decisions required for the cost-efficient, effective flow of goods between sellers and buyers. Transportation is a high cost, high impact supply chain activity. The proper management of transportation processes and issues is critical to the fulfillment of customer demand and the ultimate success of a supply chain.

## Learning Objectives

After completing the content in this learning block, certification candidates should be able to:

1. Describe the basic concepts of transportation management and its essential role in demand fulfillment
2. Identify the key elements and processes in managing transportation operations and how they interact
3. Identify principles and strategies for establishing efficient, effective, and sustainable transportation operations
4. Explain the critical role of technology in managing transportation operations and product flows
5. Define the requirements and challenges of planning and moving goods between countries
6. Discuss how to assess the performance of transportation operations using standard metrics and frameworks

## Learning Block 6: Inventory Management

### Abstract

Inventory management is focused on determining how much inventory to carry across the supply chain, where to carry it, and how much safety stock is required to meet the organization's cost and customer service objectives. The management of inventories will depend upon the value of the product, the cost to carry the product in inventory, the variability of demand and lead time, the cost of stocking out of the product, the number of locations where inventory is held, and the importance of the product to customers.

### **Description**

The goal of this learning block is to assess candidates' knowledge of the essential management of inventory in the supply chain. The content focuses on the different approaches to managing supply chain inventories and the variables that drive the level of inventories to be held. This includes the fundamental need for inventory, how the product's value affects inventory decisions, the various approaches for determining inventory levels, how the number of inventory locations affects the level of inventory, and new approaches to reducing inventory including postponement, vendor-managed inventories, cross-docking, and quick response systems. The trade-offs between inventory and transportation costs are a critical element in managing inventory effectively, including understanding how carrying costs can affect inventory decisions.

### **Learning Objectives**

After completing the content in this learning block, certification candidates should be able to:

1. Describe the basic concepts of inventory management and its essential role in meeting customer demand
2. Identify the key elements and processes in inventory management and how they interact
3. Identify principles and strategies for establishing efficient and effective flows of inventory across the supply chain
4. Explain the critical role of technology in planning and managing inventory
5. Define the requirements and challenges of inventory management on a global basis
6. Discuss how to assess the performance of inventory management using standard metrics and frameworks

## **Learning Block 7: Warehousing Management**

### **Abstract**

Warehousing is a critical logistics function that manages the storage and handling of materials, work-in-process, and finished goods within supply chains. The warehousing function provides economic benefits, such as transaction efficiencies and the consolidation and breaking bulk of inventories. It also plays a critical role in meeting customer requirements for the timely delivery of goods and services. This is accomplished through value-added services and fulfillment processes, while at the same time efficiently managing inventory costs.

### **Description**

This goal of this learning block is to assess certification candidates' knowledge of the management of warehouse processes and operations in the supply chain. The content focuses on the different types of warehousing options, basic warehousing storage and handling operations, strategic planning issues, and the effects of warehousing design and service decisions on total logistics costs and customer service. Proper management of these distribution activities is vital to the fulfillment of customer demand and the ultimate success of a supply chain.

### **Learning Objectives**

After completing the content in this learning block, certification candidates should be able to:

1. Describe the basic concepts of warehousing management and its essential role in demand fulfillment
2. Identify the key elements and processes in managing warehousing operations and how they interact
3. Identify principles and strategies for planning and managing warehouse operations
4. Identify principles and strategies for designing materials handling operations within a warehousing facility
5. Explain the critical role of technology in managing warehouse operations and product flows
6. Discuss how to assess the performance of warehousing operations using standard metrics and frameworks

## **Learning Block 8: Order Fulfillment & Customer Service**

### **Abstract**

Order fulfillment is the complete process from point-of-sale inquiry to delivery of a product to the customer to returns processing. In the broadest terms, it refers to the way organizations respond to customer orders. Order fulfillment is a crucial process since it is the last link in the supply chain. It may be the only direct contact some organizations have with their end customers, and it can make or break an organization's reputation with its customers.

Customer service is a series of activities designed to enhance the level of customer satisfaction. Satisfaction is based on the feeling that a product or service has met or exceeded the customer's expectations— before, during, and after a purchase.

### **Description**

The goal of this learning block is to assess candidates' knowledge of the essential management of order fulfillment and customer service processes in the supply chain. The content focuses on planning, organizing, controlling, and coordinating the order fulfillment and service operations activities from the initial customer inquiry all the way through post sales service.

### **Learning Objectives**

After completing the content in this learning block, certification candidates should be able to:

1. Describe the basic concepts of order fulfillment and customer service and their essential roles in meeting customer expectations
2. Identify the key elements and processes in order fulfillment and customer service and how they interact
3. Identify principles and strategies for establishing efficient, effective, and sustainable order fulfillment and customer service processes
4. Explain the critical role of technology in managing order fulfillment and customer service processes
5. Define the requirements and challenges of order fulfillment and customer service processes on a global basis
6. Discuss how to assess the performance of order fulfillment and customer service processes using standard metrics and frameworks