

# What is Supply Chain Management?

## Worksheet

SCM integrates procurement, production planning, inventory control, logistics and demand forecasting into one system. A well-managed chain balances supplier reliability, production efficiency, stock levels and customer delivery to minimize waste and maximize responsiveness.

## Questions

1. A manufacturer's biggest SCM goal is typically

- A) Maximum inventory
- B) Lowest cost + highest speed + best quality
- C) Fewest suppliers
- D) No returns

2. Which scenario most benefits from just-in-time (JIT)?

- A) Fashion with unpredictable demand
- B) Perishable food with short shelf life
- C) Stable demand + reliable suppliers
- D) Bulky, cheap raw materials

3. The 'bullwhip effect' happens because

- A) Suppliers are dishonest
- B) Each layer orders based on its local demand, not end-customer demand
- C) Warehouses charge too much
- D) Products decay quickly

4. A supply chain audit reveals lead time from supplier is 8 weeks but forecast error is high. Priority fix?

- A) Buy more inventory
- B) Find faster supplier or dual-source
- C) Stop production
- D) Ignore it

5. An auto parts factory needs steel. Describe the SCM process.

6. An e-commerce retailer wants to reduce delivery time from 7 days to 3. What SCM tools apply?

7. A clothing brand faces demand volatility. Inventory costs are high but stock-outs damage sales. How to balance?

8. Define: What are the five key components of SCM?

9. Define: What is just-in-time (JIT) inventory?

10. Define: Why forecast demand in SCM?

## Answer Key

1. B) Lowest cost + highest speed + best quality - SCM balances cost, speed and quality. Too much inventory wastes money; too little causes stockouts.
2. C) Stable demand + reliable suppliers - JIT works when demand is predictable and suppliers are dependable. Uncertainty = risky.
3. B) Each layer orders based on its local demand, not end-customer demand - Without end-to-end visibility, retailers order based on their sales; distributors order based on retailer orders, etc. Small swings amplify.
4. B) Find faster supplier or dual-source - Long lead time + high forecast error = risk. Shorter lead time reduces need for forecast accuracy.
5. Procurement: Negotiate with steel suppliers, lock in price and delivery. Production: Schedule steel delivery to match factory output. Inventory: Store steel on-site; too much ties up cash, too little halts production. Logistics: Coordinate inbound shipments, minimize wait time. Quality: Test steel on arrival; reject substandard batches quickly.
6. Demand forecast: Predict peak seasons pre-stock strategically. Network optimization: Locate regional warehouses closer to customers. Supplier relationships: Work with nearer suppliers to reduce lead time. Inventory: Hold safety stock in regional hubs, not just central warehouse. Logistics: Use faster shipping (air vs. ground) where margins allow.
7. Forecast accuracy: Use 3-year sales + seasonality data to refine demand estimates. Flexible sourcing: Partner with fast-response suppliers for quick reorders. Safety stock formula:  $\text{Safety stock} = Z L$  ( $Z$ =service level,  $=$ demand std dev,  $L$ =lead time). Drop-shipping: High-margin items stay at supplier; customer demand triggers direct shipment.
8. Procurement, production, inventory control, logistics and demand forecasting - integrated into one flow.
9. Materials arrive exactly when production needs them - minimizes storage cost but requires supplier reliability.
10. Accurate forecasts align procurement and production with expected customer demand - avoid stockouts and overstock.

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