Certified in Planning and Inventory Management

Supply and Purchasing Planning

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Supply and Purchasing Planning

1. Supply Planning Fundamentals

Supply planning determines how an organization will meet demand through internal production, external procurement, inventory utilization, and resource allocation. It balances capacity, supplier capabilities, cost, and inventory targets. Planners must align supply plans with the master production schedule (MPS), demand plan, and organizational strategy. Understanding supply planning fundamentals is critical to ensuring material availability without excessive inventory or cost overruns. This concept forms the foundation upon which all purchasing and sourcing decisions are made.

2. Role of MRP in Supply and Purchasing

Material Requirements Planning (MRP) determines what to buy, in what quantity, and when, based on dependent demand and BOM structures. It generates planned orders, purchase requisitions, and rescheduling messages. For purchasing planning, MRP provides time-phased signals for procurements, ensuring components arrive just in time for production. Understanding MRP logic—explosion, netting, time-phasing, and lead-time offsetting—is essential to ensure supply continuity and accurate purchasing decisions.

3. Purchasing Process and Procurement Cycle

The procurement cycle includes requisitioning, supplier selection, purchase order placement, follow-up, receipt, inspection, and payment. Understanding each step ensures efficient purchasing and alignment with supply plans. Planners must coordinate purchasing timelines with

production needs, lead times, and supplier performance. Mastery of procurement steps helps prevent late deliveries, stockouts, and cost overruns while enabling better supplier collaboration.

4. Supplier Relationship Management (SRM)
SRM focuses on developing, maintaining, and improving relationships with suppliers. It includes evaluating supplier performance, ensuring compliance with quality standards, sharing forecasts, and fostering collaboration. Strong SRM improves responsiveness, reliability, innovation, and risk mitigation. In supply planning, SRM ensures that suppliers understand demand variability and can support flexible replenishment strategies. Effective SRM is essential for long-term procurement success.

5. Sourcing Strategies and Supplier Selection
Organizations choose suppliers based on cost, capability, quality, reliability, geography, and strategic fit. Sourcing strategies may include single sourcing, dual sourcing, multisourcing, global sourcing, and strategic partnerships. Selecting the right supplier affects lead time, cost, risk, and service levels. CPIM candidates must understand how sourcing strategies influence supply availability and how to evaluate trade-offs between price, responsiveness, and risk.

6. Lead Time and Its Components in Purchasing
Lead time includes order preparation, supplier processing, manufacturing, transportation, receiving, inspection, and administrative handling. Accurate lead-time data is essential for MRP output accuracy. Long or unreliable lead times may

require higher safety stock or alternative suppliers. Understanding how each component contributes to overall lead time supports better planning, negotiation, and inventory management.

7. Lot Sizing in Purchasing

Purchasing lot sizes determine how much material is ordered at one time. Common lot-sizing methods include lot-for-lot (L4L), EOQ, MOQ, FOQ, and period order quantity (POQ). Lot-size decisions influence inventory holding cost, order cost, and supplier workloads. CPIM candidates must understand how lot sizing affects supply stability, cost performance, and inventory turns. Choosing the right method aligns purchasing with demand patterns and operational constraints.

8. Supplier Capacity and Capability Analysis

Assessing supplier capacity ensures that suppliers can meet volume and flexibility requirements. Capability analysis evaluates technical expertise, process control, workforce competence, and technology infrastructure. Supply planners must evaluate whether suppliers can support forecasted and unexpected spikes in demand. Understanding capacity constraints helps determine sourcing strategies, contract terms, and risk mitigation approaches.

9. Contracting and Supplier Agreements

Purchasing planning involves negotiating contracts that define pricing, delivery terms, service levels, quality requirements, lead times, and penalties. Contracts can be

short-term or long-term (blanket orders, frame agreements). Strong contracts ensure stability, reduce administrative workload, and protect supply continuity. CPIM candidates must understand legal, financial, and operational aspects of supplier agreements.

10. Purchasing Policy and Governance
An organization's purchasing policy defines authority levels, compliance rules, ethical standards, and approval processes. Adhering to governance ensures consistency, transparency, and legal compliance in procurement. Understanding policies helps planners execute procurement tasks correctly, enforce supplier accountability, and prevent fraud or maverick buying. Effective governance enhances organizational control and supply chain integrity.

11. Supplier Performance Measurement
Supplier performance is assessed using metrics such as on-time delivery, quality levels, responsiveness, cost competitiveness, and innovation capability. Supplier scorecards and audits help maintain supply reliability. For supply planning, accurate supplier performance data is essential for adjusting safety stock, revising lead times, and determining whether suppliers can be trusted with critical components.

12. Inventory Strategies in Supply Planning
Inventory strategies—cycle stock, safety stock, buffer stock, decoupling inventory, and strategic stock—balance supply uncertainty with service-level goals. Planners must determine where and how much inventory to hold to serve

production and customer needs. Inventory strategies help mitigate variability in demand, supplier performance, and transit reliability. Mastery of inventory planning supports robust, efficient supply chains.

13. Collaborative Planning with Suppliers

Collaborative planning includes sharing forecasts, consumption data, production schedules, and inventory positions with suppliers. Models such as VMI (Vendor-Managed Inventory), CPFR (Collaborative Planning, Forecasting, and Replenishment), and consignment inventory improve visibility and reduce bullwhip effects. Collaboration strengthens relationships and reduces lead time variability, enhancing supply reliability.

14. Make-or-Buy Analysis

Make-or-buy decisions consider factors such as cost, capacity, expertise, quality, risk, confidentiality, and strategic value. This analysis determines whether a company should produce a component internally or outsource it. CPIM candidates must understand how make-or-buy decisions affect supply planning, long-term sourcing strategy, capacity utilization, and total cost of ownership.

15. Risk Management in Purchasing

Risk management includes identifying, assessing, and mitigating risks related to suppliers, logistics networks, geopolitical factors, and quality issues. Techniques include multisourcing, safety stock, dual suppliers, geographic diversification, and supplier audits. Effective risk management prevents supply disruptions and protects

operational continuity, making it essential to purchasing planning.

16. Replenishment Strategies for Purchased Items
Replenishment strategies include reorder point (ROP), time-phased MRP ordering, Kanban replenishment, VMI, and periodic review systems. Choosing the right replenishment strategy depends on demand patterns, lead times, cost structure, and product criticality. CPIM candidates must understand how replenishment decisions influence inventory levels and supplier responsiveness.

17. Supplier Scheduling and Release Management
Scheduling suppliers involves issuing purchase orders, releases, and delivery schedules. The planner must manage order releases based on MRP signals and supplier agreements. Techniques like blanket orders, schedule releases, and EDI-based schedules simplify purchasing administration and support stable supplier operations. Proper release management ensures timely deliveries and smooth production flow.

18. Transportation and Logistics in Procurement
Transportation decisions influence delivery reliability, cost, and lead time. Supply planners must understand shipment modes, freight terms (Incoterms), carrier selection, consolidation opportunities, and tracking. Logistics affects total landed cost and supplier performance. Integrating logistics planning with purchasing ensures materials arrive when needed at optimal cost.

19. Cost Management and Total Cost of Ownership (TCO)
TCO looks beyond purchase price to include freight, duties, holding cost, quality cost, administrative cost, risk, and lifecycle cost. Decisions based solely on lowest price may increase total supply chain cost. CPIM candidates must understand how to evaluate and optimize the full cost structure of purchasing decisions and supplier relationships.

20. Continuous Improvement in Supply and Purchasing
Continuous improvement applies methodologies such as lean procurement, Kaizen, value analysis/value engineering (VA/VE), and supplier development. Improving processes reduces waste, shortens lead times, and enhances supplier capabilities. Planners play a key role in identifying improvement opportunities, aligning procurement with organizational strategy, and fostering innovation within the supply base.

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Micro-Learning Programs in Supply Chain Management & Procurement

Enhance your professional edge with Fhyzics Business Consultants' Micro-Learning Programs in Supply Chain Management and Procurement. Designed as focused, two-hour Executive Development Programs, these sessions deliver practical insights and tools to solve real-world business challenges. Conducted in small batches for personalized learning, participants gain a deeper understanding of key supply chain and procurement strategies that drive efficiency and profitability. Each participant receives a certificate of completion, adding value to their professional profile and career growth. Whether you aim to advance in your current role or explore new opportunities, this program equips you with the knowledge and confidence to excel.

Micro-Learning Programs in Supply Chain Management

1. Fundamentals of Supply Chain Management
2. Supply Chain Planning and Optimization
3. Demand Forecasting Techniques
4. Inventory Control and Management
5. Distribution and Logistics Strategy
6. Warehouse Layout and Operations Efficiency
7. Supply Chain Risk Management
8. Supply Chain Performance Metrics (KPIs)
9. Lean Supply Chain Practices
10. Agile and Responsive Supply Chains
11. Sales and Operations Planning (S&OP)
12. Supply Chain Network Design
13. Supply Chain Digital Transformation
14. AI and Data Analytics in Supply Chain
15. Supply Chain Sustainability and Green Logistics
16. Reverse Logistics and Returns Management
17. Supply Chain Collaboration and Integration
18. Supplier Relationship Management in SCM
19. Global Supply Chain Strategy
20. Transportation Management Systems (TMS)
21. Inventory Optimization Models
22. Demand-Driven MRP (DDMRP) Concepts
23. Blockchain Applications in Supply Chain
24. Supply Chain Cost Reduction Techniques
25. SCOR Model and Process Improvement

Micro-Learning Programs in Supply Chain Management …

26. Capacity Planning and Resource Allocation
27. Managing Supply Chain Disruptions
28. End-to-End Supply Chain Visibility
29. Cold Chain Logistics Management
30. Supply Chain Compliance and Ethics
31. Import–Export Procedures and Documentation
32. Managing Third-Party Logistics (3PL) Providers
33. Supply Chain Collaboration Technologies
34. Production Planning and Scheduling
35. Strategic Supply Chain Design Using Case Studies
36. Circular Economy in Supply Chain
37. Vendor-Managed Inventory (VMI)
38. Transportation Optimization Techniques
39. E-Commerce Supply Chain Models
40. Omni-Channel Fulfillment Strategies
41. Warehouse Automation and Robotics
42. SCOR DS Roadmap for Supply Chain Excellence
43. Customer-Centric Supply Chain Strategies
44. Supply Chain Finance and Working Capital Management
45. Supply Chain Data Visualization Using Power BI
46. Strategic Sourcing in Supply Chain Context
47. Supply Chain Benchmarking and Best Practices
48. Integrated Business Planning (IBP)
49. Supply Chain in Crisis Management and Recovery
50. Future Trends and Technologies in Supply Chain

Micro-Learning Programs in Procurement

1. Fundamentals of Procurement Management
2. Strategic Sourcing and Category Management
3. Supplier Selection and Evaluation
4. Contract Management Essentials
5. Cost and Price Analysis in Procurement
6. Negotiation Strategies for Procurement Professionals
7. E-Procurement and Digital Tools
8. Procurement Planning and Budgeting
9. Risk Management in Procurement
10. Supplier Relationship and Performance Management
11. Sustainable and Ethical Procurement
12. Total Cost of Ownership (TCO) Analysis
13. Make-or-Buy Decision Frameworks
14. Procurement Policies and Governance
15. Procurement in Public vs. Private Sectors
16. Procurement Audit and Compliance
17. Procurement Data Analytics and Reporting
18. Procurement Scorecards and KPIs
19. Strategic Supplier Partnerships
20. Category Strategy Development
21. Managing Global and Offshore Procurement
22. Negotiation Simulation Workshop
23. Contract Law for Procurement Managers
24. Cost Reduction Strategies in Procurement
25. Supplier Risk Assessment Models

Micro-Learning Programs in Procurement …

26. Procurement Process Mapping and Improvement
27. Procurement Automation and AI Applications
28. Managing Procurement Teams Effectively
29. Procurement Ethics and Transparency
30. Procurement in the Digital Supply Chain
31. Vendor Consolidation Strategies
32. Spend Analysis and Optimization
33. Demand Forecasting for Procurement
34. E-Auction and Reverse Bidding Techniques
35. Inventory and Procurement Alignment
36. Procurement in Project-Based Organizations
37. Supplier Onboarding and Development
38. Procurement Market Intelligence
39. Measuring Supplier Innovation
40. Procurement in Times of Supply Disruption
41. Cross-Functional Collaboration in Procurement
42. Writing Effective RFPs, RFQs, and RFIs
43. Contract Negotiation Best Practices
44. Green Procurement and Circular Economy
45. Legal Aspects of Procurement Contracts
46. Performance-Based Contracting
47. Procurement Leadership and Strategic Influence
48. Cost Avoidance and Value Creation in Procurement
49. Managing Procurement with Power BI Dashboards
50. Future Skills and Trends in Procurement

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