Exam Specification

Certified Professional in Supply Management® (CPSM®)
# Table of Contents

## Foundation of Supply Management – Exam 1
- Cost and Finance: 1-B-1 to 1-B-5  
- International: 1-C-1 to 1-C-3  
- Social Responsibility: 1-D-1 to 1-D-3  
- Sourcing: 1-E-1 to 1-E-3  
- Supplier Relationship Management: 1-F-1 to 1-F-6  

## Effective Supply Management Performance – Exam 2
- Forecasting: 2-A-1 to 2-A-3  
- Logistics: 2-B-1 to 2-B-4  
- Materials and Inventory Management: 2-C-1 to 2-C-4  
- Organization/Department Assessment: 2-D-1 to 2-D-2  
- Planning: 2-E-1 to 2-E-2  
- Product and Service Development: 2-F-1 to 2-F-2  
- Project Management: 2-G-1 to 2-G-2  
- Quality: 2-H-1 to 2-H-3  

## Leadership in Supply Management – Exam 3
- Leadership: 3-A-1 to 3-A-18  
- Risk and Compliance: 3-B-1 to 3-B-8  
- Strategic Sourcing: 3-C-1 to 3-C-6  

---

**ISM**

INSTITUTE FOR SUPPLY MANAGEMENT

COPYRIGHT © 2015 by INSTITUTE FOR SUPPLY MANAGEMENT ALL RIGHTS RESERVED

Material may not be reproduced in whole or in part in any form whatsoever.

SC 290
The Foundation of Supply Management exam tests several traditional areas of concern for supply management, from a leading-edge perspective, in 165 questions. From contracting and negotiation, cost and finance, and international business, to social responsibility, sourcing and supplier relationship management each task is essential to establish a solid foundation and maintain an effective supply chain within any organization.

**Contracting and Negotiation**

1-A-1  
Prepare solicitations for competitive bids, quotations and proposals with pertinent specifications, terms and conditions.  
Knowledge of:  
1) Methods of communicating attributes of a product or service  
2) Types of solicitation/bids  
3) Requests for information (RFI)  
4) Bidder’s conferences  
5) General solicitation procedures and concepts  
6) Terms and conditions of solicitations and offers  
7) Bonds and other types of surety  
8) Problems related to the solicitation and receipt of offers

1-A-2  
Prepare for and develop strategies and tactics for negotiations, including definition of roles and responsibilities of team members.  
Knowledge of:  
1) Preparation for negotiations  
2) Negotiation philosophies

1-A-3  
Lead/conduct/support negotiations with suppliers to obtain desired results.  
Knowledge of:  
1) Negotiation strategies and tactics  
2) Special considerations in conducting negotiations

1-A-4  
Manage the preparation and/or issuance of contracts/purchase orders/agreements.  
Knowledge of:  
1) Elements of a contract  
2) Types of obligation documents  
3) Purchase orders  
4) Binding and nonbinding letter instruments  
5) Contract/agreement types  
6) Purchase order confirmations and acknowledgments  
7) Considerations in preparing obligation documents  
8) Statement or scope of work (SOW)

1-A-5  
Administer contracts/purchase orders from award to completion or termination.  
Knowledge of:  
1) Contract administration concepts  
2) Supplier management concepts  
3) Conflict/dispute resolution  
4) Termination options

**Cost and Finance**

1-B-1  
Prepare and/or administer a supply management department budget.  
Knowledge of:  
1) Budgeting’s relationship to the strategic and operational plans  
2) Steps in budgeting  
3) Purposes for a budget  
4) Types of budgets

1-B-2  
Develop cost management program strategies for purchases.  
Knowledge of:  
1) Cost savings  
2) Issues to be considered when establishing a cost management program  
3) Value analysis/value engineering processes  
4) Cost modeling  
5) Standard cost setting  
6) Product cost roll-up  
7) Margins  
8) Contribution to profit  
9) Cost of poor quality  
10) Cost of inventory  
11) Intangible costs  
12) Total cost of ownership  
13) Other forms of cost management
1-B-3
Identify savings potential and opportunities and strategies for specific categories through spend analysis.
Knowledge of:
1) Sources of spend data
2) Data mining tools
3) Cost baseline
4) Implementation processes and outcomes
5) Segmentation/categorization of spend

1-B-4
Perform cost/benefit analyses on acquisitions.
Knowledge of:
1) Definition of total cost of ownership
2) Direct costs
3) Indirect costs
4) Carrying costs
5) Should cost
6) Target cost
7) Relevant versus irrelevant costs
8) Overhead
9) Opportunity costs
10) Financial analysis tools
11) Lease/buy analysis

1-B-5
Develop financing and leveraging strategies for purchases.
Knowledge of:
1) Cash flow
2) Interest rates
3) Payment terms
4) Depreciation
5) Market conditions
6) Commodity markets
7) Bond and currency markets
8) Regulations
9) Tax Laws
10) Import/export quotas
11) Supplier financing
12) Equity investment
13) Centralized buying, decentralized buying, and hybrid buying
14) Cooperative purchasing
15) Consortia

International
1-C-1
Identify and assess international markets to source goods and services.
Knowledge of:
1) Cultural awareness
2) Issues in global business
3) Infrastructure
4) Risk assessment
5) Cost benefit and opportunity analysis

1-C-2
Develop international sources of materials and services.
Knowledge of:
1) Research and benchmarking of potential global suppliers
2) Financial issues
3) Development of a business case/plan
4) Contingency plans and exit strategies
5) Country-specific governmental regulations (for example, customs, import/export, trade agreements)
6) Brokers and import merchants
7) Trade networks/trading companies
8) Logistics
9) Quality assurance and regulatory compliance

1-C-3
Develop and maintain documentation regarding cross-border transactions.
Knowledge of:
1) Governmental regulations pertaining to restricted parties and countries
2) Customs requirements
3) Broker management
Social Responsibility

1-D-1
Develop and act upon a code of business conduct for the supply management function and external suppliers.
Knowledge of:
1) ISM Principles and Standards of Ethical Supply Management Conduct
2) ISM Principles of Sustainability and Social Responsibility
3) Organizational policies
4) Industry codes of conduct
5) International issues
6) Communication to and training for key stakeholders
7) Laws governing issues in ethics
8) Customer-driven requirements

1-D-2
Establish and monitor environmentally responsible and compliant programs throughout the supply chain and life cycle.
Knowledge of:
1) Environmental laws and regulations
2) Risk transfer
3) Ethical issues
4) Auditing
5) Organization values and policies
6) Purchase of recycled materials
7) Minimization of waste
8) End of life cycle

1-D-3
Implement, monitor and promote organizational and supply chain safety policies and procedures.
Knowledge of:
1) Laws and regulations
2) Policies and procedures
3) Supplier and subcontractor safety (for example, safety, history)
4) Customer-driven requirements

1-E-2
Evaluate competitive offerings to determine the overall best offer for a product/service.
Knowledge of:
1) Decision matrix/multi-attribute evaluation tool
2) Receiving, controlling and analyzing offers
3) Offer responsiveness
4) Technical analysis
5) Operational analysis
6) Cost and price analysis
7) Offeror capability/offeror responsibility
8) Transportation terms
9) Other factors

1-E-3
Plan and communicate sourcing and supply strategies based on forecasted data.
Knowledge of:
1) Buying strategies
2) Financial tools
3) Forecasts of volume
4) Factors in the selection of the method of procurement

Supplier Relationship Management

1-F-1
Identify opportunities and benefits for rationalizing the supply base.
Knowledge of:
1) Strengths, weaknesses, opportunities, threats (SWOT) analysis
2) Data mining tools
3) Supplier categories
4) Supplier segmentation

Sourcing

1-E-1
Analyze potential sources of goods or services.
Knowledge of:
1) Supply base analysis
2) Nature of sources and their effects on procurement
3) Existing versus new sources
1-F-2
Develop/manage effective relationships with suppliers.  
Knowledge of:  
1) Benefits of good supplier relations  
2) Confidentiality policies  
3) Ways of promoting good relations and trust  
4) Issues in supplier product education and involvement  
5) Issues in reciprocity  
6) Concepts of continuous improvement  
7) Supplier partnerships/strategic alliances  
8) Reverse marketing/supplier development  
9) Supplier mentorship  
10) Early supplier involvement (ESI)  
11) Supply chain management  
12) Supply base innovation

1-F-3
Develop/implement a supplier diversity program.  
Knowledge of:  
1) Rationale in developing programs  
2) Sources of information on socially or economically disadvantaged suppliers  
3) Independent certification of diverse suppliers  
4) Program elements

1-F-4
Develop new supplier qualification plans and reports to assure components, materials and suppliers meet specified requirements (regulatory, safety, reliability, quality).  
Knowledge of:  
1) Customer communication/customer relationship management (CRM)  
2) Supply chain mapping  
3) Quality systems  
4) Logistics systems  
5) Financial analysis  
6) Methods of requirements gathering  
7) Supplier evaluation measures  
8) Contingency plans

1-F-5
Conduct supplier performance evaluations.  
Knowledge of:  
1) Factors used to analyze a supplier’s ability to perform  
2) Issues in conducting site visits  
3) Evaluate changes within supplier organization

1-F-6
Develop and execute supplier exit strategies.  
Knowledge of:  
1) Internal considerations  
2) External considerations  
3) Associated risks  
4) Community concerns
Effective Supply Management Performance – Exam 2

The Effective Supply Management Performance exam focuses on operational issues that are part of successful supply management performance. The latest surveys show that supply management professionals oversee an expanding list of responsibilities, which are covered here in 165 questions. From forecasting, logistics, and materials and inventory management, to organization assessment, planning, product development, project management and quality, each task enables effective management of the supply chain in order to maximize customer value.

**Forecasting**

2-A-1
Perform analysis and provide data on current and future and global/domestic market conditions, benchmarks and industry trends to management and/or user departments. **Knowledge of:**
1) General issues in economics
2) Market analysis
3) Supply market complexity versus impact on business
4) Analytical/financial skills

2-A-2
Develop supply forecasts in light of economic, competitive, technology, market and currency trends and conditions that affect procurement. **Knowledge of:**
1) Types of forecasting
2) Economic concepts and terms used in forecasting
3) Sources of data used in forecasting
4) Forecasting methodologies/techniques
5) Factors that can affect forecasts
6) Measures of forecast accuracy

2-A-3
Manage forecasted data with suppliers. **Knowledge of:**
1) Business forecasting models
2) Confidentiality issues
3) Parameters for disclosure
4) Legal implications
5) Supplier-managed inventory (SMI)/Vendor-managed inventory (VMI)
6) Collaborative Planning Forecasting and Replenishment (CPFR)
7) Product life cycle
8) Information exchange options

**Logistics**

2-B-1
Design/modify logistics facility layouts and equipment designs to support the business model, increase productivity and lower operating costs. **Knowledge of:**
1) Considerations for geographical location
2) Considerations for layout
3) Order picking versus stock replenishing functions
4) Virtual warehouse versus physical warehouse
5) Logistics performance measures, strategies and cost-saving initiatives
6) Third-party and fourth-party logistics considerations (3PL and 4PL)
7) Process improvement action plans

2-B-2
Direct traffic/distribution policies and procedures to ensure optimum flow of material and consolidation of freight. **Knowledge of:**
1) Transportation modalities
2) Transportation restrictions
3) Carrier cost auditing
4) Carrier performance auditing
5) Freight classifications/rates
6) Available technology
7) Relocation or movement processes

2-B-3
Manage international transportation, invoicing and documentation functions to ensure corporate compliance with all governmental import, export, hazardous material and air freight regulations. **Knowledge of:**
1) Modes of transportation and impacts
2) Roles of shipping companies, customers, suppliers and freight forwarders
3) Import/export documentation
4) Traffic patterns
5) Shipping routes
6) Incoterms® rules
7) Security considerations (for example U.S. Customs-Trade Partnerships Against Terrorism [C-TPAT])
8) Hazardous and regulated materials
Effective Supply Management Performance – Exam 2

2-B-4
Manage the resolution of delivery/receiving problems including freight loss and damage claims.
Knowledge of:
1) Freight terms (domestic and international)
2) Delivery tracking systems
3) Delivery performance measurements
4) Visible versus latent damage
5) Rules for freight claims
6) Resolution processes
7) Freight audit procedures
8) Maritime law (for example, general average)
9) Reverse logistics

Materials and Inventory Management

2-C-1
Develop/implement a material and/or service standardization program.
Knowledge of:
1) General issues in standardization and simplification
2) Sources of standards

2-C-2
Develop/implement a warehouse and inventory management system.
Knowledge of:
1) Physical tracking systems
2) Overall project plan
3) Customer requirements
4) Cost considerations
5) Available technology for warehouse management system (WMS)
6) Warehouse management
7) Inventory accuracy and inventory integrity

2-C-3
Coordinate and/or monitor the movement of equipment and assets within the organization.
Knowledge of:
1) Organizational policy for asset classification
2) Tax policy on assets
3) Physical tracking systems (for example, bar coding, asset tags, serial numbers, Radio Frequency Identification — (RFID)
4) Financial tracking systems
5) Internal distribution (for example, distribution channels)
6) Types of equipment and assets (for example, vehicles, aircraft, railroad cars, copiers)
7) Asset management

2-C-4
Develop, oversee and execute multichannel disposition plan for excess inventory and finished goods.
Knowledge of:
1) Investment recovery principles
2) Marketplace for disposal
3) Categories

Organization/Department Assessment

2-D-1
Monitor work against business plans and take action to resolve variances or adjust plans as appropriate.
Knowledge of:
1) Performance measurement processes

2-D-2
Develop performance criteria and evaluate supply management staff performance.
Knowledge of:
1) Issues in the evaluation of employees

2-D-3
Develop tools and processes to measure, report and improve compliance with supply management policies.
Knowledge of:
1) Audit processes
2) Validation process
3) Reporting requirements
4) Remediation
5) Training
6) Compliance metrics

2-D-4
Analyze and resolve issues raised in supply management audit reports.
Knowledge of:
1) Types of audits
2) Validation of current policies, procedures, work instructions and forms
3) Corrective action process
4) Audit schedules and reports
Planning

2-E-1
Implement or use requirements planning (xRP — for example, Enterprise Resource Planning, [ERP], Materials Requirements Planning [MRP], Manufacturing Resource Planning [MRP II], Distribution Requirements Planning [DRP and DRP II], Warehouse Management Systems [WMS]) to align supply management and operations activities to support organizational strategy.

Knowledge of:
1) Key Principles of xRP
2) System development life cycle (SDLC)

2-E-2
Develop, implement, maintain and monitor the forecasting, operations planning, scheduling and inventory control functions to ensure optimum use of capacity and resources.

Knowledge of:
1) Replenishment/priority tool
2) Scheduling processes
3) Capacity utilization techniques

Project Management

2-G-1
Perform project management activities representing the supply management organization.

Knowledge of:
1) Project initiation
2) Project planning
3) Project execution
4) Project monitoring and control
5) Project closure

2-G-2
Implement a continuous improvement process within the supply chain in accordance with organizational objectives.

Knowledge of:
1) Benchmarking systems
2) Process mapping and value stream mapping
3) Process costing
4) Maturity models
5) Process improvement metrics
6) Process improvement methods (for example, lean methods JIT, lean six sigma, value stream mapping)
7) Supplier workshops

Product and Service Development

2-F-1
Participate in product/service development or specification/requirement changes that support organizational merchandising and marketing efforts to meet customer needs.

Knowledge of:
1) Innovative and integrated product development process
2) Role of supply management in product or service design teams

2-F-2
Manage ramp-up strategy and implementation to full-scale production for new product or service introductions.

Knowledge of:
1) Sales projections
2) Staffing requirements
3) Operations capacity and capabilities
4) Supply chain readiness

Quality

2-H-1
Develop and administer a supplier certification program.

Knowledge of:
1) Supplier quality practices
2) Supplier certifications/registrations (for example, ISO, or Good Manufacturing Practices [GMP])
3) Congruence of test methodologies and results between buying and selling organizations
4) Organizational requirements for supplier certification (for example, evidence of statistical process control [SPC])

2-H-2
Develop measurements for continuous quality improvement and target setting.

Knowledge of:
1) Quality control
2) Quality assurance
3) Quality management
2-H-3
Develop, measure and evaluate quality requirements to continuously improve supplier performance. Knowledge of:
1) Customer/user requirements
2) Service level agreements (SLAs)
3) Measurements methods
4) Legal requirements
5) Supplier capacity and capabilities
6) Various quality processes
Leadership

3-A-1
Represent the supply management organization in decisions related to the organizationwide or project objective-setting, budgeting, staffing and policies.
Knowledge of:
1) Supply management organization mission, processes, capabilities
2) Definition of customer requirements
3) Corporate processes and organizational dynamics
4) Influence
5) Internal negotiations and synergies

3-A-2
Develop and implement business plans that will meet customer service, corporate profit and return on equity goals.
Knowledge of:
1) Corporate goals
2) Elements of a business plan
3) Concept of goal alignment
4) Product price structure
5) Contribution to profit
6) Business planning process
7) Strengths, weaknesses, opportunities, threats (SWOT) analysis
8) Financial measures and other metrics
9) Demand-driven principles

3-A-3
Develop, implement and monitor a strategic supply management plan and operating plan based on market conditions, business needs and available resources.
Knowledge of:
1) Strategic supply management plan
2) Operating plan

3-A-4
Plan/develop/provide operating policies, guidelines and procedures. Modify as necessary to achieve the optimal structure.
Knowledge of:
1) Management control
2) Best practices of management controls

3-A-5
Develop/implement changes to the organization’s supply management policies as needed.
Knowledge of:
1) Organizational policies and procedures
2) Scope of supply management (as defined by ISM)
3) The role of supply management in organizational strategies
4) Change management
5) Legal considerations

3-A-6
Participate in company acquisitions, and/or mergers and/or divestitures to assure the continuity of supply and capture synergy opportunities.
Knowledge of:
1) Mergers/acquisitions/divestitures
2) Methods of evaluating assets and corporate value
3) Impact on the supply base
4) Impact on technology

3-A-7
Represent the supply organization in meetings with corporations, government agencies, professional associations and other organizations.
Knowledge of:
1) Meeting dynamics
2) Issues in the external role and perception of supply management
3) Professionalism
4) Feedback to management
5) Confidentiality
6) Legal restrictions

3-A-8
Lead or participate in cross-functional and/or multifunctional teams (for example, project management, process improvement, international).
Knowledge of:
1) Purpose of teams
3-A-9
Disseminate information and promote training related to supply management policies and procedures.
Knowledge of:
1) Knowledge assessment and situational analysis
2) Compliance metrics
3) The “learning organization” concept

3-A-10
Market the value of strategic sourcing and sourcing strategies and initiatives to management and internal customers.
Knowledge of:
1) Level of communication
2) Communications plan
3) Methods of communication

3-A-11
Evaluate the supply management organizational structure and modify as necessary to achieve the optimal structure.
Knowledge of:
1) Functional impact of organizational structures
2) Organizational types and their implications
3) Key issues
4) Workload distribution

3-A-12
Hire, develop, retain, promote and/or dismiss supply management personnel.
Knowledge of:
1) Organizational human resource policies and procedures
2) Organization skill set requirements
3) Position skill set requirements
4) Selection and recruitment
5) Retention
6) Promotion
7) Termination
8) Legal issues

3-A-13
Supervise and lead human resources to achieve initiatives.
Knowledge of:
1) Issues in organizational management and administration
2) Group dynamics
3) Leadership principles
4) Change management techniques

3-A-14
Conduct/authorize job training for the professional development of the staff.
Knowledge of:
1) Determination of training and development needs
2) Types of job training (functional orientation)
3) Professional certification
4) Formal education/advanced degrees
5) Professional and trade associations

3-A-15
Develop/manage/evaluate/measure relationships with internal departments.
Knowledge of:
1) Role/perception of supply management within the organization
2) Establishment of trust and credibility
3) Feedback techniques
4) Influence techniques
5) Leadership techniques
6) Internal business partners’ roles, goals and objectives
7) Joint accountability

3-A-16
Develop/utilize criteria for evaluating supply management department performance.
Knowledge of:
1) Organizational expectations of supply management
2) Reasons for departmental performance appraisal
3) Steps in department-level evaluation
4) Concepts of a strategic supply management department
5) Evaluation of outsourced supply functions
6) Evaluation of feasibility and impact of outsourcing supply functions

3-A-17
Conduct role design evaluation and potential job redesign requirements.
Knowledge of:
1) Organization functional requirements
2) Position functional requirements
3) Elements of job design
4) Staffing and talent management
5) Span of influence
6) Role of leaders, managers and facilitators
Leadership in Supply Management – Exam 3

3-A-18
Create and manage a succession plan, allocating work assignments in such a way as to provide career development and growth opportunities.
Knowledge of:
1) Cross-training
2) Mentoring and reverse mentoring
3) Professional development
4) Delegation of leadership opportunities
5) Human resources policies, procedures and planning
6) Succession planning
7) Organizational structure
8) Educational opportunities
9) Job rotation

Risk and Compliance

3-B-1
Develop, implement and manage a risk profile and strategies in accordance with existing contracts, applicable laws, regulations and organizational policy.
Knowledge of:
1) Risk management process
2) Multi-tier suppliers and contractors

3-B-2
Develop and implement a risk management and/or claims management program (for example, copyright violation, patent infringement, harassment).
Knowledge of:
1) Financial risk
2) Operational risk
3) Brand/reputation risk
4) Legal risk
5) Environmental risk
6) Technical risk

3-B-3
Implement supply management processes in consideration of legal issues.
Knowledge of:
1) Legal aspects of various supply management processes
2) Role of legal counsel
3) Delegation of authority (for example, financial levels, budget holder)
4) Types of law
5) U.S. laws and regulations influencing supply management
6) International laws and regulations influencing supply management

3-B-4
Develop/Implement/maintain a database/physical filing system of relevant information.
Knowledge of:
1) Regulatory and legal requirements for records management
2) Organizational policy for records management/database management
3) Data management system requirements
4) Data classification
5) Data management capabilities
6) Domestic and international issues
7) Types of data

3-B-5
Verify the existence, accuracy and completeness of relevant financial transactions and commitments to third parties.
Knowledge of:
1) Domestic and international regulatory requirements (for example, U.S. Sarbanes-Oxley Act [SOX])
2) Organizational financial reporting policies

3-B-6
Assess risk from end-of-life cycle issues in the marketplace and establish proper risk mitigation contingency plans for all components in the product.
Knowledge of:
1) Product roadmap and specifications
2) Product life-cycle costing
3) Product marketing strategy
4) Market intelligence
5) Collaboration with suppliers
6) Risk tolerance of organization

3-B-7
Manage and control the storage/disposal of hazardous/regulated materials and related documentation.
Knowledge of:
1) Laws/regulations related to documentation, storage, handling, transportation and disposal ("cradle to grave" and cradle-to-cradle)"
2) Risk
3) Ethical issues
4) Audit
5) Organization values and policies
6) ISM Principles of Sustainability and Social Responsibility and Audit
7) Customer-driven requirements
Leadership in Supply Management – Exam 3

3-B-8
Comply with programs that prevent and respond to discrimination or harassment.
Knowledge of:
1) Governmental laws and regulations by country
2) Organizational policies and procedures
3) Court rulings pertaining to emploment discrimination
4) Diversity training

Strategic Sourcing
3-C-1
Establish and execute strategic sourcing plans, in congruence with organizational objectives and sourcing strategies.
Knowledge of:
1) Internal organization conditions related to sourcing strategies
2) Stakeholder engagement and alignment
3) Market analysis
4) Supplier marketing strategies
5) Risk/benefit analysis
6) Rollout plan
7) Communication plan
8) Phased time line approach

3-C-2
Establish and standardize strategic sourcing procedures and business process improvements.
Knowledge of:
1) Strategic sourcing process

3-C-3
Identify, evaluate, select and implement technologies that support supply management functions throughout the organization.
Knowledge of:
1) Business process design
2) Methodologies for selection, implementation and adoption by the organization
3) E-sourcing tools
4) Procedures for managing an online event
5) Spend analysis
6) Risk management tools
7) Supplier performance measurement

3-C-4
Leverage spend through identification, prioritization, development and execution of strategies.
Knowledge of:
1) Implications of organizational structure
2) Opportunity assessment
3) Leveraging strategies
4) Factors for prioritizing decision-making

3-C-5
Conduct analysis to determine insourcing or outsourcing strategy.
Knowledge of:
1) Procedures for conducting make-or-buy or outsourcing analyses
2) Factors influencing outsourcing/make-or-buy/offshoring decisions
3) Labor and other organizational constraints
4) Offshoring
5) Privatization
6) Post-audit evaluation

3-C-6
Create new systems and process improvements to help the organization meet sales goals.
Knowledge of:
1) Product and technology roadmaps of supplier and customer
2) Data on sales performance to plan
3) Integration requirements between supplier and customer systems
4) Pricing strategies
5) Service factors
6) Integration of sales and supply plans