Module 2
Section A: Forecast Demand

Term
Associative forecasting

Module 2
Section A: Forecast Demand

Term
Bias

Module 2
Section A: Forecast Demand

Term
Bullwhip effect

Module 2
Section A: Forecast Demand

Term
Business-to-business (B2B)

Module 2
Section A: Forecast Demand

Term
Business-to-consumer (B2C)

Module 2
Section A: Forecast Demand

Term
Forecast error

Module 2
Section A: Forecast Demand

Term
Forecasting

Module 2
Section A: Forecast Demand

Term
Qualitative forecasting technique

A consistent deviation from the mean in one direction (high or low). A normal property of a good forecast is that it is not biased. See: average forecast error.

The use of one or more variables that are believed to affect demand in order to forecast future demand. See: causal forecast.

Business conducted between two organizations, often via e-commerce. This type of connectivity allows businesses to act as a virtual supply chain management entity in order to reduce costs, improve quality, reduce delivery lead times, and improve due-date performance.

An extreme change in the supply position upstream in a supply chain generated by a small change in demand downstream in the supply chain. Inventory can quickly move from being backordered to being excess. This is caused by the serial nature of communicating orders up the chain with the inherent transportation delays of moving product down the chain. The bullwhip effect can be eliminated by synchronizing the supply chain.

The difference between actual demand and forecast demand. Forecast error can be represented several different ways: mean absolute deviation, mean absolute percent error, and mean squared error. See: deviation, mean absolute deviation (MAD), mean absolute percent error (MAPE), mean squared error (MSE).

Business conducted between businesses and final consumers, bypassing any third-party entities. It includes traditional brick-and-mortar businesses that may or may not also offer products and services online as well as businesses that trade exclusively on the internet.

An approach to forecasting that is based on intuitive or judgmental evaluation. It is used generally when data is scarce, not available, or no longer relevant. Common types of qualitative techniques include personal insight, sales force estimates, panel consensus, market research, visionary forecasting, and the Delphi method. Examples include developing long-range projections and new product introductions. See: historical analogy, jury of executive opinion.

The business function that attempts to predict sales and use of products so they can be purchased or manufactured in appropriate quantities in advance.

Module 2
Section A: Forecast Demand

Term
Quantitative forecasting techniques

Module 2
Section A: Forecast Demand

Term
Random variation

Module 2
Section A: Forecast Demand

Term
Seasonality

Module 2
Section A: Forecast Demand

Term
Time series forecasting

Module 2
Section A: Forecast Demand

Term
Tracking signal

Module 2
Section A: Forecast Demand

Term
Trend

Module 2
Section B: Understand Demand Management

Term
Agile manufacturing

Module 2
Section B: Understand Demand Management

Term
Agile supply chain

A fluctuation in data that is caused by uncertain or random occurrences. See: noise, random events.

An approach to forecasting in which historical demand data is used to project future demand. Extrinsic and intrinsic techniques are typically used. See: extrinsic forecasting method, intrinsic forecast method.

A forecasting method that projects historical data patterns into the future. It involves the assumption that the near-term future will be like the recent past.

A predictable, repetitive pattern of demand measured within a year, during which time the demand grows and declines. These are calendar-related patterns that can appear annually, quarterly, monthly, weekly, daily and/or hourly. Syn.: seasonal variation. See: base series.

General upward or downward movement of a variable over time (e.g., demand or process attribute).

A measure used to evaluate whether the actual demand reflects the forecasting method's assumptions about demand behavior. It is the ratio of the cumulative forecast errors to the mean absolute deviation (MAD). See: forecast error.

A supply chain that has the ability to respond quickly to sudden or unpredictable changes in customer demand, supply availability, or the marketplace. See: agile manufacturing.

A manufacturing methodology that allows an organization to be flexible and respond rapidly to customer demand and market changes. See: agile supply chain.

Module 2
Section B: Understand Demand Management

Term
Demand forecasting

Module 2
Section B: Understand Demand Management

Term
Demand management

Module 2
Section B: Understand Demand Management

Term
Demand planning

Module 2
Section B: Understand Demand Management

Term
Postponement

Module 2
Section B: Understand Demand Management

Term
Resource planning

Module 2
Section D: Support Sales and Operations Planning (S&OP)

Term
Collaborative planning, forecasting, and replenishment (CPFR)

Module 2
Section D: Support Sales and Operations Planning (S&OP)

Term
Sales and operations planning (S&OP)

Module 2
Section E: Support Distribution Requirements Planning (DRP)

Term
Aggregate plan

1) The integration of demand planning upstream and downstream within the supply chain to balance all sources of demand for goods and services with the firm's output capabilities to generate profitable results. Demand management involves prioritizing demand when supply is lacking and responds quickly to changes in demand. Demand management includes the individual processes of planning demand, communicating demand, influencing demand, and prioritizing demand. 2) In marketing and sales, the process of planning, executing, controlling, and monitoring the design, pricing, promotion, and distribution of products and services to bring about transactions that meet organizational and individual needs. See: marketing management, demand planning.

Forecasting the demand for a particular good, component, or service.

A product design or supply chain strategy that deliberately delays final differentiation of a product (assembly, production, packaging, tagging, etc.) until the latest possible time in the process. This shifts product differentiation closer to the consumer to reduce the anticipatory risk of producing the wrong product. The practice reduces excess finished goods in the supply chain. Syn.: delayed differentiation.

The process of combining statistical forecasting techniques and judgment to construct demand estimates for products or services (both high and low volume; lumpy and continuous) across the supply chain from the suppliers' raw materials to the consumer's needs. Items can be aggregated by product family, geographical location, product life cycle, etc., to estimate consumer demand for finished products, service parts, and services. Numerous forecasting models are tested and combined with judgment and intelligence from marketing, sales, distributors, warehousing, service parts, and other functions to minimize forecast error. See: demand management.

A collaboration process in which supply chain trading partners jointly develop plans for demand management and demand fulfillment activities to establish a shared vision of how products will be promoted and sold over the planning horizon. The trading partners share demand forecasts and replenishment plans iteratively until they agree to a consensus forecast, which they use to develop production and shipment plans designed to support the collaborative demand forecast. See: collaborative planning.

Capacity planning conducted at the business plan level. Resource planning is the process of establishing, measuring, and adjusting limits or levels of long-range capacity. It is normally based on the production plan but may be driven by higher-level plans beyond the time horizon of the production plan (e.g., the business plan). It addresses those resources that take long periods of time to acquire. Resource planning decisions always require top management approval. Syn.: resource requirements planning. See: capacity planning, long-term planning.

A plan that includes budgeted levels of finished goods, inventory, production backlogs, and changes in the workforce to support the production strategy. Aggregated information (e.g., product line, family) rather than individual product information is used.

A mid- to long-term supply chain planning practice that compares the demand plan with inventory levels and production capacity and analyzes where any imbalances to the plan might exist. The process integrates all the plans for the business (sales, marketing, development, manufacturing, sourcing, and financial) and produces a high-level production plan, covering a horizon sufficient to plan for resources and to support the annual business planning process. S&OP is performed at least once a month and is reviewed by management at an aggregate (product family) level. The S&OP process links the strategic plans for the business with its execution and reviews performance measurements for continuous improvement. See: aggregate planning, executive sales and operations planning (executive S&OP), integrated business planning (IBP), production plan, production planning, sales plan, tactical planning.

Module 2
Section E: Support Distribution Requirements Planning (DRP)

Term
Distribution requirements planning (DRP)

Module 2
Section E: Support Distribution Requirements Planning (DRP)

Term
Distribution resource planning (DRP II)

Module 2
Section E: Support Distribution Requirements Planning (DRP)

Term
Exception report

Module 2
Section E: Support Distribution Requirements Planning (DRP)

Term
Planned order

Module 2
Section E: Support Distribution Requirements Planning (DRP)

Term
Planned order receipt

Module 2
Section E: Support Distribution Requirements Planning (DRP)

Term
Planned order release

Module 2
Section E: Support Distribution Requirements Planning (DRP)

Term
Scheduled receipt

Module 2
Section F: Understand Master Scheduling and Material Requirements Planning

Term
Advanced planning and scheduling (APS)

The extension of distribution requirements planning (DRP) into the planning of the key resources contained in a distribution system (warehouse space, workforce, money, trucks, freight cars, etc.).

The function of determining the need to replenish inventory at branch warehouses. A time-phased order point approach often is used when the planned orders at the branch warehouse level are "exploded" via material requirements planning (MRP) logic to become gross requirements of the supplying source. In the case of multilevel distribution networks, this explosion process can continue down through the various levels of regional warehouses (e.g., master warehouse, factory warehouse, etc.) and become input to the master production schedule (MPS).

A suggested order quantity, release date, and due date created by the planning system's logic when it encounters net requirements in processing material requirements planning (MRP). In some cases, it can also be created by a master scheduling module. Planned orders are created by the computer, exist only within the computer, and may be changed or deleted by the computer during subsequent processing if conditions change. Planned orders at one level will be exploded into gross requirements for components at the next level. Planned orders, along with released orders, serve as input to capacity requirements planning (CRP) to show the total capacity requirements by work center in future time periods. See: planning time fence.

A report that lists or flags only those items that deviate from planned thresholds.

A row on a material requirements planning (MRP) table that is derived from planned order receipts by taking the planned receipt quantity and offsetting it to the left by the appropriate lead time. See: order release.

The quantity planned to be received at a future date as a result of a planned order release. Planned order receipts differ from scheduled receipts in that they have not been released. Syn.: planned receipt.

Techniques that deal with the analysis and planning of logistics and manufacturing during short, intermediate, and long-term time periods. APS describes any application that uses advanced mathematical algorithms or logic to perform optimization or simulation of finite capacity scheduling, sourcing, capital planning, resource planning, forecasting, demand management, etc. These techniques simultaneously consider a range of constraints and business rules to provide real-time planning and scheduling, decision support, available-to-promise (ATP), and capable-to-promise (CTP) capabilities. APS often generates and evaluates multiple scenarios. Management then selects one scenario to use as the "official plan." The five main components of APS systems are (1) demand planning, (2) production planning, (3) production scheduling, (4) distribution planning, and (5) transportation planning.

An open order that has an assigned due date. See: on-order stock, open order.

Module 2

Section F: Understand Master Scheduling and Material Requirements Planning

Term

Dependent demand

Module 2

Section F: Understand Master Scheduling and Material Requirements Planning

Term

Enterprise resource planning (ERP)

Module 2

Section F: Understand Master Scheduling and Material Requirements Planning

Term

Independent demand

Module 2

Section F: Understand Master Scheduling and Material Requirements Planning

Term

Master schedule

Module 2

Section F: Understand Master Scheduling and Material Requirements Planning

Term

Material requirements planning (MRP)

Module 2

Section F: Understand Master Scheduling and Material Requirements Planning

Term

Supply chain control tower

Module 2

Section G: Facilitate Sourcing and Procurement

Term

Annualized contract

Module 2

Section G: Facilitate Sourcing and Procurement

Term

Bilateral contract

Integrated business software that manages all areas of a business, including manufacturing, accounting, distribution, etc. An ERP system provides a framework for standardizing processes and common extensive databanks of information, including master files, financial details, analyses of product and customer hierarchies, and historic and current transactional data.

Demand that is directly related to or derived from the bill-of-material structure for other components or end products. Such requirements are therefore calculated instead of forecasted. A given inventory item may have both dependent and independent demand at any given time. For example, a part may simultaneously be the component of an assembly and sold as a service part. See: derived demand, independent demand.

A format that includes time periods (dates), the forecast, customer orders, projected available balance, available-to-promise (ATP), and the master production schedule (MPS). It takes into account the forecast; the production plan; and other important considerations such as backlog, availability of material, availability of capacity, and management policies and goals. See: master production schedule (MPS).

The demand for an item that is unrelated to the demand for other items. Demand for finished goods, parts required for destructive testing, and service parts requirements are examples of independent demand. See: dependent demand.

A centralized hub that provides an integrated, complete view of data across the end-to-end supply chain. The system allows the supplier to see the requirements and inventory levels at the customer's site, enhances the ability to get accurate information about supply location and availability, and highlights any potential excess inventory. Similarly, it helps the customer easily identify supply and demand variations and take necessary actions to return excess inventory. See: digital twin.

A set of techniques that uses bill of material (BOM) data, inventory data, and the master production schedule (MPS) to calculate requirements for materials. It makes recommendations to release replenishment orders for material. Further, because it is time phased, it makes recommendations to reschedule open orders when due dates and need dates are not in phase.

An agreement wherein each party makes a promise to the other party.

A negotiated agreement with a supplier for one year that sets pricing, helps ensure a continuous supply of material, and provides the supplier with estimated future requirements.

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Contract

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Cost-based contract

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Cost-plus-fixed-fee contract

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Cost-plus-incentive-fee contract

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Fixed-price incentive fee contract

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Incentive arrangements

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Incentive contract

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Multisourcing

A type of purchasing contract in which the price of goods or services is tied to the costs of key inputs or other economic factors such as interest rates.

An agreement between two or more people or companies to perform or not to perform specific acts or services or to deliver merchandise. A contract may be oral or written. A purchase order, when accepted by a supplier, becomes a contract.

A contract in which the seller is paid for costs specified as allowable in the contract plus a bonus, provided certain provisions are met or exceeded.

A contract in which the seller is paid for costs specified as allowable in the contract plus a stipulated fixed fee.

A contract between a buyer and seller that incorporates conditions designed to motivate the supplier to improve its performance in specific areas including on-time delivery, product quality, and customer satisfaction.

A contract in which the seller is paid a set price and can earn an additional profit if certain stipulations are met.

Procurement of a good or service from more than one independent supplier. Syn.: multiple sourcing. Ant.: single sourcing. See: dual sourcing.

A contract in which the buyer and seller agree to share cost savings beyond the target cost established in the contract. If actual costs exceed the target, the parties share the additional cost up to a maximum level specified in the contract.

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Procurement

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Purchase order

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Routing guide

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Single-source supplier

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Sole source

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Sourcing

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Strategic sourcing

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Tactical buying

The purchaser's authorization used to formalize a purchase transaction with a supplier. A purchase order, when given to a supplier, should contain statements of the name, part number, quantity, description, and price of the goods or services ordered; agreed-to terms as to payment, discounts, date of performance, and transportation; and all other agreements pertinent to the purchase and its execution by the supplier. See: discrete purchase order.

The business functions of procurement planning, purchasing, inventory control, traffic, receiving, incoming inspection, and salvage operations.

A company that is selected to have 100 percent of the business for a part although alternate suppliers are available. See: sole-source supplier.

A shipping tool used to manage logistics activities for shipments between two points. It contains mode and carrier information, freight rates, and service requirements.

The process of identifying a company that provides a needed good or service.

A supply situation where the supply of a good or service is available from only one organization. Usually technical barriers, such as patents, complex tooling, or component designs, preclude other suppliers from offering the product.

The purchasing process focused on transactions and nonstrategic material buying. It is closely aligned with the ordering portion of executing the purchasing transaction process. Its characteristics include stable, limited fluctuations; defined standard specifications noncritical to production; no delivery issues; and high reliability concerning quality-standard material with very little concern for rejects. See: strategic sourcing.

A comprehensive approach for locating and sourcing key material suppliers, which often includes the business process of analyzing total-spend-for-material spend categories. The approach includes a focus on the development of long-term relationships with trading partners who can help the purchaser meet profitability and customer satisfaction goals. From an information technology (IT) applications perspective, it includes automation of requests for quotes, requests for proposals, electronic auctioning (e-auction or reverse auction), and contract management processes.

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Terms and conditions

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Terms of sale

Module 2
Section G: Facilitate Sourcing and Procurement

Term
Trading partner agreement

Module 2
Section G: Facilitate Sourcing and Procurement

Term
United Nations Convention on Contracts for the International Sale of Goods (CISG)

In international trade, the element of a contract that states the delivery and payment terms between a buyer and a seller. It includes when and where the transfer of goods will occur, documentation that is required, and liabilities for both parties while the goods are in transit.

All the provisions and agreements of a contract.

A multilateral treaty that governs the sale of goods internationally. It facilitates international trade and removes legal barriers by providing uniform rules for commercial transactions. It is sometimes known as the Vienna Convention.

A contract between trading partners that describes all facets of their business together. It is a legal and binding agreement suitable for legal purposes as well as standard working agreements.