Module 1
Section A: Introduction to Supply Chains

Term
Keiretsu

Module 1
Section A: Introduction to Supply Chains

Term
Service industry

Module 1
Section A: Introduction to Supply Chains

Term
Stakeholder

Module 1
Section A: Introduction to Supply Chains

Term
Supply chain

Module 1
Section A: Introduction to Supply Chains

Term
Supply chain management

Module 1
Section B: Demand Analysis and Patterns

Term
Macro environment

Module 1
Section B: Demand Analysis and Patterns

Term
Market plan

Module 1
Section B: Demand Analysis and Patterns

Term
Market research

1) In its narrowest sense, an organization that provides an intangible product (e.g., medical or legal advice). 2) In its broadest sense, all organizations except farming, mining, and manufacturing. The service industry includes retail trade; wholesale trade; transportation and utilities; finance, insurance, and real estate; construction; professional, personal, and social services; and local, state, and federal governments.

A form of cooperative relationship among companies in Japan where the companies largely remain legally and economically independent, even though they work closely in various ways such as financial backing. A member of [this] generally owns a limited amount of stock in other member companies. [It] generally forms around a bank and a trading company, but "distribution" (supply chain) alliances [of this type] have been formed of companies ranging from raw material suppliers to retailers.

The network of suppliers that deliver products from raw materials to end customers through either an engineered or transactional flow of information, goods, and money.

People with a vested interest in a company, including managers, employees, stockholders, customers, and suppliers.

The environment external to a business including technological, economic, natural, and regulatory forces that marketing efforts cannot control.

The design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand, and measuring performance globally.

Syn.: marketing research.

The output of the market planning process. The market plan includes the current market position, opportunity and issue analysis, marketing objectives and strategies, action plans, programs, projects, budgets, and pro forma profit and loss statement and management controls. Syn.: brand plan, product plan.

Module 1
Section B: Demand Analysis and Patterns

Term
Market share

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Module 1
Section B: Demand Analysis and Patterns

Term
Microeconomics

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Module 1
Section B: Demand Analysis and Patterns

Term
Price elasticity

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Module 1
Section B: Demand Analysis and Patterns

Term
Random variation

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Module 1
Section B: Demand Analysis and Patterns

Term
Seasonality

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Module 1
Section B: Demand Analysis and Patterns

Term
Trend

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Module 1
Section C: Demand Management

Term
Branding

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Module 1
Section C: Demand Management

Term
Demand

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The analysis of the behavior of individual economic decision makers (individuals and firms).

The actual portion of current market demand that a company or product achieves.

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

The degree of change in buyer demand in response to changes in product price. Calculated by dividing the percentage of change in quantity bought by the percentage of change in price. Prices are considered elastic if demand varies with changes in price. If demand changes only slightly when the price changes, demand is said to be inelastic. For example, demand for most medical services is relatively inelastic, but demand for automobiles is generally elastic.

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

A predictable repetitive pattern of demand measured within a year where 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.

A need for a particular product or component. The demand could come from any number of sources (e.g., a customer order or forecast, an interplant requirement, a branch warehouse request for a service part, or the manufacturing of another product). At the finished goods level, demand data is usually different from sales data because demand does not necessarily result in sales (i.e., if there is no stock, there will be no sale). There are generally up to four components of demand: cyclical component, random component, seasonal component, and trend component. See: booked orders.

The use of a name, term, symbol, or design, or a combination of these, to identify a product.

Module 1
Section C: Demand Management

Term
Demand management

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Module 1
Section C: Demand Management

Term
Demand management process

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Module 1
Section C: Demand Management

Term
Demand shaping

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Module 1
Section C: Demand Management

Term
Four Ps

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Module 1
Section C: Demand Management

Term
Life cycle analysis

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Module 1
Section C: Demand Management

Term
Order processing

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Module 1
Section C: Demand Management

Term
Order qualifiers

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Module 1
Section C: Demand Management

Term
Order winners

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A process that weighs both customer demand and a firm's output capabilities, and tries to balance the two. Demand management is made up of planning demand, communicating demand, influencing demand, and prioritizing demand.

1) The function of recognizing all demands for goods and services to support the marketplace. It involves prioritizing demand when supply is lacking. [This] facilitates the planning and use of resources for profitable business results. 2) In marketing, 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. Syn.: marketing management. See: demand planning.

A set of marketing tools to direct the business offering to the customer; include product, price, place, and promotion.

The use of tactics such as price incentives, advertising, product positioning, product modifications and substitutions or trade programs to entice customers to purchase.

The activity required to administratively process a customer's order and make it ready for shipment or production.

A quantitative forecasting technique based on applying past patterns of demand data covering introduction, growth, maturity, saturation, and decline of similar products to a new product family.

Those competitive characteristics that cause a firm's customers to choose that firm's goods and services over those of its competitors.

Those competitive characteristics that a firm must exhibit to be a viable competitor in the marketplace.

Module 1
Section C: Demand Management

Term
Plan-do-check-action (PDCA)

Module 1
Section C: Demand Management

Term
Product life cycle

Module 1
Section C: Demand Management

Term
Product life cycle management (PLM)

Module 1
Section D: Forecasting

Term
Bias

Module 1
Section D: Forecasting

Term
Demand forecasting

Module 1
Section D: Forecasting

Term
Demand planning

Module 1
Section D: Forecasting

Term
Forecast error

Module 1
Section D: Forecasting

Term
Forecasting

1) The stages a new product goes through from beginning to end (i.e., the stages that a product passes through from introduction through growth, maturity, and decline). 2) The time from initial research and development to the time at which sales and support of the product to customers are withdrawn. 3) The period of time during which a product can be produced and marketed profitably.

A four-step process for quality improvement. In the first step (plan), a plan to effect improvement is developed. In the second step (do), the plan is carried out, preferably on a small scale. In the third step (check), the effects of the plan are observed. In the last step (action), the results are studied to determine what was learned and what can be predicted. The plan-do-check-action cycle is sometimes referred to as the Shewhart cycle (because Walter A. Shewhart discussed the concept in his book, "Statistical Method from the Viewpoint of Quality Control") or as the Deming circle (because W. Edwards Deming introduced the concept in Japan, and the Japanese subsequently called it the Deming circle). Syns.: plan-do-check-act cycle, Shewhart circle of quality, Shewhart cycle. See: Deming circle.

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

The process of facilitating the development, use, and support of products that customers want and need. Helps professionals envision the creation and preservation of product information, both to the customer and along the reverse-logistics portion of the supply chain.

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, and so forth, to determine an estimate of consumer demand for finished products, service parts, and services. Numerous forecasting models are tested and combined with judgment from marketing, sales, distributors, warehousing, service parts, and other functions. Actual sales are compared to forecasts provided by various models and judgments to determine the best integration of techniques and judgment to minimize forecast error. See: demand management.

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

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

The difference between actual demand and forecast demand. [It] can be represented several different ways: mean absolute deviation (MAD); mean absolute percentage error (MAPE); and mean squared error (MSE). See: mean absolute deviation (MAD), mean absolute percentage error (MAPE), mean squared error (MSE).

Module 1
Section D: Forecasting

Term
Leading indicator

Module 1
Section D: Forecasting

Term
Mean absolute deviation (MAD)

Module 1
Section D: Forecasting

Term
Mix forecast

Module 1
Section D: Forecasting

Term
Safety factor

Module 1
Section D: Forecasting

Term
Standard deviation

Module 1
Section D: Forecasting

Term
Tracking signal

Module 1
Section E: Supply and Demand Alignment

Term
Assemble-to-order (ATO)

Module 1
Section E: Supply and Demand Alignment

Term
Backlog

The average of the absolute values of the deviations of observed values from some expected value. [This] can be calculated based on observations and the arithmetic mean of those observations. An alternative is to calculate absolute deviations of actual sales data minus forecast data. This data can be averaged in the usual arithmetic way or with exponential smoothing. See: forecast error, tracking signal.

A specific business activity index that indicates future trends. [Housing starts is an example of this] for the industry that supplies builders' hardware.

1) The ratio of average strength to the worst stress expected. It is essential that the variation, in addition to the average value, be considered in design. 2) The numerical value used in the service function (based on the standard deviation or mean absolute deviation of the forecast) to provide a given level of customer service. For example, if the item's mean absolute deviation is 100 and a .95 customer service level (safety factor of 2.06) is desired, then a safety stock of 206 units should be carried. This safety stock must be adjusted if the forecast interval and item lead times differ. Syn.: service factor. See: service function.

Forecast of the proportion of products that will be sold within a given product family, or the proportion of options offered within a product line. Product and option mix as well as aggregate product families must be forecasted. Even though the appropriate level of units is forecasted for a given product line, [...] material shortages and inventory problems [can be created if this is inaccurate].

The ratio of the cumulative algebraic sum of the deviations between the forecasts and the actual values to the mean absolute deviation. Used to signal when the validity of the forecasting model might be in doubt. See: forecast error, mean absolute deviation.

A measurement of dispersion of data or of a variable. [It] is computed by finding the differences between the average and actual observations, squaring each difference, adding the squared differences, dividing by n – 1 (for a sample), and taking the square root of the result.

All the customer orders received but not yet shipped. Sometimes referred to as open orders or the order board. See: order backlog, past due order.

A production environment where a good or service can be assembled after receipt of a customer's order. The key components (bulk, semi-finished, intermediate, subassembly, fabricated, purchased, packing, and so on) used in the assembly or finishing process are planned and usually stocked in anticipation of a customer order. Receipt of an order initiates assembly of the customized product. This strategy is useful where a large number of end products (based on the selection of options and accessories) can be assembled from common components. Syn.: finish-to-order. See: make-to-order, make-to-stock.

Module 1
Section E: Supply and Demand Alignment

Term
Chase production method

Module 1
Section E: Supply and Demand Alignment

Term
Engineer-to-order (ETO)

Module 1
Section E: Supply and Demand Alignment

Term
Executive sales and operations planning (executive S&OP)

Module 1
Section E: Supply and Demand Alignment

Term
Level production method

Module 1
Section E: Supply and Demand Alignment

Term
Make-to-order (MTO)

Module 1
Section E: Supply and Demand Alignment

Term
Make-to-stock (MTS)

Module 1
Section E: Supply and Demand Alignment

Term
Master planning

Module 1
Section E: Supply and Demand Alignment

Term
Package to order

Products whose customer specifications require unique engineering design, significant customization, or new purchased materials. Each customer order results in a unique set of part numbers, bills of material, and routings. Syn.: design-to-order.

A production planning method that maintains a stable inventory level while varying production to meet demand. Companies may combine [this] and level production schedule methods. Syn.: chase strategy, chase-demand strategy.

A production planning method that maintains a stable production rate while varying inventory levels to meet demand. Syn.: level strategy, production leveling. See: level schedule.

The portion of sales and operations planning that defines executive decision-making processes to balance supply and demand at the volume level in families, fully integrates financial planning and operational planning, and provides a forum for establishing and linking high-level strategic plans with day-to-day operations. See: sales and operations planning.

A production environment where products can be and usually are finished before receipt of a customer order. Customer orders are typically filled from existing stocks, and production orders are used to replenish those stocks. Syn.: produce-to-stock. See: assemble-to-order, make-to-order.

A production environment where a good or service can be made after receipt of a customer's order. The final product is usually a combination of standard items and items custom-designed to meet the special needs of the customer. Where options or accessories are stocked before customer orders arrive, the term assemble-to-order is frequently used. Syn.: build-to-order. See: assemble-to-order, make-to-stock.

A production environment in which a good or service can be packaged after receipt of a customer order. The item is common across many different customers; packaging determines the end product.

A group of business processes that includes the following activities: demand management (which includes forecasting and order servicing); production and resource planning; and master scheduling (which includes the master schedule and the rough-cut capacity plan).

Module 1
Section E: Supply and Demand Alignment

Term
Product family

Module 1
Section E: Supply and Demand Alignment

Term
Quality

Module 1
Section E: Supply and Demand Alignment

Term
Resource planning

Module 1
Section E: Supply and Demand Alignment

Term
Sales and operations planning

Conformance to requirements or fitness for use.

A group of products or services that pass through similar processing steps, have similar characteristics, and share common equipment prior to shipment or delivery to the customer. Can be from different overlapping product lines that are produced in one factory and often used in production planning (or sales and operations planning). See: product line.

A process to develop tactical plans that provide management the ability to strategically direct its businesses to achieve competitive advantage on a continuous basis by integrating customer-focused marketing plans for new and existing products with the management of the supply chain. The process brings together all the plans for the business (sales, marketing, development, manufacturing, sourcing, and financial) into one integrated set of plans. [This] is performed at least once a month and is reviewed by management at an aggregate (product family) level. The process must reconcile all supply, demand, and new product plans at both the detail and aggregate levels and tie to the business plan. It is the definitive statement of the company's plans for the near to intermediate term, covering a horizon sufficient to plan for resources and to support the annual business planning process. Executed properly, [this] 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, production plan, production planning, sales plan, tactical planning.

Capacity planning conducted at the business plan level. The process of establishing, measuring, and adjusting limits or levels of long-range capacity. [This] 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. [Decisions based on this] always require top management approval. Syn.: resource requirements planning. See: capacity planning, long-term planning.