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Term
Actual demand

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Term
Adaptive smoothing

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Term
Backorder

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Term
Base series

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Term
Business-to-business e-commerce (B2B)

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Term
Business-to-consumer e-sales (B2C)

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Term
Correlation

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Term
Curve fitting

A form of exponential smoothing in which the smoothing constant is automatically adjusted as a function of forecast error measurement.

[Composed] of customer orders (and often allocations of items, ingredients, or raw materials to production or distribution). [This] nets against or “consumes” the forecast, depending upon the rules chosen over a time horizon. For example, [this] will totally replace forecast inside the sold-out customer order backlog horizon (often called the demand time fence) but will net against the forecast outside this horizon based on the chosen forecast consumption rule.

A standard succession of values of demand-over-time data used in forecasting seasonal items. This series of factors is usually based on the relative level of demand during the corresponding period of previous years. The average value of [this] over a seasonal cycle is 1.0. A figure higher than 1.0 indicates that demand for that period is higher than average; a figure less than 1.0 indicates less-than-average demand. For forecasting purposes, [it] is superimposed upon the average demand and trend in demand for the item in question. Syn.: base index. See: seasonal index, seasonality.

An unfilled customer order or commitment. [This is] an immediate (or past due) demand against an item whose inventory is insufficient to satisfy the demand. See: stockout.

Business being conducted between businesses and final consumers, largely over the internet. It includes traditional brick and mortar businesses that also offer products online and businesses that trade exclusively on the internet.

Business conducted over the internet between businesses. The implication is that this connectivity will cause businesses to transform themselves via supply chain management to become virtual organizations—reducing costs, improving quality, reducing delivery lead time, and improving due-date performance.

An approach to forecasting based on a straight line, polynomial, or other curve that describes some historical time series data.

The relationship between two sets of data such that when one changes, the other is likely to make a corresponding change. If the changes are in the same direction, [this is positive]. When changes tend to occur in opposite directions, [this is negative]. When there is little correspondence or changes are random, [this is nonexistant].

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Decomposition

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Delphi method

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Demand forecasting

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Dependent demand

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Distribution channel

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Term
Distributor

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Term
Double smoothing

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Term
Econometric model

A qualitative forecasting technique where the opinions of experts are combined in a series of iterations. The results of each iteration are used to develop the next, so that convergence of the experts' opinions is obtained. See: management estimation, panel consensus.

A method of forecasting where time series data is separated into up to three components—trend, seasonal, and cyclical—where trend includes the general horizontal upward or downward movement over time; seasonal includes a recurring demand pattern such as day of the week, weekly, monthly, or quarterly; and cyclical includes any repeating, nonseasonal pattern. A fourth component is random—that is, data with no pattern. The new forecast is made by projecting the patterns individually determined and then combining them. See: cyclical component, random component, seasonal component, trend component.

Demand that is directly related to or derived from the bill-of-material structure for other items or end products. Such demands are therefore calculated and need not and should not be forecast. A given inventory item may [also have] 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: independent demand.

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

A business that does not manufacture its own products but instead purchases and resells these products. Such a business usually maintains a finished goods inventory. Syn.: wholesaler.

The distribution route, from raw materials through consumption, along which products travel. See: channels of distribution, marketing channel.

A set of equations intended to be used simultaneously to capture the way in which dependent and independent variables are interrelated.

A method of exponential smoothing for trend situations that employs two previously computed averages, the singly and doubly smoothed values, to extrapolate into the future. Syn.: second-order smoothing.

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Exponential smoothing forecast

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Term
Extrinsic forecasting method

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First-order smoothing

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Forecast

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Term
Forecast horizon

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Term
Forecast interval

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Forecasting

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Term
Historical analogy

A forecast method using a correlated leading indicator; for example, estimating furniture sales based on housing starts. [These] forecasts tend to be more useful for large aggregations, such as total company sales, than for individual product sales. Ant: intrinsic forecast method. See: quantitative forecasting technique.

A type of weighted moving average forecasting technique in which past observations are geometrically discounted according to their age. The heaviest weight is assigned to the most recent data. [Data] points are weighted in accordance with an exponential function of their age. The technique makes use of a smoothing constant to apply to the difference between the most recent forecast and the critical sales data, thus avoiding the necessity of carrying historical sales data. The approach can be used for data that exhibits no trend or seasonal patterns. Higher order [...] models can be used for data with either (or both) trend and seasonality.

An estimate of future demand [that] can be constructed using quantitative methods, qualitative methods, or a combination of methods, and it can be based on extrinsic (external) or intrinsic (internal) factors. [Various techniques] attempt to predict one or more of the four components of demand: cyclical, random, seasonal, and trend. Syn.: sales forecast. See: Box-Jenkins model, exponential smoothing forecast, extrinsic forecasting method, intrinsic forecasting method, moving average forecast, qualitative forecasting method, quantitative forecasting method.

A single exponential smoothing; a weighted moving average approach that is applied to forecasting problems where the data does not exhibit significant trend or seasonal patterns. Syn.: single exponential smoothing, single smoothing.

The time unit for which forecasts are prepared, such as week, month, or quarter. Syn.: forecast period.

The period of time into the future for which a forecast is prepared.

A judgmental forecasting technique based on identifying a sales history that is analogous to a present situation, such as the sales history of a similar product, and using that past pattern to predict future sales. See: management estimation.

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

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Independent demand

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Term
Intrinsic forecast method

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Term
Leading indicator

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Term
Least-squares method

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Life cycle analysis

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Mix forecast

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Term
Moving average

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Term
Multiple regression models

A forecast based on internal factors, such as an average of past sales. Ant: extrinsic forecast.

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 method of curve fitting that selects a line of best fit through a plot of data to minimize the sum of squares of the deviations of the given points from the line. See: regression analysis.

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

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].

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.

A form of regression analysis where the model involves more than one independent variable, such as developing a forecast of dishwasher sales based upon housing starts, gross national product, and disposable income.

An arithmetic average of a certain number (n) of the most recent observations. As each new observation is added, the oldest observation is dropped. The value of n (the number of periods to use for the average) reflects responsiveness versus stability in the same way that the choice of smoothing constant does in exponential smoothing. There are two [types...]: simple and weighted. See: simple moving average, weighted moving average.

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Panel consensus

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Pyramid forecasting

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Qualitative forecasting techniques

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Quantitative forecasting techniques

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Regression analysis

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Seasonal index

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Seasonality

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Term
Second-order smoothing

A forecasting technique that enables management to review and adjust forecasts made at an aggregate level and to keep lower-level forecasts in balance. The approach combines the stability of aggregate forecasts and the application of management judgment with the need to forecast many end items within the constraints of an aggregate forecast or sales plan. The procedure begins with the roll up (aggregation) of item forecasts into forecasts by product group. The management team establishes a (new) forecast for the product group. The value is then forced down (disaggregation) to individual item forecasts so they are consistent with the aggregate plan. See: management estimation, planning bill of material, product group forecast.

A judgmental forecasting technique by which a committee, sales force, or group of experts arrives at a sales estimate. See: Delphi method, management estimation.

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

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...] 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.

1) A number used to adjust data to seasonal demand. 2) Manipulations to the buffer size that affect inventory positions by adjusting buffers to follow seasonal patterns. Syn.: seasonal adjustment. See: base series.

A statistical technique for determining the best mathematical expression describing the functional relationship between one response and one or more independent variables. See: least-squares method.

A method of exponential smoothing for trend situations that employs two previously computed averages, the singly and doubly smoothed values, to extrapolate into the future. Syn.: double smoothing.

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.

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Single exponential smoothing

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Term
Smoothing constant

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Time bucket

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Time series analysis

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Time series forecasting

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Transaction channel

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Trend

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Weighted moving average

In exponential smoothing, the weighting factor that is applied to the most recent demand, observation, or error. In this case, the error is defined as the difference between actual demand and the forecast for the most recent period. The weighting factor is represented by the symbol α. Theoretically, the range of α is 0.0 to 1. Syn.: alpha factor, smoothing factor.

A weighted moving average approach that is applied to forecasting problems where the data does not exhibit significant trend or seasonal patterns. Syn.: first-order smoothing, single smoothing.

Analysis of any variable classified by time in which the values of the variable are functions of the time periods. Time series analysis is used in forecasting. A time series consists of seasonal, cyclical, trend, and random components. See: cyclical component, random component, seasonal component, trend component.

A number of days of data summarized into a columnar or row-wise display. For example, a weekly [type of this] contains all the relevant data for an entire week [and is] considered to be the largest possible (at least in the near and medium term) to permit effective MRP.

A distribution network that deals with change of ownership of goods and services including the activities of negotiation, selling, and contracting.

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

An averaging technique in which the data to be averaged is not uniformly weighted but is given values according to its importance. See: moving average, simple moving average.

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