Module 6
Section A: Inventory Planning

Term
ABC classification

Module 6
Section A: Inventory Planning

Term
Aggregate inventory management

Module 6
Section A: Inventory Planning

Term
Anticipation inventories

Module 6
Section A: Inventory Planning

Term
Cycle stock

Module 6
Section A: Inventory Planning

Term
Decoupling

Module 6
Section A: Inventory Planning

Term
Decoupling inventory

Module 6
Section A: Inventory Planning

Term
Distressed goods

Module 6
Section A: Inventory Planning

Term
Distribution inventory

Establishing the overall level (dollar value) of inventory desired and implementing controls to achieve this goal.

The classification of a group of items in decreasing order of annual dollar volume (price multiplied by projected volume) or other criteria. This array is then split into three classes, called A, B, and C. The A group usually represents 10 percent to 20 percent by number of items and 50 percent to 70 percent by projected dollar volume. The next grouping, B, usually represents about 20 percent of the items and about 20 percent of the dollar volume. The C class contains about 50 percent of the items and represents about 10 percent to 30 percent of the dollar volume. The ABC principle states that effort and money can be saved through applying looser controls to the low-dollar-volume class items than to the high-dollar-volume class items. The ABC principle is applicable to inventories, purchasing, and sales. Syns.: ABC analysis, distribution by value. See: 80-20 rule, classification, Pareto analysis, Pareto's law.

The amount of inventory maintained to fulfill demand during an order cycle. The cycle stock depletes gradually as customer orders are fulfilled and is replenished cyclically when orders from suppliers are received. Syn.: cycle inventory. See: lot-size inventory.

Additional inventory above basic stocking levels to cover projected trends of increasing sales, planned sales promotion programs, seasonal fluctuations, plant shutdowns, and vacations.

An amount of inventory maintained between entities in a manufacturing or distribution network to create independence between processes or entities. The objective of decoupling inventory is to disconnect the rate of use from the rate of supply of the item. See: buffer.

Creating independence between supply and use of material. The process commonly denotes allocating inventory between operations so that fluctuations in the production rate of the supplying operation do not constrain the production or use rates of the next operation.

Inventory, usually spare parts and finished goods, located in the distribution system (e.g., in warehouses or in transit between warehouses and the consumer).

Products that are damaged or close to their expiration date and cannot be sold at full price. See: deterioration.

Module 6
Section A: Inventory Planning

Term
Excess inventory

Module 6
Section A: Inventory Planning

Term
Finished goods inventory

Module 6
Section A: Inventory Planning

Term
Floor stock

Module 6
Section A: Inventory Planning

Term
Fluctuation inventory

Module 6
Section A: Inventory Planning

Term
Hedge inventory

Module 6
Section A: Inventory Planning

Term
In-transit inventory

Module 6
Section A: Inventory Planning

Term
Inactive inventory

Module 6
Section A: Inventory Planning

Term
Inventory

The on-hand stock of items on which all manufacturing operations, including final testing, have been completed.

Any inventory that exceeds the minimum amount necessary to achieve the desired throughput rate at the constraint or that exceeds the minimum amount necessary to achieve the desired due date performance. Total inventory = productive inventory + protective inventory + excess inventory.

Inventory that is carried as a cushion to protect against temporary variations in supply and demand. Syn.: fluctuation stock. See: inventory buffer.

An inventory of inexpensive production parts from which production workers can draw without requisitions. Syn.: bench stock, expensed stock.

Material moving between two or more locations, usually separated geographically (e.g., finished goods being shipped from a plant to a distribution center (DC)).

A form of inventory buildup to buffer against some event that may not happen. Hedge inventory planning involves speculation related to potential labor strikes, price increases, unsettled governments, and events that could severely impair a company's strategic initiatives. Risk and consequences are unusually high, and top management approval is often required.

Items or stock used to support production (raw materials and work in process (WIP) items), supporting activities (maintenance, repair, and operating supplies), and customer service (finished goods and spare parts). Demand for inventory may be dependent or independent. Inventory functions are anticipation, hedge, cycle (lot size), fluctuation (safety, buffer, or reserve), transportation (pipeline), and service parts. Total inventory value is represented as a current asset on an organization's balance sheet.

1) Stock designated as in excess of consumption within a defined period. 2) Stocks of items that have not been used for a defined period.

Module 6
Section A: Inventory Planning

Term
Inventory buffer

Module 6
Section A: Inventory Planning

Term
Inventory control

Module 6
Section A: Inventory Planning

Term
Inventory investment

Module 6
Section A: Inventory Planning

Term
Inventory management

Module 6
Section A: Inventory Planning

Term
Inventory policy

Module 6
Section A: Inventory Planning

Term
Lot-size inventory

Module 6
Section A: Inventory Planning

Term
Maintenance, repair, and operating (MRO) supplies

Module 6
Section A: Inventory Planning

Term
Obsolete inventory

The activities and techniques of maintaining the desired levels of items, whether raw materials, work in process (WIP), or finished products and storing them properly to enable effective tracking and ensure their usable condition. Syn.: material control.

Inventory used to protect the throughput of an operation or the schedule against the negative effects caused by delays in delivery, quality problems, delivery of an incorrect quantity, and so on. Syn.: inventory cushion. See: fluctuation inventory, safety stock.

The area of business management concerned with planning and controlling inventories, such as warehouse and material handling processes.

The monies consumed for inventory assets currently on hand. See: inventory valuation.

Inventory that results whenever quantity price discounts, shipping costs, setup costs, or similar considerations make it more economical to purchase or produce in larger lots than are needed for immediate purposes. See: cycle stock.

A statement of a company's goals and approach to the management of inventories. This includes areas such as stocking levels, asset valuation, ABC classifications, replenishment policies, and review cycles.

Inventory items that have met the obsolescence criteria established by the organization, such as inventory that has been superseded by a new model or otherwise has a lack of demand. Obsolete inventory will never be used or sold at full value. Disposing of the inventory may reduce a company's profit.

Items used in support of general operations and maintenance such as maintenance supplies, spare parts, and consumables used in the manufacturing process and supporting operations. See: nonproduction material.

Module 6
Section A: Inventory Planning

Term
Pareto's law

Module 6
Section A: Inventory Planning

Term
Pipeline stock

Module 6
Section A: Inventory Planning

Term
Raw material

Module 6
Section A: Inventory Planning

Term
Risk pooling

Module 6
Section A: Inventory Planning

Term
Safety stock

Module 6
Section A: Inventory Planning

Term
Scrap

Module 6
Section A: Inventory Planning

Term
Seasonal inventory

Module 6
Section A: Inventory Planning

Term
Semifinished goods

Inventory in the transportation network and the distribution system, including the flow through intermediate stocking points. The flow time through the pipeline has a major effect on the amount of inventory required in the pipeline. Time factors involve order transmission, order processing, scheduling, shipping, transportation, receiving, stocking, review time, and so forth. Syn.: pipeline inventory. See: distribution system, transportation inventory.

A principle first observed by Italian economist Vilfredo Pareto that states that a small percentage of a group accounts for the largest fraction of its impact or value. In ABC classification, for example, 20 percent of the inventory items may constitute 80 percent of the inventory value. See: 80-20 rule, ABC classification.

A method often associated with the management of inventory risk. Manufacturers and retailers that experience high variability in demand for their products can pool together common inventory components associated with a broad family of products to buffer the overall burden of having to deploy inventory for each discrete product.

Purchased items or extracted materials that are converted via the manufacturing process into components and products.

Material outside of specifications and possessing characteristics that make rework impractical.

Stock planned to be in inventory to protect against fluctuations in demand or supply, including uncertainty, forecast errors, long lead times, or supplier shortages. Syns.: buffer stock, reserve stock. See: hedge, inventory buffer.

Products that have been stored in an uncompleted state and are awaiting final operations that will adapt them to different uses or customer specifications.

Inventory built up to smooth production in anticipation of a peak seasonal demand. Syn.: seasonal stock.

Module 6
Section A: Inventory Planning

Term
Service parts

Module 6
Section A: Inventory Planning

Term
Shelf life

Module 6
Section A: Inventory Planning

Term
Transportation inventory

Module 6
Section A: Inventory Planning

Term
Work in process (WIP)

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Absorption costing

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Activity-based cost accounting

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Activity-based management (ABM)

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Actual cost system

The amount of time an item may be held in inventory before it becomes unusable.

Those modules, components, and elements that are planned to be used without modification to replace an original part. Syns.: repair parts, spare parts.

A good or goods in various stages of completion throughout the plant, including all material from raw material that has been released for initial processing up to completely processed material awaiting final inspection and acceptance as finished goods inventory. Many accounting systems also include the value of semi-finished stock and components in this category. Syn.: in-process inventory.

Inventory that is in transit between locations. See: pipeline stock, transit inventory.

A cost accounting system that accumulates costs based on actual activities performed that consume resources and then uses cost drivers to allocate these costs to products or other bases such as customers, markets, or projects. It attempts to allocate overhead costs on a more realistic basis than by only using direct labor or machine hours. See: absorption costing, activity-based costing (ABC).

An approach to inventory valuation in which variable costs and a portion of fixed costs are assigned to each unit of production. The fixed costs are usually allocated to units of output on the basis of direct labor hours, machine hours, or material costs. Syn.: allocation costing. See: activity-based cost accounting, activity-based costing (ABC).

A cost system that collects costs historically as they are applied to production and allocates indirect costs to products based on the specific costs and achieved volume of the products.

The use of activity-based costing (ABC) information about cost pools and drivers, activity analysis, and business processes to identify business strategies; improve product design, manufacturing, and distribution; and remove waste from operations. See: activity-based cost accounting.

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Balance sheet

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Carrying cost

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Cash flow

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Cost accounting

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Cost control

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Cost object driver

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Cost of goods sold (COGS)

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Cost variance

The cost of holding inventory, usually defined as a percentage of the dollar value of inventory per unit of time (generally one year). Carrying cost depends mainly on the cost of capital invested as well as costs of maintaining the inventory, such as taxes and insurance, obsolescence, spoilage, and space occupied. Such costs vary from 10 percent to 35 percent annually, depending on type of industry. Carrying cost is ultimately a policy variable reflecting the opportunity cost of alternative uses for funds invested in inventory. Syn.: holding cost. See: inventory cost.

A financial statement showing the resources owned, the debts owed, and the owner's share of a company at a given point in time. See: funds flow statement, income statement.

The branch of accounting that is concerned with recording and reporting business operating costs. It includes the reporting of costs by departments, activities, and products.

1) The net flow of cash flowing into and out of the business over a specified period of time. Cash flows are commonly classified by the way they were generated. Operating cash flows are generated from the business' common operations. Investing cash flows are generated from investing activities such as the purchase or sale of securities or property, plant, and equipment assets. Financing cash flows are generated from the issuance or payment of debt instruments, equity payments, or dividend payments. 2) The net flow of dollars into or out of a proposed project. Also called cash proceeds or cash generated.

In activity-based cost accounting, a numerical measure of the demand placed on one cost object by other cost objects.

Applying procedures that monitor the progress of operations against authorized budgets and taking action to achieve minimal costs.

The difference between a budgeted or projected cost and actual cost.

An accounting classification for determining the amount of direct materials, direct labor, and allocated overhead associated with the product(s) sold during a given period of time. See: cost of sales.

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Days of supply (DOS)

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Direct costs

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Direct labor

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Direct material

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
First in, first out (FIFO)

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Fixed overhead

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
General and administrative (G&A) expense

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Generally accepted accounting principles (GAAP)

1) In traditional cost accounting, variable costs that can be directly attributed to a particular job or operation. Direct material and direct labor are traditionally considered direct costs. 2) In activity-based cost (ABC) accounting, a cost that can specifically be traced and is economically feasible to track to a particular cost object (e.g., the units produced, a production line, a department, a manufacturing plant).

1) Inventory-on-hand metric converted from units to how long the units will last. For example, if there are 2,000 units on hand and the company is using 200 per day, then there are 10 DOS. 2) A financial measure of the value of all inventory in the supply chain divided by the average daily cost of goods sold (COGS) rate.

Material that becomes a part of the final product in measurable quantities.

Labor that is specifically applied to the good being manufactured or used in the performance of the service. Syn.: touch labor.

All manufacturing costs, other than direct labor and direct materials, that exist even if products are not produced. Although fixed overhead is necessary to produce the product, it cannot be directly traced to the final product.

1) A method of inventory valuation for accounting purposes. The assumption is that the oldest inventory (first in) is the first to be used (first out). This may or may not be related to the actual physical movement of specific items. See: average cost system; first-come-first-served (FCFS) rule; last in, first out (LIFO). 2) An inventory management method in a warehouse or distribution center (DC) in which the oldest units remaining in inventory for a given part or product are the first items picked. This method is especially useful in managing the inventory of perishable products to limit product expiration.

Accounting practices that conform to conventions, rules, and procedures that are generally accepted by the accounting profession in the United States. See: International Financial Reporting Standards (IFRS).

The category of expenses on an income statement that includes the costs of general managers, computer systems, research and development, etc.

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Gross margin

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Income statement

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Indirect cost

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Inventory accounting

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Job costing

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Landed cost

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Last in, first out (LIFO)

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Liability

A financial statement summarizing the difference between revenues and expenses (i.e., the net income) over a specific period of time. See: balance sheet, funds flow statement, net income (loss).

The difference between total revenue and the cost of goods sold (COGS), divided by the total revenue. Gross margin is expressed as a percentage. Syn.: gross profit margin.

The branch of accounting dealing with valuing inventory. Inventory may be recorded or valued using either a perpetual or a periodic system. A perpetual inventory record is updated frequently or in real time, while a periodic inventory record is counted or measured at fixed time intervals (e.g., every two weeks or monthly). Both recording systems use the last in, first out; first in, first out; or average costs inventory valuation method.

A cost that is not directly incurred by a particular product unit, job, or operation. Indirect costs typically are allocated to products through the application of overhead rates. Examples of indirect costs include plant utilities, rent, and administrative salaries.

This cost includes the product cost plus the costs of logistics, such as warehousing, transportation, and handling fees, as well as customs and duty fees. See: laid-down cost.

A cost accounting system in which costs are assigned to specific jobs. This system can be used with either actual or standard costs in the manufacturing of distinguishable units or lots of products. Syn.: job order costing.

An accounting or financial term (balance sheet classification of accounts) representing a debt or obligation owed by a company to creditors. Liabilities may have a short-term time horizon, such as accounts payable (AP), or a longer-term obligation, such as mortgage payable or bonds payable. See: asset, balance sheet, debt, owner's equity.

A method of inventory valuation for accounting purposes that assumes that the most recently received (last in) items are the first to be used or sold (first out) for costing purposes, but this behavior does not necessarily match the physical movement of specific items. See: average cost system; first in, first out (FIFO).

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Managerial accounting

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Material usage variance

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Operation costing

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Ordering cost

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Overhead

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Owner's equity

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Process costing

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Product cost

The difference between the planned or standard requirements for materials to produce a given item and the actual quantity used for a particular instance of manufacture.

A branch of accounting that uses techniques such as break-even analysis, cost-volume-profit analysis, make-buy analysis, and others to provide information used in day-to-day decision-making.

The costs an organization incurs each time it places an order. Ordering cost is used in determining order quantities and includes costs related to the administrative work of preparing, releasing, and monitoring orders and paying invoices; the physical handling of goods; receiving and inspection; and setups, as applicable. Syn: order cost. See: acquisition cost, inventory cost.

A hybrid cost accounting system that utilizes a combination of job costing and process costing approaches. It commonly is utilized in environments where units are produced in batches (as in job costing) but also undergo significant continuous processing (as in process costing).

An accounting or financial term (balance sheet classification of accounts) representing the residual claim by the company's owners or shareholders, or both, to the company's assets less its liabilities. See: asset, balance sheet, liability, net assets.

The costs incurred in the operation of a business that cannot be directly related to the individual goods or services produced. These costs, such as utilities, supervision, and maintenance, are grouped in several pools (e.g., department overhead, factory overhead, general overhead) and assigned to units of goods or services by some standard allocation method such as direct labor hours, direct labor dollars, or direct materials dollars. Syn.: burden. See: expense.

Cost allocated by some method to the products being produced. Initially recorded in asset (inventory) accounts, product costs become an expense (cost of sales) when the product is sold.

A cost accounting system in which the costs are collected by time period and averaged over all the units produced during the period. This system can be used with either actual or standard costs in the manufacture of a large number of identical units.

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Profit margin

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Purchase price variance (PPV)

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Specific identification

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Standard cost accounting system

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Standard costs

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Stockout costs

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Total cost of ownership (TCO)

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Transfer pricing

The difference between the amount paid to the supplier and the purchase order (PO) cost or standard cost of that item.

1) The difference between the sales and cost of goods sold (COGS) for an organization, sometimes expressed as a percentage of sales. 2) In traditional accounting, the product selling price minus the direct material, direct labor, and allocated overhead for the product, sometimes expressed as a percentage of selling price.

A cost accounting system that uses cost units determined before production for estimating the cost of an order or product. For management control purposes, the standards are compared with actual costs, and variances are computed.

A method of keeping track of the units of the beginning inventory and the units purchased—that is, specific identification of the purchase cost of each item. This may be done through a coding method or serial number identification.

The costs associated with a stockout. Those costs may include lost sales, backorder costs, expediting, and additional manufacturing and purchasing costs.

The target costs of an operation, process, or product, including direct material, direct labor, and overhead charges.

The pricing of goods or services transferred from one segment of a business to another. See: interplant transfer.

In supply chain management, the total cost of ownership of the supply delivery system is the sum of all the costs associated with every activity of the supply stream. The main insight that TCO offers to the supply chain manager is the understanding that the acquisition cost is often a very small portion of the total cost of ownership.

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Unit cost

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Value added

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Variable costing

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Variable overhead

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Variance

Module 6
Section B: Inventory Costs, Basic Accounting, Costing, and Metrics

Term
Velocity

Module 6
Section C: Inventory Management

Term
Cold chain

Module 6
Section C: Inventory Management

Term
Economic order quantity (EOQ)

1) In accounting, the addition of direct labor, direct material, and allocated overhead assigned at an operation. It is the cost roll-up as a part goes through a manufacturing process to finished inventory. 2) In manufacturing, the actual increase of utility from the viewpoint of the customer as a part is transformed from raw material to finished inventory. It also refers to the contribution made by an operation or a plant to the final usefulness and value of a product, as seen by the customer. The objective is to eliminate all non-value-added activities in producing and providing a good or service.

Total labor, material, and overhead cost for one unit of production (e.g., one part, one gallon or one pound).

All manufacturing costs, other than direct labor and direct materials, that vary directly with production volume. Variable overhead is necessary to produce the product but cannot be directly assigned to a specific product.

An inventory valuation method in which only variable production costs are applied to the product; fixed factory overhead is not assigned to the product. Traditionally, variable production costs are direct labor, direct material, and variable overhead costs. Variable costing can be helpful for internal management analysis but is not widely accepted for external financial reporting. For inventory order quantity purposes, however, the unit costs must include both the variable and allocated fixed costs to be compatible with the other terms in the order quantity formula. For make-or-buy decisions, variable costing should be used rather than full absorption costing. Syn.: direct costing.

1) The rate of change of an item with respect to time. See: inventory turnover, lead time. 2) In supply chain management, a term used to indicate the relative speed of all transactions, collectively, within a supply chain community. A maximum velocity is most desirable because it indicates higher asset turnover for stockholders and faster order-to-delivery response for customers.

1) The difference between the expected (budgeted or planned) value and the actual value. 2) In statistics, a measurement of dispersion of data. See: estimate of error.

A type of fixed order quantity (FOQ) model that determines the amount of an item to be purchased or manufactured at one time. The intent is to minimize the combined costs of acquiring and carrying inventory. The basic formula is: quantity = $\sqrt{(2AS/iC)}$ where A = annual usage in units, S = ordering costs in dollars, i = annual inventory carrying cost rate as a decimal, and C = unit cost. Syns.: economic lot size, minimum cost order quantity. See: total cost curve.

The storage and transfer of temperature-controlled products. Industries in the cold chain include food and agriculture, pharmaceuticals, and chemicals.

Module 6
Section C: Inventory Management

Term
Fixed order interval inventory model

Module 6
Section C: Inventory Management

Term
Fixed order period system

Module 6
Section C: Inventory Management

Term
Hazardous materials

Module 6
Section C: Inventory Management

Term
Hazardous waste

Module 6
Section C: Inventory Management

Term
Inventory ordering system

Module 6
Section C: Inventory Management

Term
Lot size

Module 6
Section C: Inventory Management

Term
Lot-for-lot (L4L)

Module 6
Section C: Inventory Management

Term
Maintenance, repair, and overhaul (MRO)

A method of inventory planning that measures actual inventory levels at regular intervals of time. A check of inventory levels is performed and an order placed if needed. Often the quantity ordered varies from period to period as inventory is restored to a predetermined level. See: fixed order quantity (FOQ), min-max system, period order quantity (POQ).

An independent demand, periodic-review item management model in which an order is placed at fixed intervals (such as weekly, biweekly, or monthly). The order quantity is variable and replaces the items consumed during the current time period to return the inventory to the target inventory level. The target inventory level must be large enough to cover the maximum expected demand during the lead time plus the length of the review interval. Syns.: fixed-interval order system, periodic review system, time-based order system. See: fixed order quantity (FOQ) inventory model, hybrid inventory system, min-max system, optional replenishment model.

Waste, such as chemicals, nuclear materials, or toxic substances, that is hazardous to humans, animals, or the environment and requires special handling and disposal procedures.

Any material that a country's relevant government agency has classified as a risk to human, animal, or environmental health or to property—either on its own or due to interaction with other elements. A government's transportation authority may allow transportation only when proper permits and safety precautions are implemented. Similarly, a government may regulate or supervise hazardous material disposal. Categories include explosives, flammable or corrosive liquids or gases, biohazards, and radioactive materials. Syn.: hazmat.

The amount of a particular item that is ordered from a manufacturing facility or a supplier or is issued as a standard quantity to the production process. Syn.: order quantity.

An inventory model for the replenishment of inventory. Independent demand inventory ordering systems include fixed reorder cycle, fixed reorder inventory model, optional replenishment, and hybrid models, among others. Dependent demand inventory ordering systems include material requirements planning, kanban, and drum-buffer-rope.

All activities designed to ensure that an item or piece of equipment can continue to perform its required functions reliably. This often involves either repairing or remanufacturing the item to achieve the desired level of performance. MRO is prominent in the aviation industry, but it can also be applied in a general remanufacturing context.

A lot-sizing technique that generates planned orders in quantities equal to the net requirements in each period. See: discrete order quantity.

Module 6
Section C: Inventory Management

Term
Mean time between failures (MTBF)

Module 6
Section C: Inventory Management

Term
Mean time to failure (MTTF)

Module 6
Section C: Inventory Management

Term
Mean time to repair (MTTR)

Module 6
Section C: Inventory Management

Term
Min-max system

Module 6
Section C: Inventory Management

Term
On-time schedule performance

Module 6
Section C: Inventory Management

Term
Order point

Module 6
Section C: Inventory Management

Term
Order point system

Module 6
Section C: Inventory Management

Term
Period order quantity (POQ)

Average time for failure of a nonrepairable product (expected life) or average time to first failure of a repairable product. See: reliability.

The predicted elapsed time between inherent failures of a mechanical or electronic system during normal system operation. MTBF is calculated by dividing the total operational time by the number of failures that occur during that time. This metric must meet design, legal, quality, and customer requirements.

An order point replenishment system in which the minimum (min) is the order point, and the maximum (max) is the order up to inventory level. The order quantity is variable and is the difference between the max and the sum of available and on-order inventory. An order is recommended when the sum of the available and on-order inventory is at or below the min. See: fixed order interval inventory model, fixed order period system, fixed order quantity (FOQ).

The average time that it takes to repair a product. MTTR is computed by dividing the total repair time by the number of repairs conducted during that time.

A set inventory level where, if the total stock on hand plus on order falls to or below that point, action is taken to replenish the stock. The order point is normally calculated as forecasted usage during the replenishment lead time plus safety stock. Syns.: reorder point (ROP), statistical order point, trigger level. See: fixed order quantity (FOQ) inventory model.

A measure (percentage) of meeting the customer's originally negotiated requested delivery date. Performance can be expressed as a percentage based on the number of orders, line items, or dollar value shipped on time.

A lot-sizing technique under which the lot size is equal to the net requirements for a given number of periods (e.g., weeks into the future). The number of periods to order is variable, each order size equalizing the holding costs and the ordering costs for the interval. See: discrete order quantity, dynamic lot sizing, fixed order period system, fixed order quantity (FOQ), fixed-period quantity.

An inventory replenishment system based on the stock on hand plus on order. Syn.: statistical order point system. See: order point, reorder point (ROP), fixed order quantity (FOQ) inventory model, hybrid inventory system.

Module 6
Section C: Inventory Management

Term
Periodic replenishment

Module 6
Section C: Inventory Management

Term
Perpetual inventory record

Module 6
Section C: Inventory Management

Term
Point of sale (POS)

Module 6
Section C: Inventory Management

Term
Reorder quantity

Module 6
Section C: Inventory Management

Term
Replenishment lead time

Module 6
Section C: Inventory Management

Term
Safety data sheet (SDS)

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Term
Safety lead time

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Term
Sawtooth diagram

A computer record or manual document on which each inventory transaction is posted so that a current record of the inventory is maintained.

A method of aggregating requirements to place deliveries of varying quantities at evenly spaced time intervals rather than variably spaced deliveries of equal quantities.

1) In a fixed reorder quantity system of inventory control, the fixed quantity that should be ordered each time the available stock (on-hand plus on-order) falls to or below the reorder point (ROP). 2) In a variable reorder quantity system, the amount ordered from time period to time period varies. Syn.: replenishment order quantity.

The relief of inventory and computation of sales data at the time and place of sale, generally through the use of barcoding or magnetic media and equipment.

A document that is part of the materials information system and accompanies the product. It was formerly referred to as the manufacturing safety data sheet. The document is prepared by the manufacturer and provides information regarding the safety and chemical properties to downstream users and, if necessary, regarding the long-term storage, handling, and disposal of the product. Among other factors, the SDS describes: the hazardous components of a product; how to treat leaks, spills, and fires; and how to treat improper human contact with the product. Syn.: material safety data sheet (MSDS).

The total period of time that elapses from the moment it is determined that a product should be reordered until the product is back on the shelf available for use. Syn.: reorder cycle.

A quantity-versus-time graphic representation of the order point or order quantity inventory system showing inventory being received and then used up and reordered.

An element of time added to normal lead time to protect against fluctuations in lead time so that an order can be completed before its real need date. When used, the material requirements planning (MRP) system, in offsetting for lead time, will plan both order release and order completion for earlier dates than it would otherwise. Syns.: protection time, safety time.

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Term
Service level

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Term
Service-level agreement (SLA)

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Term
Stockout percentage

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Term
Two-bin inventory system

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Term
Visual review system

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Section D: Inventory Control

Term
Cut-off control

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Section D: Inventory Control

Term
Cycle counting

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Term
Electronic commerce (e-commerce)

A document that represents the terms of performance for organic support between a service provider and a customer. The agreement describes the service, documents service level targets, and specifies the responsibilities of the information technology (IT) service provider and the customer. A single agreement may cover multiple services or multiple customers.

A measure (usually expressed as a percentage) of satisfying demand through inventory or by the current production schedule in time to satisfy the customers' requested delivery dates and quantities. In a make-to-stock (MTS) environment, service level is sometimes calculated as the percentage of orders picked complete from stock upon receipt of the customer order, the percentage of line items picked complete, or the percentage of total dollar demand picked complete. In make-to-order (MTO) and design-to-order (DTO) environments, service level is the percentage of times the customer-requested or acknowledged date was met by shipping complete product quantities. Syns.: level of service, measure of service. See: cycle service level.

A type of fixed-order system in which inventory is carried in two bins. A replenishment quantity is ordered when the first bin (working) is empty. During the replenishment lead time, material is used from the second bin. When the material is received, the second bin (which contains a quantity to cover demand during lead time plus some safety stock) is refilled, and the excess is put into the working bin. At this time, stock is drawn from the first bin until it is again exhausted. This term also is used to loosely describe any fixed-order system even when physical bins do not exist. Syn.: bin reserve system. See: visual review system.

A measure of the effectiveness with which a company responds to actual demand or requirements. The stockout percentage can be a comparison of total orders containing a stockout with total orders or of line items incurring stockouts with total line items ordered during a period. One formula is stockout percentage = (1 – customer service ratio) × 100 percent. Ant.: customer service ratio.

A procedure for synchronizing cycle counting and transaction processing.

A simple inventory control system in which the inventory reordering is based on actually looking at the amount of inventory on hand. This is usually used for low-value items, such as nuts and bolts. See: two-bin inventory system.

The use of computer and telecommunication technologies to conduct business via electronic transfer of data, documents, and funds. See: electronic market.

An inventory accuracy audit technique in which inventory is counted on a cyclic schedule rather than once a year. A cycle count is usually taken on a regular, defined basis (often more frequently for high-value or fast-moving items and less frequently for low-value or slow-moving items) to identify errors in inventory records quickly and to trigger corrective action. Most effective cycle counting systems require the counting of a certain number of items every workday, with each item counted at a prescribed frequency. See: count frequency, inventory cycle counting.

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Section D: Inventory Control

Term
Inventory accuracy

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Term
Inventory adjustment

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Term
Inventory shrinkage

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Term
Obsolescence

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Term
Periodic inventory

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Term
Physical inventory

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Section D: Inventory Control

Term
Record accuracy

A change made to an inventory record to correct the balance in order to bring it in line with actual physical inventory balances. The adjustment either increases or decreases the item record on-hand balance.

A metric that compares the actual on-hand quantity with the recorded balance in the system. This metric usually is measured as the percent of items with inventory levels that fall within an allowable tolerance. Target values usually are 95 percent to 99 percent, depending on the value of the item. For logistics operations, it is sometimes measured as the number of storage locations with errors divided by the total number of storage locations.

1) The condition of being out of date. 2) A loss of value occasioned by new developments that place the older property at a competitive disadvantage. 3) A factor in depreciation. 4) A decrease in the value of an asset brought about by the development of new and more economical methods, processes, or machinery. 5) The loss of usefulness or worth of a product or facility as a result of the appearance of better or more economical products, methods, or facilities. See: deterioration.

Reductions of actual quantities of items in stock, in process, or in transit. The loss may be caused by scrap, theft, deterioration, evaporation, and so forth. Syn.: shrinkage.

1) The actual inventory itself. 2) The determination of inventory quantity by actual count. Physical inventories can be taken on a continuous, periodic, or annual basis. Syns.: annual inventory count, annual physical inventory. See: periodic inventory.

A physical inventory taken at some recurring interval (e.g., monthly, quarterly, or annual physical inventory). See: physical inventory.

A measure of the conformity of recorded values in a bookkeeping system to the actual values. An example of this is the on-hand balance of an item maintained in a computer record relative to the actual on-hand balance of the items in the stockroom.