Fold each printed sheet in half lengthwise. The left side of the document will list the term and the right side will list the definition. Tape or staple the open edges of your flashcards. Cut out your flashcards on the solid lines indicated and fold them on the dotted lines.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Master scheduling

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The process where the master schedule is generated and reviewed and adjustments are made to the master production schedule to ensure consistency with the production plan. The master production schedule (the line on the grid) is the primary input to the material requirements plan. The sum of the master production schedules for the items within the product family must equal the production plan for that family.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Master scheduler

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Often the job title of the person charged with the responsibility of managing, establishing, reviewing, and maintaining a master schedule for select items. Ideally, the person should have substantial product, plant, process, and market knowledge because the consequences of this individual's actions often have a great impact on customer service, material, and capacity planning. See: master production schedule.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Master schedule

APICS CPIM Learning System © 2023

A format that includes time periods (dates), the forecast, customer orders, projected available balance, available-to-promise, and the master production schedule. 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.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Master production schedule (MPS)

A line on the master schedule grid that reflects the anticipated build schedule for those items assigned to the master scheduler. The master scheduler maintains this schedule, and in turn, it becomes a set of planning numbers that drives material requirements planning. It represents what the company plans to produce, expressed in specific configurations, quantities, and dates. [This] is not a sales item forecast that represents a statement of demand. It must take 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 schedule.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Scheduling

The act of creating a schedule, such as a shipping schedule, master production schedule, maintenance schedule, or supplier schedule.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Master schedule item

A part number selected to be planned by the master scheduler. [It] is deemed critical in its impact on lower-level components or resources such as skilled labor, key machines, or dollars. Therefore, the master scheduler, not the computer, maintains the plan for these items. [This] may be an end item, a component, a pseudo number, or a planning bill of material.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Multilevel master schedule

A master scheduling technique that allows any level in an end item's bill of material to be master scheduled. To accomplish this, MPS items must receive requirements from independent and dependent demand sources. See: two-level master schedule.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Two-level master schedule

A master-scheduling approach in which a planning bill of material is used to master schedule an end product or family, along with selected key features (options and accessories). See: hedge, multilevel master schedule, production forecast.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Overstated master production schedule

A schedule that includes either past due quantities or quantities that are greater than the ability to produce, given current capacity and material availability. [This] should be made feasible before MRP is run.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Product load profile

A listing of the required capacity and key resources needed to manufacture one unit of a selected item or family. The resource requirements are further defined by a lead-time offset to predict the impact of the product on the load of the key resources by specific time period. [This] can be used for rough-cut capacity planning to calculate the approximate capacity requirements of the master production schedule. See: bill of resources, resource profile, rough-cut capacity planning.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Materials management

The grouping of management functions supporting the complete cycle of material flow, from the purchase and internal control of production materials to the planning and control of work in process to the warehousing, shipping, and distribution of the finished product.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Product structure

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The sequence of operations that components follow during their manufacture into a product. A typical product structure shows raw material converted into fabricated components, components put together to make subassemblies, subassemblies going into assemblies, and so forth.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Priority

APICS CPIM Learning System © 2023

In a general sense, the relative importance of jobs (i.e., the sequence in which jobs should be worked on). It is a separate concept from capacity.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Product configuration catalog

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A listing of all upper-level configurations contained in an end-item product family. Its application is most useful when there are multiple end-item configurations in the same product family. Used to provide a transition linkage between the end-item level and a two-level master production schedule. Also provides a correlation between the various units of upper level product definition.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Planning bill of material

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An artificial grouping of items or events in bill-of-material format used to facilitate master scheduling and material planning. It may include the historical average of demand expressed as a percentage of total demand for all options within a feature or for a specific end item within a product [family...] Syn: planning bill. See: hedge, option overplanning, production forecast, pseudo bill of material.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Feature

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A distinctive characteristic of a good or service. The characteristic is provided by an option, accessory, or attachment. For example, in ordering a new car, the customer must specify an engine type and size (option), but need not necessarily select an air conditioner (attachment). See: accessory, attachment, option.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Production forecast

APICS CPIM Learning System © 2023

A projected level of customer demand for a feature (option, accessory, etc.) of a make-to-order or an assemble-to-order product. Used in two-level master scheduling, it is calculated by netting customer backlog against an overall family or product line master production schedule and then factoring this product's available-to-promise by the option percentage in a planning bill of material. See: assemble-to-order, planning bill of material, two-level master schedule.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Option overplanning

APICS CPIM Learning System © 2023

Typically, scheduling extra quantities of a master schedule option greater than the expected sales for that option to protect against unanticipated demand. This schedule quantity may be planned only in the period where new customer orders are currently being accepted, typically just after the demand time fence. This technique is usually used on the second level of a two-level master scheduling approach to create a situation where more of the individual options than of the overall family are available. The historical average of demand for an item is quantified in a planning bill of [material. This concept] is accomplished by increasing this percentage to allow for demands greater than forecast. See: demand time fence, hedge, planning bill of material.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Common parts bill of material

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A type of planning bill that groups common components for a product or family of products into one bill of material, structured to a pseudoparent item number. Syn: common parts bill.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Modular bill of material

A type of planning bill that is arranged in product modules or options. It is often used in companies where the product has many optional features (e.g., assemble-to-order companies such as automobile manufacturers). See: pseudo bill of material.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Super bill of material

A type of planning bill, located at the top level in the structure, that ties together various modular bills (and possibly a common parts bill) to define an entire product or product family. The quantity per relationship of [this bill] to its modules represents the forecasted percentage of demand of each module. The master-scheduled quantities of [this bill] explode to create requirements for the modules that also are master scheduled. See: pseudo bill of material.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Projected available balance (PAB)

An inventory balance projected into the future. It is the running sum of on-hand inventory minus requirements plus scheduled receipts and planned orders. Syn: projected available inventory.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Batch

1) A quantity scheduled to be produced or in production. See: process batch, transfer batch. 2) For discrete products, [a quantity] planned to be the standard batch quantity, but during production, the standard batch quantity may be broken into smaller lots. See: lot [, standard batch quantity]. 3) In nondiscrete products, [...] a quantity that is planned to be produced in a given time period based on a formula or recipe that often is developed to produce a given number of end items. 4) A type of manufacturing process used to produce items with similar designs; it also may cover a wide range of order volumes. Typically, items ordered are of a repeat nature, and production may be for a specific customer order or for stock replenishment. See: project manufacturing.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Lot

A quantity produced together and sharing the same production costs and specifications. See: batch.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Pegging

In MRP and MPS, the ability to identify for a given item the sources of its gross requirements and/or allocations. [This] can be thought of as active where-used information. See: requirements traceability.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Rough-cut capacity planning (RCCP)

The process of converting the master production schedule into requirements for key resources often including labor, machinery, warehouse space, suppliers' capabilities, and, in some cases, money. Comparison to available or demonstrated capacity is usually done for each key resource. This comparison assists the master scheduler in establishing a feasible master production schedule. Three approaches to performing [this] are the bill of labor (resources, capacity) approach, the capacity planning using overall factors approach, and the resource profile approach. See: bill of resources, capacity planning, capacity planning using overall factors, product load profile, resource profile.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Capacity planning using overall factors (CPOF)

A rough-cut capacity planning technique. The master schedule items and quantities are multiplied by the total time required to build each item to provide the total number of hours to produce the schedule. Historical work center percentages are then applied to the total number of hours to provide an estimate of the hours per work center to support the master schedule. This technique eliminates the need for engineered time standards. Syn: overall factors. See: bill of resources, capacity planning, resource profile, rough-cut capacity planning.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Bill of labor

A structured listing of all labor requirements for the fabrication, assembly, and testing of a parent item. See: bill of resources, capacity bill procedure, routing.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Resource profile

The standard hours of load placed on a resource by time period. Production lead-time data is taken into account to provide time-phased projections of the capacity requirements for individual production facilities. See: bill of resources, capacity planning using overall factors, product load profile, rough-cut capacity planning.

Module 4

Section A: Creating and Validating the Master Schedule

Term

Work center

A specific production area, consisting of one or more people and/or machines with similar capabilities, that can be considered as one unit for purposes of capacity requirements planning and detailed scheduling. Syn: load center.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Cumulative lead time

The longest planned length of time to accomplish the activity in question. It is found by reviewing the lead time for each bill of material path below the item; [this term is defined by whichever path adds up to the greatest number]. Syn: aggregate lead time, combined lead time, composite lead time, critical path lead time, stacked lead time. See: planning horizon, planning time fence.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Time fence

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A policy or guideline established to note where various restrictions or changes in operating procedures take place. For example, changes to the master production schedule can be accomplished easily beyond the cumulative lead time, while changes inside the cumulative lead time become increasingly more difficult to a point where changes should be resisted. [It] can be used to define these points. See: demand time fence, hedge, planning time fence.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Demand time fence (DTF)

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1) That point in time inside of which the forecast is no longer included in total demand and projected available inventory calculations; inside this point, only customer orders are considered. Beyond this point, total demand is a combination of actual orders and forecasts, depending on the forecast consumption technique chosen. 2) In some contexts, [this] may correspond to that point in the future inside which changes to the master schedule must be approved by an authority higher than the master scheduler. Note, however, that customer orders may still be promised inside [this] without higher authority approval if there are quantities available-to-promise (ATP). Beyond [this term], the master scheduler may change the MPS within the limits of established rescheduling rules without the approval of higher authority. See: option overplanning, planning time fence, time fence.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Planning time fence

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A point in time denoted in the planning horizon of the master scheduling process that marks a boundary inside of which changes to the schedule may adversely affect component schedules, capacity plans, customer deliveries, and cost. Outside [of this], customer orders can be booked and changes to the master schedule can be made within the constraints of the production plan. Changes inside [of this] must be made manually by the master scheduler. Syn: planning fence. See: cumulative lead time, demand time fence, firm planned order, planned order, planning horizon, time fence.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Order entry

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The process of accepting and translating what a customer wants into terms used by the manufacturer or distributor. The commitment should be based on the available-to-promise (ATP) line in the master schedule. This can be as simple as creating shipping documents for finished goods in a make-to-stock environment, or it might be a more complicated series of activities, including design efforts for make-to-order products. See: master schedule, order service.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Order promising

The process of making a delivery commitment (i.e., answering the question, “When can you ship?”). For make-to-order products, this usually involves a check of uncommitted material and availability of capacity, often as represented by the master schedule available-to-promise. Syn: customer order promising, order dating. See: available-to-promise, order service.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Available-to-promise (ATP)

1) In operations, the uncommitted portion of a company’s inventory and planned production maintained in the master schedule to support customer-order promising. [This] quantity is the uncommitted inventory balance in the first period and is normally calculated for each period in which an MPS receipt is scheduled. In the first period, [this] includes on-hand inventory less customer orders that are due and overdue. Three methods of calculation are used: discrete [...], cumulative [...] with look-ahead, and cumulative [...] without look-ahead. (2) In logistics, the quantity of a finished good that is or will be available to commit to a customer order based on the customer’s required ship date. To accommodate deliveries on future dates, [this] is usually time-phased to include anticipated purchases or production receipts. See: discrete available-to-promise, cumulative available-to-promise.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Available inventory

The on-hand inventory balance minus allocations, reservations, backorders, and (usually) quantities held for quality problems. Often called beginning available balance. Syn: beginning available balance, net inventory.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

On-hand balance

The quantity shown in the inventory records as being physically in stock.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Discrete available-to-promise

APICS CPIM Learning System © 2023

A calculation based on the available-to-promise figure in the master schedule. For the first period, the ATP is the sum of the beginning inventory plus the MPS quantity minus backlog for all periods until the item is master scheduled again. For all other periods, if a quantity has been scheduled for that time period, then the ATP is this quantity minus all customer commitments for this and other periods until another quantity is scheduled in the MPS. For those periods where the quantity scheduled is zero, the ATP is zero (even if deliveries have been promised). The promised customer commitments are accumulated and shown in the period where the item was most recently scheduled. Syn: incremental available-to-promise. See: available-to-promise.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Cumulative available-to-promise

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A calculation based on the available-to-promise (ATP) figure in the master schedule. Two methods of computing [this] are used, with and without look-ahead calculation. [With look-ahead, this] equals the ATP from the previous period plus the MPS of the period minus the backlog of the period minus the sum of the differences between the backlogs and MPSs of all future periods until, but not to include, the period where point production exceeds the backlogs. [Without look-ahead, this] equals the ATP from the previous period plus the MPS, minus the backlog in the period being considered. See: available-to-promise.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Hedge

APICS CPIM Learning System © 2023

1) An action taken in an attempt to shield the company from an uncertain event such as a strike, price increase, or currency reevaluation. 2) In master scheduling, a scheduled quantity to protect against uncertainty in demand or supply. [This] is similar to safety stock, except that [this] has the dimension of timing as well as amount. [A volume or market type of this] is carried at the master schedule or production plan level. The master scheduler plans excess quantities over and above the demand quantities in given periods beyond some time fence such that, if [this] is not needed, it can be rolled forward before major resources must be committed to produce [it] and put it in inventory. [A product mix type of this] is an approach where several interrelated optional items are overplanned. Sometimes, using a planning bill, the sum of the percent mix can exceed 100 percent by a defined amount, thus triggering additional [planning for this term]. 3) In purchasing, any purchase or sale transaction having as its purpose the elimination of the negative aspects of price fluctuations. See: market hedge, option overplanning, planning bill of material, safety stock, time fence, two-level master.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Volume hedge

APICS CPIM Learning System © 2023

A [...] hedge [...] carried at the master schedule or production plan level. The master scheduler plans excess quantities over and above the demand quantities in given periods beyond some time fence such that, if the hedge is not needed, it can be rolled forward before major resources must be committed to produce the hedge and put it in inventory.

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Product mix hedge

APICS CPIM Learning System © 2023

[An] approach where several interrelated optional items are overplanned. Sometimes, using a planning bill, the sum of the percent mix can exceed 100 percent by a defined amount, thus triggering additional hedge planning.

Module 4

Section C: Material Requirements Planning

Term

Material requirements planning (MRP)

APICS CPIM Learning System © 2023

A set of techniques that uses bill of material data, inventory data, and the master production schedule 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. [When] time-phased, [this concept] begins with the items listed on the MPS and determines (1) the quantity of all components and materials required to fabricate those items and (2) the date that the components and material are required. [Also when] time-phased, [this] is accomplished by exploding the bill of material, adjusting for inventory quantities on hand or on order, and offsetting the net requirements by the appropriate lead times.

Module 4

Section C: Material Requirements Planning

Term

Bill of material (BOM)

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1) A listing of all the subassemblies, intermediates, parts, and raw materials that go into a parent assembly, showing the quantity of each required to make an assembly. It is used in conjunction with the master production schedule to determine the items for which purchase requisitions and production orders must be released. A variety of display formats [exist] for [this], including the single-level [...], indented [...], modular (planning) [...], transient [...], matrix [...], and costed[...]. 2) A list of all the materials needed by a contract manufacturer to make one production run of a product's piece parts/components for its customers. [It] may also be called the formula, recipe, or ingredients list in certain process industries.

Module 4

Section C: Material Requirements Planning

Term

Item master record

APICS CPIM Learning System © 2023

The "master" [information] for an item. Typically, it contains identifying and descriptive data and control values (lead times, lot sizes, etc.) and may contain data on inventory status, requirements, planned orders, and costs. [It is] linked by bill-of-material records (or product structure records), thus defining the bill of material.

Module 4

Section C: Material Requirements Planning

Term

Parent item

The item produced from one or more components. Syn: parent.

Module 4

Section C: Material Requirements Planning

Term

Single-level bill of material

A display of components that are directly used in a parent item. It shows only the relationships one level down.

Module 4

Section C: Material Requirements Planning

Term

Multilevel bill of material

A display of all the components directly or indirectly used in a parent, together with the quantity required of each component. If a component is a subassembly, blend, intermediate, etc., all its components and all their components also will be exhibited, down to purchased parts and raw materials.

Module 4

Section C: Material Requirements Planning

Term

Indented bill of material

A form of multilevel bill of material. It exhibits the highest-level parents closest to the left margin, and all the components going into these parents are shown indented toward the right. All subsequent levels of components are indented farther to the right. If a component is used in more than one parent within a given product structure, it will appear more than once, under every subassembly in which it is used.

Module 4

Section C: Material Requirements Planning

Term

Summarized bill of material

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A form of multilevel bill of material that lists all the parts and their quantities required in a given product structure. Unlike the indented bill of material, it does not list the levels of manufacture and lists a component only once for the total quantity used.

Module 4

Section C: Material Requirements Planning

Term

Phantom bill of material

APICS CPIM Learning System © 2023

A bill-of-material coding and structuring technique used primarily for transient (nonstocked) subassemblies. For the transient item, lead time is set to zero and the order quantity to lot-for-lot. [This term] represents an item that is physically built but rarely stocked before being used in the next step or level of manufacturing. This permits MRP logic to drive requirements straight through the phantom item to its components, although the MRP system usually retains its ability to net against any occasional inventories of the item. This technique also facilitates the use of common bills of material for engineering and manufacturing. Syn: blowthrough, transient bill of material. See: pseudo bill of material.

Module 4

Section C: Material Requirements Planning

Term

Allocation

APICS CPIM Learning System © 2023

1) The classification of resources or item quantities that have been assigned to specific orders but have not yet been released from the stockroom to production. It is an “uncashed” stockroom requisition. 2) A process used to distribute material in short supply. Syn: assignment. See: reservation.

Module 4

Section C: Material Requirements Planning

Term

Parts requisition

APICS CPIM Learning System © 2023

An authorization that identifies the item and quantity required to be withdrawn from an inventory. Syn: requisition. See: purchase requisition.

Module 4

Section C: Material Requirements Planning

Term

Firm planned order (FPO)

A planned order that can be frozen in quantity and time. The computer is not allowed to change it automatically; this is the responsibility of the planner in charge of the item that is being planned. This technique can aid planners working with MRP systems to respond to material and capacity problems by [solidifying] selected planned orders. In addition, [these] are the normal method of stating the master production schedule. See: planning time fence.

Module 4

Section C: Material Requirements Planning

Term

Action message

An output of a system that identifies the need for, and the type of action to be taken to correct, a current or potential problem. Examples of [this] in an MRP system include release order, reschedule in, reschedule out, and cancel. Syn: exception message, action report.

Module 4

Section C: Material Requirements Planning

Term

Rescheduling

The process of changing order or operation due dates, usually as a result of their being out of phase with production or customer commitments.

Module 4

Section C: Material Requirements Planning

Term

Bill-of-material explosion

The process of determining component identities, quantities per assembly, and other parent-component relationship data for a parent item. Explosion may be single level, indented, or summarized.

Module 4

Section C: Material Requirements Planning

Term

Requirements explosion

The process of calculating the demand for the components of a parent item by multiplying the parent item requirements by the component usage quantity specified in the bill of material. Syn: explosion.

Module 4

Section C: Material Requirements Planning

Term

Explode

To perform a bill-of-material explosion.

Module 4

Section C: Material Requirements Planning

Term

Lead-time offset

A technique used in MRP where a planned order receipt in one time period requires the release of that order in an earlier time period based on the lead time for the item. Syn: component lead-time offset, offsetting.

Module 4

Section C: Material Requirements Planning

Term

Planned order receipt

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

Module 4

Section C: Material Requirements Planning

Term

Planned order release

APICS CPIM Learning System © 2023

A row on an MRP table that is derived from planned order receipts by taking the planned receipt quantity and offsetting to the left by the appropriate lead time. See: order release.

Module 4

Section C: Material Requirements Planning

Term

Gross requirement

APICS CPIM Learning System © 2023

The total of independent and dependent demand for a component before the netting of on-hand inventory and scheduled receipts.

Module 4

Section C: Material Requirements Planning

Term

Net requirements

APICS CPIM Learning System © 2023

[In MRP and for a part or an assembly, these] are derived as a result of applying gross requirements and allocations against inventory on hand, scheduled receipts, and safety stock. After being lot-sized and offset for lead time, net requirements become planned orders.

Module 4

Section C: Material Requirements Planning

Term

Scheduled receipt

APICS CPIM Learning System © 2023

An open order that has an assigned due date. See: open order.

Module 4

Section D: CRP and Scheduling

Term

Capacity requirements planning (CRP)

APICS CPIM Learning System © 2023

The function of establishing, measuring, and adjusting limits or levels of capacity. In this context, the term refers to the process of determining in detail the amount of labor and machine resources required to accomplish the tasks of production. Open shop orders and planned orders in the MRP system are input to CRP, which through the use of parts routings and time standards translates these orders into hours of work by work center by time period. Even though rough-cut capacity planning may indicate that sufficient capacity exists to execute the MPS, [this concept] may show that capacity is insufficient during specific time periods. See: capacity planning.

Module 4

Section D: CRP and Scheduling

Term

Gateway work center

APICS CPIM Learning System © 2023

A work center that performs the first operation of a particular routing sequence.

Module 4

Section D: CRP and Scheduling

Term

Infinite loading

APICS CPIM Learning System © 2023

Calculation of the capacity required at work centers in the time periods required regardless of the capacity available to perform this work. Syn: infinite scheduling.

Module 4

Section D: CRP and Scheduling

Term

Finite loading

APICS CPIM Learning System © 2023

Assigning no more work to a work center than the work center can be expected to execute in a given time period. The specific term usually refers to a computer technique that involves calculating shop priority revisions in order to level load operation by operation. Syn: finite scheduling. See: drum-buffer-rope.

Module 4

Section D: CRP and Scheduling

Term

Time standard

APICS CPIM Learning System © 2023

The predetermined times allowed for the performance of a specific job. Often consist of two parts, one for machine setup and one for actual running. Can be developed through observation of the actual work (time study), summation of standard micromotion times (predetermined or synthetic [types of these]), or approximation (historical job times).

Module 4

Section D: CRP and Scheduling

Term

Remedial maintenance

APICS CPIM Learning System © 2023

Unscheduled maintenance performed to return a product or process to a specified performance level after a failure or malfunction.

Module 4

Section D: CRP and Scheduling

Term

Final assembly schedule (FAS)

APICS CPIM Learning System © 2023

A schedule of end items to finish the product for specific customers' orders in a make-to-order or assemble-to-order environment. It is also referred to as the finishing schedule because it may involve operations other than the final assembly; also, it may not involve assembly (e.g., final mixing, cutting, packaging). [This] is prepared after receipt of a customer order as constrained by the availability of material and capacity, and it schedules the operations required to complete the product from the level where it is stocked (or master scheduled) to the end-item level.

Module 4

Section E: Suppliers and Purchasing

Term

Procurement

APICS CPIM Learning System © 2023

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

Module 4

Section E: Suppliers and Purchasing

Term

Purchasing

APICS CPIM Learning System © 2023

The term used in industry and management to denote the function of and the responsibility for procuring materials, supplies, and services.

Module 4

Section E: Suppliers and Purchasing

Term

Physical supply

APICS CPIM Learning System © 2023

The movement and storage of goods from suppliers to manufacturing. [Its cost] is ultimately passed on to the customer.

Module 4

Section E: Suppliers and Purchasing

Term

Supplier

APICS CPIM Learning System © 2023

1) Provider of goods or services. See: vendor.
2) Seller with whom the buyer does business, as opposed to vendor, which is a generic term referring to all sellers in the marketplace.

Module 4

Section E: Suppliers and Purchasing

Term

Responsible procurement

APICS CPIM Learning System © 2023

Assuring the use of ethical sources of goods and services where a firm does business to bring about a positive impact and minimize the negative impact on societies and environments—including reduce, reuse, and recycle of materials. Includes processes for identifying, assessing, and managing the environmental, social, and ethical risk in the supply chain. Syn: environmentally responsible purchasing.

Module 4

Section E: Suppliers and Purchasing

Term

Landed cost

This cost includes the product cost plus the costs of logistics, such as warehousing, transportation, and handling fees.

Module 4

Section E: Suppliers and Purchasing

Term

Total cost of ownership (TCO)

In supply chain management, [this] is the sum of all the costs associated with every activity of the supply stream. The main insight that [this] offers to the supply chain manager is the understanding that the acquisition cost is often a very small portion of [this concept].

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Section E: Suppliers and Purchasing

Term

Supplier relationship management (SRM)

A comprehensive approach to managing an enterprise's interactions with the organizations that supply the goods and services the enterprise uses. The goal of [this] is to streamline and make more effective the processes between an enterprise and its suppliers. [It] is often associated with automating procure-to-pay business processes, evaluating supplier performance, and exchanging information with suppliers. An e-procurement system is often an example of [this type of] family of applications.

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Term

Value analysis

The systematic use of techniques that identify a required function, establish a value for that function, and finally provide that function at the lowest overall cost. Focuses on the functions of an item rather than the methods of producing the present product design.

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Section E: Suppliers and Purchasing

Term

Request for quote (RFQ)

A document used to solicit vendor responses when a product has been selected and price quotations are needed from several vendors.

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Term

Customer-supplier partnership

A long-term relationship between a buyer and a supplier characterized by teamwork and mutual confidence. The supplier is considered an extension of the buyer's organization. The partnership is based on several commitments. The buyer provides long-term contracts and uses fewer suppliers. The supplier implements quality assurance processes so that incoming inspection can be minimized. The supplier also helps the buyer reduce costs and improve product and process designs. Syn: customer partnership. See: outpartnering.

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Section E: Suppliers and Purchasing

Term

Sole-source supplier

The only supplier capable of meeting (usually technical) requirements for an item. See: single-source supplier.

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Term

Single-source supplier

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

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Term

Multisourcing

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

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Term

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. 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 applications perspective, includes automation of requests for quote (RFQ), requests for proposal (RFP), electronic auctioning (e-auction or reverse auction), and contract management processes.

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Term

Tactical buying

The purchasing process focused on transactions and nonstrategic material buying. 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.

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Term

Virtual organization

Short-term alliances between independent organizations in a potentially long-term relationship to design, produce, and distribute a product. Organizations cooperate based on mutual values and act as a single entity to third parties.

Module 4

Section E: Suppliers and Purchasing

Term

Strategic alliance

A relationship formed by two or more organizations that share information (proprietary), participate in joint investments, and develop linked and common processes to increase the performance of both companies. Many organizations form [these] to increase the performance of their common supply chain.

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Section E: Suppliers and Purchasing

Term

Strategic partnerships

Alliances with top supplier and buyer performers to enhance a firm's performance.

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Term

Joint venture

An agreement between two or more firms to risk equity capital to attempt a specific business objective.

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Term

Concurrent engineering

Syn: participative design/engineering.

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Term

Participative design/engineering

A concept that refers to the simultaneous participation of all the functional areas of the firm in the product design activity. Suppliers and customers are often also included. The intent is to enhance the design with the inputs of all the key stakeholders. Such a process should ensure that the final design meets all the needs of the stakeholders and should ensure a product that can be quickly brought to the marketplace while maximizing quality and minimizing costs. Syn: co-design, concurrent design, concurrent engineering, new product development team, parallel engineering, simultaneous design/engineering, simultaneous engineering, team design/ engineering. See: early manufacturing involvement.

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Term

Cross-docking

The concept of packing products on incoming shipments so they can be easily sorted at intermediate warehouses or for outgoing shipments based on final destination. The items are carried from the incoming vehicle docking point to the outgoing vehicle docking point without being stored in inventory at the warehouse. [It] reduces inventory investment and storage space requirements. Syn: direct loading.

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Term

Third-party logistics (3PL)

A buyer and supplier team with a third party that provides product delivery services. This third party may provide added supply chain expertise.

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Term

Critical characteristics

The attributes of a product that must function properly to avoid the failure of the product. Syn: functional requirements.

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Term

Critical-to-quality characteristics (CTQs)

The important and measurable traits of a product or process whose performance targets must be met to satisfy the customer. They adjust improvement efforts to meet consumer requirements. [They also] represent customer expectations for a product.

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Term

First pass yield

The ratio of products that conform to specifications without rework or modification to total input.

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Term

First-article inspection

A quality check on the first component run after a new setup has been completed. Syn: first-piece inspection.

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Term

Average outgoing quality limit (AOQL)

The maximum average outgoing quality over all possible levels of incoming quality for a given acceptance sampling plan and disposal specification.

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Term

Supplier audit

Auditing supplier processes as part of a supplier development system.

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Term

Supplier certification

Certification procedures verifying that a supplier operates, maintains, improves, and documents effective procedures that relate to the customer's requirements. Such requirements can include cost, quality, delivery, flexibility, maintenance, safety, and ISO quality and environmental standards.

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Term

Certified supplier

A status awarded to a supplier that consistently meets predetermined quality, cost, delivery, financial, and count objectives. Incoming inspection may not be required.

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Term

Lean metric

A metric that permits a balanced evaluation and response—quality without sacrificing quantity objectives. The types of metrics are financial, behavioral, and core-process performance.

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Term

Terms and conditions

All the provisions and agreements of a contract.

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Term

Purchase requisition

An authorization to the purchasing department to purchase specified materials in specified quantities within a specified time. See: parts requisition.

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Term

Purchase order

The purchaser’s authorization used to formalize a purchase transaction with a supplier. [When given to a supplier, this] 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.

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Section E: Suppliers and Purchasing

Term

Reverse auction

An internet auction in which suppliers attempt to underbid their competitors. Company identities are known only by the buyer.

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Term

Order processing

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

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Term

Vendor-managed inventory (VMI)

A means of optimizing supply chain performance in which the supplier has access to the customer's inventory data and is responsible for maintaining the inventory level required by the customer. Accomplished by a process in which resupply is performed by the vendor through regularly scheduled reviews of the on-site inventory. The on-site inventory is counted, damaged or outdated goods are removed, and the inventory is restocked to predefined levels. The vendor obtains a receipt for the restocked inventory and accordingly invoices the customer. See: continuous replenishment.

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Term

Consignment

1) A shipment that is handled by a common carrier. 2) The process of a supplier placing goods at a customer location without receiving payment until after the goods are used or sold. See: consigned stocks.

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Section E: Suppliers and Purchasing

Term

Continuous replenishment

A process by which a supplier is notified daily of actual sales or warehouse shipments and commits to replenishing these sales (for example, by size or color) without stockouts and without receiving replenishment orders. The result is a lowering of associated costs and an improvement in inventory turnover. See: rapid replenishment, vendor-managed inventory.

Module 4

Section E: Suppliers and Purchasing

Term

Supplier measurement

The act of measuring the supplier's performance to a contract. Measurements usually cover delivery reliability, lead time, and price. Syn: purchasing performance measurement. See: vendor measurement.

Module 4

Section E: Suppliers and Purchasing

Term

Point-of-use delivery

Direct delivery of material to a specified location on a plant floor near the operation in which it is to be used.

Module 4

Section F: Changes and Product Life Cycle Management

Term

Least total cost

A dynamic lot-sizing technique that calculates the order quantity by comparing the setup (or ordering) costs and the carrying cost for various lot sizes and selects the lot size where these costs are most nearly equal. See: discrete order quantity, dynamic lot sizing.

Module 4

Section F: Changes and Product Life Cycle Management

Term

Part period balancing (PPB)

A dynamic lot-sizing technique that uses the same logic as the least total cost method, but adds a routine called look ahead/look back. When the look ahead/look back feature is used, a lot quantity is calculated, and before it is firmed up, the next or the previous period's demands are evaluated to determine whether it would be economical to include them in the current lot. See: discrete order quantity, dynamic lot sizing.

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Section F: Changes and Product Life Cycle Management

Term

Wagner-Whitin algorithm

A mathematically complex, dynamic lot-sizing technique that evaluates all possible ways of ordering to cover net requirements in each period of the planning horizon to arrive at the theoretically optimum ordering strategy for the entire net requirements schedule. See: discrete order quantity, dynamic lot sizing.

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Section F: Changes and Product Life Cycle Management

Term

Safety lead time

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 MRP system, in offsetting for lead time, will plan both order release and order completion for earlier dates than it would otherwise. Syn: protection time, safety time.

Module 4

Section F: Changes and Product Life Cycle Management

Term

End-of-life management

Planning for the phase-out of one product and the phase-in of a new product to avoid both the excessive inventory of and an out-of-stock situation with the old product before the replacement product is available.