

Module 4

Section B: Using and Maintaining the Master Schedule

Term

Available inventory

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Available-to-promise (ATP)

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Cumulative available-to-promise

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Cumulative lead time

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Demand time fence (DTF)

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Discrete available-to-promise

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Hedge

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On-hand balance

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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.

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.

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.

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.

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.

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.

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

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.

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Order entry

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Order promising

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Planning time fence

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Time fence

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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.

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.

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.

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.