



Infor System21 Capacity Requirements Planning

Product Guide

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About this guide

The purpose of this document is to describe the functions that can be used within the [Capacity Requirements](#) Planning Module.

Intended audience

The guide is intended for any users of the CP Capacity Requirements Planning business module.

Related documents

You can find the documents in the product documentation section of the Infor Xtreme Support portal, as described in "Contacting Infor" section.

Contacting Infor

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About Capacity Requirements Planning

Capacity Requirements Planning ([CRP](#)) is designed to be used to measure required [resources](#) against available resources to help ensure that the correct [balance](#) of manufacturing [capacity](#) is available to fulfill a given [production schedule](#).

The Capacity Planning algorithm takes account of [work station](#) capacities, [planned down times](#), and production activities defined across the full suite of Production applications. You can use this information to assess the [demand](#) proposed by [MPS](#) or [MRP](#) plans and determine a [loading](#) factor for each work station. MPS/MRP planned [supply](#) dates are used to [schedule](#) these required hours into appropriate weekly production time slots at each work station, with reference to work station standard capacities and with due regard to planned down times and non-working days affecting the planning [run timescales](#).

Capacity Requirements Planning operates using finite [capacity scheduling](#) by individual order and schedule, but assumes infinite capacity of the facilities used. It is the responsibility of the [planner](#) to complete any fine-tuning of the workload to optimise the loading factor, and hence [utilisation](#) of production capacity.

CRP takes the suggested orders from MPS and MRP and actual orders from Production Control, in any combination of suggested, planned, confirmed, released, or active orders and schedules. Multiple Capacity Planning Models can be developed using different combinations of production requirements in order to build up an informative picture of potential capacity requirements according to various scheduling scenarios.

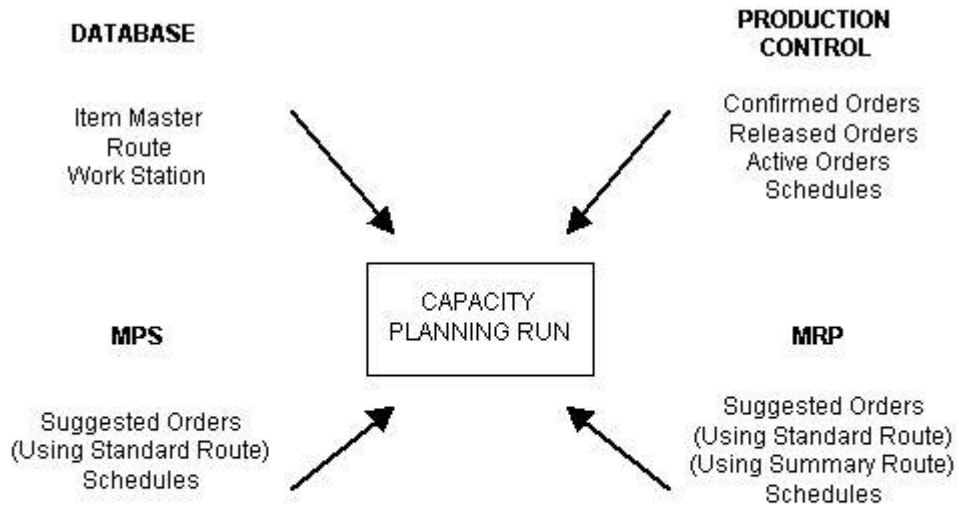
Using the [start dates](#) of the selected orders and taking into account any [move days](#) or [queue time](#), the capacity planning run calculates when each job will be performed at each work station or [work centre](#), and accumulates the [load](#) on each individual work station or work centre.

The process calculates the available capacity using the [standard capacity](#) for each work station. It can also make allowances for work station [down time](#) caused by, for example, planned maintenance, or machine breakdown.

CRP reports and enquiries compare the required and available weekly work station and work centre hours within the planning run timescales. This enables the planner to determine whether over or under load capacity situations are likely to occur, and make decisions about corrective actions.

The standard reporting unit for capacity planning is in weeks.

Data Input to the Capacity Planning Run



Maintain Work Station Planned Down Time [1/CPM]

You use this task to enter the [work station](#) down time. You must do this before the [capacity planning run](#), so that its effect can be taken into account in the run.

Work Station Planned Down Time Selection Window

To display this window, select the Maintain Work Station Planned Down Time task.

You use this window to enter the model, year, and work station for which you want to record down time.

Fields

Model

Enter the [CRP](#) model within which down time will be recorded.

Alternatively, use the prompt facility to select from the Select Model pop-up.

Year

Enter the year to which the down time relates. You must have already created a calendar for the year within the Calendars maintenance task.

Work Station

Enter the work station for which the down time will be recorded.

Alternatively, use the prompt facility to select from the Select Work Station pop-up.

Functions

Include Actual Down Time (F22)

Use this to display the [actual down time](#) as well as the [planned down time](#) on the next window.

Press Enter or select **Include Actual Down Time (F22)** to display the next window.

Work Station Planned Down Time Detail Window

To display this window, press Enter or select **Include Actual Down Time (F22)** on the Work Station Planned Down Time Selection window.

You use this window to enter the planned and actual down time for the work station.

Note: *If you pressed Enter on the last window, instead of selecting **Include Actual Down Time (F22)**, this window displays the planned down time without the actual down time.*

Fields

Planned Down Time

Enter the planned down time in hours and minutes (HHMM) for each week.

Actual Down Time

You can enter the actual down time in hours and minutes (HHMM) for each week.

Note: *When you are entering times, do not enter the colon between the hours and minutes. You must enter just four numbers. For example, for one hour and 25 minutes, enter 0125 and then press Enter.*

Select **Update (F8)** to update the times and return to the Work Station Planned Down Time Selection window.

Run CRP [11/CPM]

The Capacity Requirements Planning Run consists of a series of calculations made using data taken from other Production applications. The outcome of a [Capacity Planning Run](#) is the determination of the [capacity utilisation](#) requirements of a proposed production plan. The results are used by the enquiries and reports to indicate the extent to which available capacity can accommodate the capacity requirements and the anticipated capacity utilisation of a proposed plan, either for individual [work stations](#), or for work stations grouped together into [work centres](#).

Certain restrictions are placed on other production tasks while the [CRP](#) Run is taking place. For example, on selecting a Model, you may be warned that a Run is already in progress or is awaiting processing for that Model. The status and the Model of the last run to have been selected appears on the bottom half of the run selection window, once at least one run selection has been made.

Each individual [operation](#) is [scheduled](#) using finite [scheduling](#) on the required work stations. However, each operation loading does not take into account other [loadings](#) that have been applied to the same work stations. Therefore, it is possible for the total capacity requirement to be in excess of 100% of the available capacity for any given work station or work centre.

CRP and Calendars

If [production calendars](#) exist for calendar codes other than the main planning calendar defined on the [Company Profile](#), they should be kept up to date and in line with the planning calendar. This is

because work stations can be associated with calendars for the CRP Run specific to their work pattern that differ from the default calendar.

It is best to ensure that all calendars that will be used by CRP extend a little further than the end date you will be selecting, and that there are no date gaps between calendar years. An error can occur if a date that does not exist on the calendar is encountered.

CRP Processing

Factors used in the Capacity Requirements Planning processing are:

Starting Date and Time

This is normally the due [start date](#) of the order for the first operation, or the completion of the previous operation for subsequent operations. If orders are overdue, then they are rescheduled to start immediately. Orders that are in process are also scheduled with their remaining requirement schedule to start immediately. The start date and time for the loading on the required work station is offset by any operation [move days](#) or work station [queue time](#) defined. The duration of the loading on the work station is derived from the duration time for the operation as defined in the [route](#) or order details according to the duration calculation method for the operation. The [Duration Calculation Basis](#) to be used may be defined specifically for the operation, or otherwise it may come from the Work Station setting. If there is no setting for either of these, then the Company Profile setting is used.

Weekly Load

Having calculated the start time and the duration of an operation, the duration is then spread over the working time available for the work station, and a weekly load record is recorded for the amount of time required in each separate week that is occupied by the full operation loading. For this to happen, the available time for each working day must be calculated, in order to determine how much time is available in each week. The available time is calculated as:

Total of Standard [Shift Lengths](#) x Number of Working Days remaining in the Week for the Work Station

If [shift profiles](#) are used, then the total of shift profile shift lengths is calculated for each day for which a profile is defined, using the method described above for any other working days.

If the amount of time available in the week is greater than the calculated operation duration time, the full duration of the work is scheduled for that week on the work station.

If the amount of time available in the week is less than the calculated operation time, the job is scheduled to take place spread over the current week and following week or weeks on the work station.

Note: *This process is carried out order by order and schedule by schedule, each order or schedule being loaded independently of any other order or schedule. The individual operations for an order or schedule are scheduled in sequence, taking into account any overlapping operations.*

In carrying out the weekly scheduling for multiple independent tasks, the capacity requirements planning process assumes that infinite capacity is available. This means that all orders and schedules are scheduled according to their due dates. The only exception to this is that overdue and in process tasks are scheduled to start immediately on the start date of the run. The result is that

multiple tasks may be scheduled to run concurrently using the same equipment, regardless of the number of concurrent tasks the equipment is capable of handling. When equipment is capable of processing multiple tasks within its daily total shift duration, this can be reflected in a shift capacity that is greater than the shift length. The shift length is used to determine the amount of time that a work station is available to be used. The shift capacity is used to indicate the amount of work that can be achieved in a shift. This is expressed in terms of machine hours available, not in terms of labour hours that can be expended. Operation durations are not amended by [Crew Sizes](#) during the capacity planning run, in order that the timing of the operations can be accurately matched to the shift durations.

Only on enquiries and reports does the software compare the total weekly load with the total weekly capacity.

Available Capacity

For the purposes of the capacity requirements planning run, the capacity of a work station is calculated as the available duration. For enquiries and reports it is calculated as follows:

Capacity is calculated for each work station, for each week as:

Total of Standard Shift Capacities x Working Days

This capacity can be adjusted by the [standard efficiency](#) defined for the work station.

If Shift Profiles are defined for the work station, then the total of shift lengths for each working day are calculated and then adjusted by the [standard capacity factors](#). For days of the week that are working days but have no shift profile defined, the standard calculation defined above is used.

This capacity is called the [budget capacity](#) on enquiries and reports.

Note: [Maximum capacity](#) is also calculated, for reference purposes only. It is calculated in a similar way as budget capacity but is called maximum capacity and uses maximum capacities and capacity factors.

Capacity Planning Run Window

To display this window, select the Run [CRP](#) task.

Use this window to enter the selection criteria for the CRP run. The bottom half of the window displays information about the last CRP run.

Fields

Model

Enter the CRP model to be generated. If the model will use [suggested production orders](#) and [schedules](#), the code you enter must have an equivalent [MPS/MRP](#) model with the same code. If you enter a CRP model without an equivalent MPS/MRP model, no suggested orders or schedules will be extracted. You can use CRP, MPS and MRP models to assess the effect different production plans have on resource capacity.

You can use the prompt facility on this field to select from the Select Model pop-up.

Start Week

Enter the [start date](#) as a week number, in the form WWYY. This week must exist in the calendar. This date is not normally earlier than the date on which the run is being carried out, and you cannot enquire on or report on earlier periods. It is advisable to leave this field as the current week.

End Week

Enter the last date for which you want to see [work station loading](#), in the form WWYY. This date represents the [planning horizon](#). The earlier this date is, the less time the capacity planning run takes, and so it is sensible to make the planning period as short as is convenient for your particular planning requirements.

Base Plan On

Check these fields to include any of the following order statuses in the CRP run.

Suggested Supply

This includes production orders and schedules suggested by MPS and MRP in the CRP run. If you **check** this field, the model code entered above must be valid in MPS and MRP.

Planned Supply

Planned orders are created in Production Order Control, and do not have firm [operational](#) timings or material requirements. The software explodes planned orders through the designated [planning route](#) for the parent item to determine the operation loading. This option does not include any schedule items.

Confirmed Supply

Confirmed orders are created in Production Order Control and represent a firm commitment to make. They have firm operational timings that are extracted to calculate work station loads. Confirmed schedules are also included.

Released Supply

You can include released and active orders in the run. These two types of [supply](#) are put together as they are both of use in short-term planning.

Select **Submit Planning Run (F8)** to start the CRP run and leave this task.

Enquire on CRP Bar Chart [21/CPM]

Use this task to view the results of the [CRP](#) run in bar chart format.

Capacity Planning Enquiry Bar Chart Selection Window

To display this window, select the Enquire on CRP Bar Chart task.

Use this window to enter the selection criteria for the run on which you want to enquire.

Fields

Model

Enter the required model code. This must be the model for which the last CRP run was successfully run.

You can use the prompt facility on this field to select from the Select Model pop-up.

Enquiry Type

You can select one of the following:

[Work Station](#) (1) - To enquire by work station

[Work Centre](#) (2) - To enquire by work centre

Work Station/Work Centre

Enter the work station or work centre on which you want to enquire.

You can use the prompt facility on this field to select from either the Select Work Station or the Select Work Centre pop-up, depending on the value of the Enquiry Type field.

Start Week

Enter the start week for the enquiry. It must be the current week, which is the default.

End Week

Enter the week number of the last week that you require for inclusion in the enquiry.

Review Budget Method

You can make comparisons between [scheduled loads](#) and [capacity](#) at work stations using one of two methods. The result of this is referred to and shown as budgeted capacity.

Select one of the following:

Standard (1) - To compare with standard capacity

The software assumes 100% efficiency, meaning all the capacity is used.

Standard x Efficiency (2) - To compare with standard effective capacity

In this case, the standard work station efficiency factor is applied: [standard capacity](#) multiplied by [standard efficiency](#) factor.

Include Supply Status

Check each supply status that you want to include. You can select any combination of statuses included in the last CRP run.

Suggested

Check this field to include suggested supply in the enquiry.

Planned

Check this field to include planned supply in the enquiry.

Confirmed

Check this field to include confirmed supply in the enquiry.

Released/Active

Check this field to include released/active supply in the enquiry.

Functions**Summary Enquiry (F18)**

Use this to toggle between the Summary and Bar Chart enquiries.

Press Enter to display the Capacity Planning Enquiry Bar Chart Detail window.

Capacity Planning Enquiry Bar Chart Detail Window

To display this window, press Enter on the Capacity Planning Enquiry Bar Chart Selection window.

The vertical scale of the bar chart is in hours. The horizontal scale shows the week number.

The first column shows any overdue work, followed by work for the current week and then subsequent weeks. There are two columns for each week. The left-hand column shows the budgeted capacity. The right-hand column shows the actual number of hours scheduled for the work station or work centre for that week.

The Overdue column shows the amount of work outstanding.

The numbers above the columns show the number of hours' work scheduled for each week.

You can use **Page Up** and **Page Down** to display later and earlier weeks.

Function**Details (F17)**

Use this to display the Capacity Planning Enquiry Details window.

Select **Previous (F12)** to return to the Capacity Planning Enquiry Bar Chart Selection window.

Enquire on CRP Summary [22/CPM]

Use this task to view the results of the [CRP](#) run in summary and detail form.

Capacity Planning Enquiry Summary Selection Window

To display this window, select the Enquire on CRP Summary task.

Enter the selection criteria for the enquiry here. This is the same selection window as for the Bar Chart enquiry.

Fields

Model

Enter the required model code. This must be a model for which the last CRP run was successfully run.

Alternatively, use the prompt facility to select from the Select Model pop-up.

Enquiry Type

Select one of the following:

[Work Station](#) (1) - To enquire by work station

[Work Centre](#) (2) - To enquire by work centre

Work Station/Work Centre

Enter the work station or work centre on which you want to enquire.

You can use the prompt facility on this field to select from either the Select Work Station or the Select Work Centre pop-up, depending on the value of the Enquiry Type field.

Start Week

Enter the start week for the enquiry. It must be the current week, which is the default.

End Week

Enter the week number of the last week that you require for inclusion in the enquiry.

Review Budget Method

You can make comparisons between [scheduled loads](#) and [capacity](#) at work stations using one of two methods. The result of this is referred to and shown as budgeted capacity.

Select one of the following:

Standard (1) - To compare to standard capacity

The software assumes 100% efficiency, meaning all the capacity is used.

Standard x Efficiency (2) - To compare with standard effective capacity

In this case, the standard work station efficiency factor is applied: [standard capacity](#) multiplied by [standard efficiency](#) factor.

Include Supply Status

Check each supply status that you want to include. You can select any combination of statuses included in the last CRP run.

Suggested

Check this field to include suggested supply in the enquiry.

Planned

Check this field to include planned supply in the enquiry.

Confirmed

Check this field to include confirmed supply in the enquiry.

Released/Active

Check this field to include released/active supply in the enquiry.

Functions**Barchart Enquiry (F18)**

Use this to toggle between the Summary and Bar Chart enquiries.

Press Enter to display the Capacity Planning Enquiry Summary window.

Capacity Planning Enquiry Summary Window

To display this, press Enter on the Capacity Planning Enquiry Summary Selection window.

The top section of this window displays the work station or work centre selected. If you selected an individual work station, details for that station are displayed. If you selected a work centre, a list of the work stations in that work centre is displayed.

Each column represents the available capacity and the requirements for a particular week. The relevant week number is displayed above each column.

The first row gives the [maximum capacity](#) of the work station or work centre. This is the total of the maximum shift capacities held on the work station record, multiplied by the number of working days available in each week.

The second row gives the budgeted capacity for each week. These figures represent the expected available capacity. This is the total of the standard shift capacities multiplied by the number of days available each week. If [shift profiles](#) are used then the total of the daily capacities in the week are added together. This figure is then adjusted for any [planned down time](#) entered for the relevant work stations. If budget method 2 was selected on the previous window, this is then multiplied by the standard efficiency percentage from the work station record.

The third row gives the planned workload, which is the total number of hours that the CRP run has calculated to be [scheduled](#) for each week. This includes all [operations](#) that fall in that week according to the [start dates](#) on the orders and schedules, regardless of any constraints due to capacity limitations.

The fourth row gives the week [loading](#) percentage. The software calculates this separately for each week in the enquiry.

The last row gives the average loading or cumulative loading percentage. The total available capacity and the [capacity requirements](#) are added up from the first week and an average loading value is given. You can use this to determine whether the overall loading is reasonable or not.

You can use Page Up and Page Down to display earlier and later weeks.

Functions

Detail (F17)

Use this to display the Capacity Planning Enquiry Details window.

Select **Previous (F12)** to return to the previous window.

Capacity Planning Enquiry Details Window

To display this window, select **Detail (F17)** on the Capacity Planning Enquiry Summary window.

This window displays the loading details for the work station or work centre. The following details are displayed:

- The week numbers in which the loads fall
- The scheduled start date for each operation
- The descriptive status of the supply from which this load arises
- If it is a firm production order, the order number is shown here.
- The sequence number for the operation that gives rise to this load
- The outstanding scheduled duration of the operation, in hours
- The work order operation status (if applicable)
 - 0 - Suggested
 - 1 - Planned
 - 2 - Firm
 - 3 - Released
 - 4 - Active
- The schedule operation status (if applicable)
 - 1 - Suggested
 - 2 - Firm
- The work centre to which this operation and load is related
- The operation quantity outstanding at the beginning of the week.

This is calculated as the operation scheduled quantity less the operation quantity completed.
- The unit of measure for the item
- The finished item
- The duration of the work scheduled to take place during this week, for this operation
- The quantity scheduled to be completed this week, for this operation

This is calculated from the capacity available in the work station during the week.

- The duration of any set-up scheduled for the operation for this week

This is calculated from the capacity available in the work station during the week.

Functions

Summary (F17)

Use this to display the Capacity Planning Enquiry Summary window.

Press Enter to return to the previous window.

Select **Exit (F3)** to leave the task.

Work Station Down Time Plan [31/CPM]

This report prints, for each week, for each [work station](#) within the selected [CRP](#) model, the [planned](#) and [actual down time](#) and any percentage [variance](#).

Work Station Down Time Plan Report Window

To display this window, select the Report on Work Station Down Time Plan task.

You use this window to enter the selection criteria for the report.

Fields

Model Code Range From/To

Enter the range of model codes to include in the report. You can select one model only by entering the same model code in both fields. You can also leave both fields blank to include all models.

You can use the prompt facility on these fields to select from the Select Model pop-up.

Work Station Range From/To

Enter the range of work stations required for inclusion in the report. These appear in alphanumeric sequence on the report. Leave both fields blank to report on all work stations or enter the same code in both fields to report on a single work station.

You can use the prompt facility on these fields to select from the Select Work Station pop-up.

Press Enter to submit the job for processing.

Report on Work Station Capacity Requirements [32/CPM]

Use this task to generate and produce a [capacity planning](#) requirements (CRP) report for your [work stations](#).

Capacity Report by Work Station Window

To display this window, select the Report on Work Station Capacity Requirements task.

You use this window to enter selection criteria for the report.

Fields

Model

Enter the CRP model code for which the report is required.

Alternatively, use the prompt facility to select from the Select Model pop-up.

Review Budget Method

You can make comparisons between [scheduled loads](#) and [capacity](#) using one of two methods, the result of which is shown as budgeted capacity.

Select one of the following:

Standard (1) - To compare with standard capacity

The system assumes 100% efficiency, meaning all the capacity is used.

Standard x Efficiency (2) - To compare with the standard effective capacity, that is, with the standard work station efficiency factor applied

It is calculated as [Standard Capacity](#) multiplied by [Standard Efficiency](#) Factor.

Start Week

Enter the start week for the report. It must be the current week, which is the default.

End Week

Enter the week number of the last week that will be included in the report.

From Work Station/To Work Station

Enter the range of work stations required for inclusion in the report.

You can use the prompt facility on these fields to select from the Select Work Station pop-up.

Base Plan On

Check each supply status that you want to include in the report. You can select any combination of statuses that were included in the last CRP run for the selected model.

Suggested Supply

Check this field to include suggested supply in the report.

Planned Supply

Check this field to include planned supply in the report.

Confirmed Supply

Check this field to include confirmed supply in the report.

Released/Active

Check this field to include released/active supply in the report.

Print Operation Details

Use this checkbox as follows:

Unchecked - To print a summary table only

Checked - To include operation details below the summary table in the report

Press Enter to submit the job for processing.

Report on Work Centre Capacity Requirements [33/CPM]

Use this task to generate and produce a [capacity planning](#) requirements ([CRP](#)) report for your [work centres](#).

Capacity Report by Work Centre Window

To display this window, select the Report on Work Centre Capacity Requirements task.

You use this window to enter selection criteria for the report.

Fields**Model**

Enter the CRP model code for which the report is required.

Alternatively, use the prompt facility to select from the Select Model pop-up.

Review Budget Method

You can make comparisons between [scheduled loads](#) and [capacity](#) using one of two methods, the result of which is shown as budgeted capacity.

Select one of the following:

Standard (1) - To compare with standard capacity

The system assumes 100% efficiency, meaning all the capacity is used.

Standard x Efficiency (2) - To compare with the standard effective capacity, that is, with the standard work centre efficiency factor applied

It is calculated as [Standard Capacity](#) multiplied by [Standard Efficiency](#) Factor.

Start Week

Enter the start week for the report. It must be the current week, which is the default.

End Week

Enter the week number of the last week that will be included in the report.

From Work Centre/To Work Centre

Enter the range of work centres required for inclusion in the report.

You can use the prompt facility on these fields to select from the Select Work Centre pop-up.

Base Plan On

Check each supply status that you want to include in the report. You can select any combination of statuses that were included in the last CRP run for the selected model.

Suggested Supply

Check this field to include suggested supply in the report.

Planned Supply

Check this field to include planned supply in the report.

Confirmed Supply

Check this field to include confirmed supply in the report.

Released/Active

Check this field to include released/active supply in the report.

Print Operation Details

Use this checkbox as follows:

Unchecked - To print a summary table only

Checked - To include [operation](#) details below the summary table in the report

Press Enter to submit the job for processing.

Appendix A Glossary

A

Active Production Order

This is a production order, which has associated [work-in-progress](#).

Activity Types

These are user definitions of activities to be reported and are linked to a System21 [reporting type](#). There are system-dependent activity types that are mandatory for the system to function; and user-defined activity types which may be defined to suit user requirements. The associated reporting type defines how the activity will affect updates to the database.

Actual Down Time

See [Down Time](#).

AFI

Acronym for Advanced Financial Integrator

Allocated Stock

This is the quantity of an item which has been allocated to customer orders, production orders or [schedules](#). It is usually expressed as a [balance](#) at item and stockroom level.

Allocations

This is the reservation of inventory for consumption in a production order or [schedule](#). The material can be issued to any order, but this reservation enables the application to calculate available quantities.

Amended Standard Production Orders

Production orders, which are based on a standard [route](#) and only differ in detail

Amortised Fixed Costs

This is the method of spreading fixed production [costs](#) over a designated batch size to ascertain the effect on unit product costs of the economies of scale production. See also [Fixed Costs](#).

Archived Production Orders

These are production orders which have been saved in an archive file and removed from the live order database. They are available for detailed enquiry.

Available

This is the quantity calculated by Planning to represent current availability on a given day. It is equal to:

Previous period available + [supply](#) - [demand](#)

Available Stock

This is the quantity calculated by subtracting [allocations](#) from the [physical stock balance](#). It represents uncommitted inventory, which may be used to satisfy production [demand](#).

Average Cost

This is a [costing method](#) employed by Inventory Management, whereby the weighted average [unit cost](#) of an item is recalculated every time a stock receipt is made.

Average Usage

This is the average usage per week/period of an item in a stockroom. The weeks or periods included in this calculation are defined by the [usage profile](#).

Backflush

The automatic generation of standard material issues based on production quantities reported

Backflush Item

An item that is designated to be issued automatically in production recording

Backschedule

The calculation of [operation](#) and order [start dates](#) from the due date, using the [lead time](#) elements of the operations

Balance

This may be used either to signify a database record holding summary information, such as a stockroom balance, or a single summary quantity field on such a record, such as [allocated stock](#).

Base Edition

System21 Production is available in two editions, Base and Extended. The Base edition delivers functionality equivalent to that which was available in Version 2.0. The [Extended edition](#) provides additional function, notably [scheduled](#), or repetitive, production and process industry features such as [co-products](#) and [potency](#).

Batch Balancing

This is a method of ensuring that the correct quantity and [potency](#) mix of materials is used in a production batch.

Bill of Material

This is the definition of the [inputs](#) that are required to make a product. It is also known as a Product Structure, [Recipe](#) or [Formula](#).

BOM

Acronym for [Bill of Material](#)

Booking

[Work-in-progress](#) reporting

Booking History

A record of all material and production transactions posted during the progress of a production order or [production schedule](#)

Bottleneck

This term is generally used to refer to a position on a production line, where the production flow is constrained in some way. This can lead to build-ups of work and potentially have an adverse effect on the [efficiency](#) of a line or plant, and ultimately on profitability.

Bucket

In [MPS](#) and [MRP](#), the period of time for which [supply](#) and [demand](#) are summarised for presentation

Bucketless

This describes the [MPS/MRP](#) review process, which balances [supply](#) and [demand](#) on the date it is [scheduled](#), rather than accumulating it into greater time periods.

Budget Capacity

This is the [capacity](#) of a [work station](#) that is compared with its [load](#). It represents the capacity you expect to obtain from a work station. This can be 100% of stated capacity or a factor above or below 100% (see [Standard Capacity](#)).

By-product

This is a product produced incidentally by a process which is primarily for the production of other products. It may have financial value, which will be deducted from the total costs of the mainstream product and will also be treated as a negative cost, displayed in the Relief Cost Element field.

Cancelled Production Order

A production order which has been aborted and cannot be reopened

Capacity

The amount of time that a [work station](#) is available for work in a given period

Capacity Planning

This is the activity of calculating [work station capacity requirements](#) by comparison of duration for planned work with the [capacity](#) available for the planning period. The work [schedule](#) or the capacity may then be adjusted to obtain a [balanced](#) work flow.

Capacity Planning Run

This is the main function of the [Capacity Requirements](#) Planning application. This process calculates the [work station capacity load](#) that is required to achieve a particular [production schedule](#) according to [scheduling](#) rules.

Capacity Requirement

The time required at a [work station](#) by a particular piece of work or [production schedule](#)

Cell

A group of stockrooms that are related for the purpose of [material requirements planning](#)

Cellular Planning

A planning method by which the [demand](#) and [supply](#) of materials are identified and satisfied at [cell](#) level rather than model level

Change Management

See [Engineering Change Management](#).

Co-products

These are items that are necessarily produced together as a result of a production process. They share the burden of the [cost](#) of production.

Company Profile

A collection of control parameters specific to a Production company

Completed Production Order

These are production orders which have been completed. They cannot have [bookings](#) made against them. They may be reopened for further processing.

Component

Any item that is used in the production of another item (see [Input](#))

Component Location Reference

A method whereby [components](#) may be categorised by their location and position within an assembly, structure or process

Confirmed Production Order

A production order with a firm commitment to produce an item, which cannot be changed in date or quantity except by explicit [planner](#) intervention

Cost

This is a value associated with an item in a stockroom, or a movement. It is usually a value related to a single item (a [unit cost](#)), but may refer to a quantity of items (a movement cost or value).

Cost Apportionment Method

This is the method used to calculate the proportion of production [costs](#) that are applied to each item, when [co-products](#) are produced from a process.

Cost Centre

This is a functional or organisational area defined for the purposes of defining production [costs](#). Each cost centre defines standard rates for labour, [work station](#), [set up](#) and overheads. A cost centre is assigned to a work station and is used to calculate all standard production costs associated with that work station.

Cost Elements

The following [cost elements](#) are available to analyse [costs](#):

- Relief costs
- Direct material
- Packaging
- Utility
- Labour
- Set up
- Machine
- Subcontract
- Overhead 1

- Overhead 2 (fixed)
- Overhead 2 (variable)
- User defined 1-4
- Shrinkage

Cost Relief Apportionment

The method used to calculate any [By-product](#) Relief [Costs](#) that are applied to co-product costs in a co-product process

Cost Roll-up

The method of generating product [costs](#) by calculating and accumulating costs of materials and [operations](#) required at each level of manufacture

Costing Method

This refers to the method used to establish a [cost](#) for stock movements or stock [balances](#). The methods [available](#) are latest, average, standard and [FIFO](#) (First In First Out).

Costing Route

This is the [route](#) designated for an item to calculate its [unit cost](#) within a stockroom. A unit cost may be calculated for each stockroom in which an item is stocked by designating a specific production route as a [cost](#) route.

Count Point

An [operation](#) at which [WIP inventory](#) is counted or reported

Count Reporting Policy

This policy determines the method by which production quantities are recorded during [booking](#). This may be total quantity or start and end quantity.

Creation Date

The date on which a production order is entered

Crew Size

The standard number of operatives [scheduled](#) to work on an [operation](#), either as direct labour or [set up](#) labour

CRP

Acronym for [Capacity Requirements](#) Planning

Cumulative Lead Time

This is the amount of time required to produce an item from scratch. It is based on a full explosion of the bills of material of the item and its sub-assemblies and includes the purchasing [lead time](#) of raw materials.

Current Cost

This is a category of [cost](#). The application generates values for current and standard cost control. Current cost may be considered as the proposed standard cost for the next accounting period. See Standard Cost.

Current Date in Planning

This is the datum point of an [MPS/MRP](#) plan. The [start date](#) is determined by subtracting Overdue Days from this date. The [Time Fence](#) date is calculated from this date by adding the frozen [Lead Time](#).

Customer Schedule

This is the forecast of a customer's expected delivery requirements. They can be at different statuses in different time periods.

Customer Shelf Life

This is the amount of time an item must have left in its life when it is delivered to the customer. If an item is [lot controlled](#), this time will be deducted from the [Expiry Date](#) to calculate the [Last Available Date](#).

Delivery Area

This is information which is used to identify the location to which items should be moved. It can be found on the Picking List.

Delivery Days Basis

This parameter is only pertinent to items which are not lot, batch or serial controlled. It allows [delivery lead time](#) to be taken into account during planning, and may be calculated using calendar days or working days. For lot-controlled items, the [Release Lead Time](#) is used.

Delivery Lead Time

The delivery lead time value expressed in terms of the [Delivery Days Basis](#)

Delivery Point

This is the exact position to which items should be moved within the [Delivery Area](#). It can be found on Picking List.

Demand

The forecast or actual requirement for an item

Demand Policy

This is the policy that controls the comparison of [sales forecasts](#) with sales orders, [customer schedules](#) and [dependent demand](#) to arrive at the [demand](#) to drive [MPS](#) or [MRP](#).

The demand policy can be any one of the following:

- No forecast
- Independent demand only
- Dependent and independent demand
- Dependent demand
- Explode forecasts to inputs
- Make to forecast only
- Total demand

Dependent Demand

[Demand](#) for an item, which is derived from the manufacture of a parent

Descriptions File

This is a file maintained within Inventory Management that defines a number of parameter codes and their descriptions.

Discrete Manufacturing

This is a production control method where individual pieces of work are identifiable. Usually, production orders are used to manage this.

Down Time

This is the amount of time that a [work station](#) is out of action. The application provides the facility to record both planned and [actual down time](#).

DRP

Acronym for Distribution Requirements Planning

Duration Calculation Basis

This is the method by which the duration of an operation is calculated for [scheduling](#) purposes. It can be set at [Company Profile](#), [Work Station](#) or [Route Operation](#) level.

The duration calculation basis can be any one of the following:

- Set up time only
- Machine time plus set up time
- Direct labour time plus set up time
- Machine time plus direct labour time plus set up time
- Greater of machine time
- Direct labour time plus set up time

Economic Order Quantity

This is an optimum quantity of an item to be produced by a [process route](#) or supplied on an order. It may be entered for each process route and may be used as the basis of apportioning [fixed costs](#) for an item.

Effectivity

This is a method of controlling product [input](#) configurations. The effectivity of an input is the time period when it can be used in an assembly. The application uses an effective [start date](#) and an effective finish date to control input configurations. The system will ignore the item outside the effectivity dates.

Efficiency

The ratio of standard to actual performance

Efficiency Variance

The difference between standard and actual performance in quantity and [cost](#) terms

End Date (Planning)

This is the last date to be considered by an [MPS](#) or [MRP](#) run. It can be entered or calculated as current date plus item [cumulative lead time](#). It can be extended by setting a number of safety days.

Engineering Change Management

This is an integrated module that controls and audits, via change requests, the addition and deletion and amendment of:

- Items
- Route operations
- Inputs and outputs
- Production order route maintenance
- Issue of unplanned materials
- Issue of substitute materials.

It is used to record and monitor these changes and who made them.

Equivalent Physical Quantity

This is used where item lots have variable [potency](#). For an item lot with non-[standard potency](#), it is the equivalent quantity of the item at standard potency. It is calculated as:

Physical Quantity x Actual Potency/Standard Potency

Exception Events

These are transactions that are likely to cause a change in the [supply](#) and [demand](#) status of an item.

Expiry Date

The Expiry Date is calculated as [Lot Creation Date](#) + [Shelf Life](#). It represents the last date on which the item can be used. The item is still in stock but is deemed to be frozen after this date.

Extended Edition

System21 Production is available in two editions, Base and Extended. The [Base edition](#) delivers functionality equivalent to that which was available in Version 2.0. The Extended edition provides additional function, notably [scheduled](#), or repetitive, production and process industry features such as [co-products](#) and [potency](#).

FIFO

This is an acronym for First In First Out - one of the [costing methods](#) available in the Inventory Management application. Using this method, each stock receipt is valued at actual [cost](#), and issues are valued using these receipt batch costs on a First In First Out basis.

Filler Item

An item that is used to make up the required physical of a production batch, but which has no effect on the properties of the item produced (see Balancing Quantity)

Finished Goods Receipt

The receipt of a quantity of a production item into an Inventory stockroom, as a result of a production order or [schedule](#)

Firm Planned Production Order

A production order which remains under the control of the [planner](#) in terms of timing and quantity and is not recommended for change by Planning functions, unless [Planning Filters](#) are set to allow this

Firming Period

The period for which firm [work station schedules](#) have been created

First Available Date

For a [lot controlled](#) item, this is equal to the [Creation Date](#) + [Release Lead Time](#) (Days). It is the first date the item can be used.

Fixed Cost

This is an element of item [cost](#) that does not vary with the volume of production.

Fixed elements of costs are:

- Set up
- Fixed overhead
- Fixed user-defined costs

Fixed Order Quantity

This is an ordering policy used by [MPS](#) and [MRP](#) to control suggested replenishment orders. It is used to generate suggested supplies of a predefined size.

Fixed Quantity Per

An [input](#) to a [Bill of Material](#), whose requirement will not vary with batch size

Floor Stock

Floor stock is inventory, which is issued to a designated [floor stock location](#) on the shop floor, rather than being issued directly for immediate consumption. Floor stock locations can be logical or physical stockrooms. Floor stock is consumed as it is used at a particular operation.

Floor Stock Location

This is a logical or [physical stockroom](#) where items with a [Material Control Policy](#) of issue to [floor stock](#) are issued and consumed.

Flow Route

This is a [route](#) where the individual [operations](#) are dependent on each other. Changes to [schedules](#) on flow routes for one operation result in changes to the whole route.

Formula

See [Bill of Material](#).

Frozen Stock

This is the quantity of an item which is designated as frozen and thus is not [available](#) for issue or allocation. It is expressed as a [balance](#) quantity at item and stockroom level, or item and lot level.

Generated Demand

See [Dependent Demand](#).

Gross Requirement

The total [demand](#) for an item in a given time period before stock on-hand and supplies are netted

GT Family

This is the Group Technology code, is a user-defined classification which may be used as a selection parameter both on a Selective MRP run and [MPS](#) and [MRP](#) reports.

Held Inventory Tracking

This is a regimen imposed by the system to force entry of a reference code and description each time a [WIP](#) quantity is booked as Held. This reference may be for the whole booked quantity or specific to one or more items in the total quantity. Any further movements of [Held WIP Inventory](#), for example, transfer or scrap, necessitate the specification of the Held Inventory Reference.

Held WIP Inventory

This is [WIP inventory](#) which is not [available](#) to progress to the next [operation](#) until released from held status. This may be because it is awaiting quality control inspection or [rework](#).

In Transit

This is the quantity of an item that is currently in transit between two stockrooms. It is expressed as a [balance](#) quantity at the target [item stockroom](#).

Indented Bill of Material

This is a multi-level explosion of an assembly or sub-assembly, showing all the levels of [inputs](#), each of which is displayed indented one position from its immediate parent.

Indented Cost Roll-up

A method of simulating the [cost](#) of an assembly or sub-assembly with reference to its [Bill of Material](#) and manufacturing [operations](#) at all levels, and then rolling up the costs of all its [inputs](#) and operations.

Indented Where-Used

This is the inverse of the [indented Bill of Material](#), and shows the parents of an [input](#), each parent indented one position from its immediate children. The analysis is multi-level, and identifies the parents, grandparents, great grandparents, and so on, of an item.

Independent Demand

[Demand](#) for an item originating from sales orders or forecasts, that is, direct demand for the item itself

Ingredient

Any item which is used in the production of another item (see [Input](#))

Input

This refers to any material, sub-[component](#), sub-assembly or [ingredient](#), specified on a [bill of material](#). It is the standard term of reference to any material input.

Input Reference

This is the key used to access [Component Location Reference](#) information. It can also be used as a reference field in its own right (see [Component Location Reference](#)).

Input Reference Text

This holds additional text information relating to [input references](#) on [input](#) items and [routes](#). It is used in conjunction with [Component Location Reference](#).

Input Route

The mechanism describing the way that [input](#) items are identified and used on Bills of Material

Input Shrinkage

The planned or anticipated percentage of a quantity of material that will be unusable when it is issued to the production process

Input Where-used

The identification of where an [input](#) is used in assemblies and sub-assemblies

Inventory Audit Record

When a revaluation of Inventory takes place during a transfer of standard costs from Production, a control record is created for each stockroom revaluation.

Item Group Minor

Inventory Management classification used in Production Forecasting to define the [product family](#) to which an item belongs

Item Schedule

The planned production of an item expressed as quantities on Due Dates

Item Stockroom

This is the highest level at which [costs](#) and inventory [balances](#) are held. The item/stockroom record also defines stock management rules for an item in a stockroom used within Inventory Management.

Item Type

This provides a general classification of an item within the Production system. It may be:

- Made (manufactured/produced)
- Bought out
- Phantom
- Reusable tool
- Consumable tool
- Gauge
- Purchased

Just-in-Time

This is a [scheduling](#) and material management philosophy that relies on efficiently organised plants, educated and committed employees, and co-operative suppliers. Its objective is to reduce stock holding to a minimum and optimise the flow of production, synchronised to market [demand](#), thus reducing [lead times](#) and increasing customer service. It is often abbreviated to JIT.

Key Ingredient

This is a specific [ingredient input](#) on a [route](#) that is used to control the lot characteristics of the finished product. Only one key ingredient per route may be defined.

Labour Time

The length of time required by an [operation](#) in terms of labour

LAD

Acronym for [Last Available Date](#)

Last Available Date

For a lot-controlled item, this is equal to the [Expiry Date](#) minus [Customer Shelf Life](#). It represents the last date on which the item can be used. It is deemed to be frozen after this date.

Latest Cost

This is one of the [Costing Methods available](#) in the Inventory Management application. Using this method, each stock receipt is valued at actual [cost](#) and all issues are valued at this cost. In addition, total inventory is valued at this cost.

Lead Time

This is the amount of time required to produce or procure an item. For production items it is derived from the sum of the lead times of the individual [operations](#) required to produce the item and any sub-assemblies. It also relates to procurement times for purchased items. See also Production and [Cumulative Lead Times](#).

Load

The [capacity requirement](#) on a [work station](#) in terms of time arising from an [operation scheduled](#) at that work station

Location Reference

See [Component Location Reference](#).

Logical Stockroom

This is a stockroom which does not physically exist but is used as a reference for the recording of [WIP inventory](#), [phantom items](#) or [floor stock](#). Recordings may be made to [physical stockrooms](#) if they exist; logical stockrooms are simply an alternative.

Lot Balancing Policy

For lot-controlled items, an item may be defined such that its [potency](#) will determine the actual physical quantity to be issued.

Lot Control

This refers to a level of stock control lower than item and stockroom, also referred to as batch control, for which a group of items received into stock is given a code. Issues from the group require the classification of this code for audit tracking purposes.

Lot Traceability

Where stock control is specified at batch or lot level, this refers to the ability to trace the movement of stock at this detailed level.

Low Level Code

This is the lowest point in bills of material or production orders at which an item exists. It indicates the maximum level at which the item resides. It is used by [MRP](#) to determine when to plan the item in the fully exploded product sequence.

Machine Time

The length of time consumed by an [operation](#) in terms of machine work

Master Production Schedule

[MPS](#) calculates and balances [demand](#) and [supply](#) for master [scheduled](#) items, and generates a [production schedule](#) with suggested dates and quantities.

Material Control Policy

This parameter defines the method of item issues to production. This may be: formal issue, [backflush](#) or [floor stock](#) issue.

Material Requirements Planning

[MRP](#) calculates and balances [demand](#) and [supply](#) for purchased materials and lower level manufactured items and generates a suggested [schedule](#) for production and purchases, with suggested dates and quantities for actions.

Material Type

This parameter is used to determine an item's material type.

It may be:

- Direct material
- Packaging or utility

Maximum Capacity

The theoretical [capacity](#) of a [work station](#) in hours when working at its peak rate

Maximum Capacity Factor

This factor may be applied to a shift profile to allow calculation of the maximum number of hours [available](#) at a [work station](#), if, for example, the work station consists of several machines or multiple operators. For example, if the work station has a standard shift profile which defines 8 working hours per day, applying a factor of 3 would indicate that 3 x 8 (24) hours are available.

Maximum Order Quantity

This is a value set for an item to control the suggested [supply](#) batch sizes suggested by [MPS](#) and [MRP](#). It is an advisory parameter, and does not restrict the size of the suggested batch, but a warning is shown on the plan reports when a batch size exceeds it.

Maximum Stock

This is the preferred maximum stock [balance](#) of an item in a stockroom. It may be set manually for each item

Minimum Order Quantity

This is a control parameter set for an item to manage the suggested [supply](#) batch sizes recommended by [MPS](#) and [MRP](#). It ensures that a supply is never less than the defined minimum order value.

Move Days

This is the length of time required to transport work to a given [work station](#) to perform an [operation](#). It is an element of inter-operation time.

Movement Type

This refers to the classification of movements by type of transaction, for example, sundry receipts, customer order issues.

MPS

Acronym for Master Production Scheduling

MPS Item

This is an item which is under the [scheduling](#) and planning control of Master Production Scheduling. It is typically an end product, critical sub-assembly, or key material.

MRP

Acronym for [Material Requirements Planning](#)

Multiple Order Quantity

This is a control parameter set for an item to control the suggested [supply](#) batch sizes recommended by [MPS](#) and [MRP](#). It defines the increments that are applied to a batch to meet a [demand](#) quantity. It sets a defined batch quantity and the ruling that a demand quantity must be supplied in whole batches of the set quantity. For example:

Demand = 110

Multiple order quantity = 20

Required = $110/20 = 5.5$ (which would convert to 6 batches)

Net Change

This is an [MRP](#) planning method, which is driven by exception conditions in the [supply](#) and [demand](#) status of an item (cf. [Regenerative](#)).

Net Demand

Net demand equals gross [demand](#) less [available stock](#), adjusted by [demand policy](#) parameters.

Net Requirements

The difference between [net demand](#) due on a day and the total suggested supplies planned to be available on that day, adjusted by pre-set [Order Policy](#) parameters

Non-Standard Production Orders

These are production orders that are not based on a standard production [route](#), but are created by the user to represent non-standard production [operations](#), [resources](#) or [input](#) requirements.

On Order

This is the quantity of an item for which outstanding purchase or production orders exist. It is expressed as a [balance](#) quantity at item/stockroom level.

On-Hand Quantity

This is the quantity shown in Inventory as being physically in stock. For [WIP inventory](#) it is calculated as the sum of the [Available](#) plus Subcontractor plus Held [balances](#).

Operation

A stage in the production [route](#) of an item

Operation Costs

These are the [costs](#) specific to individual production stages. In the [Extended edition](#) of the software, costs can be held at [route](#) and [operation](#) level as well as item level.

Operational Shrinkage

This is the percentage loss of [work-in-progress](#) as a result of performing an [operation](#).

Order Policy

Order policy is used by [MPS](#) and [MRP](#) when building a suggested [schedule](#).

Policies may be:

- Discrete
- Discrete above minimum
- Fixed quantity
- Number of days supply
- Multiples above minimum

Order Release

This is the point at which a production order is made available for processing on the shop floor. Materials may be allocated and issued at this point.

Order Status

This identifies the stage that a production order has reached.

Possible statuses are:

- Suggested
- Planned
- Confirmed
- Released
- Active
- Cancelled
- Completed

Organisational Model

The organisational model is a control mechanism based on a view of production [resources](#). The model enables the setting of important default values, and the definition of certain procedures and policy issues, which will be implemented at resource group level. To use this facility, [work stations](#) must be defined to an organisational model.

Output

This is an item produced as a result of a manufacturing process. It can be a single product, a co-product, [by-product](#), waste or an unplanned product.

Overdue Days (Planning)

This indicates the number of days of overdue [supply](#) and [demand](#) to be considered in [MPS](#) and [MRP](#) runs.

Overhead Rate

This is the rate per hour or percentage rate applied to absorb production overhead [costs](#) in to the item [unit cost](#). It is specified on [Cost Centres](#) together with an Overhead Recovery Method.

Overhead Recovery Methods

Different recovery methods are available based on production [costs](#), process time, material [inputs](#) or [outputs](#) in terms of values or quantities.

Overlapped Operations

An [operation](#) is defined as an overlapped operation if the next operation can begin before completion of the full quantity at the operation.

For example, if 100 items are to be made at operation 10 in batches of 10 but operation 20 can start when 5 batches have been completed at operation 10, then an overlap situation occurs and operation 10 is defined as overlapped. This will be taken into account by planning and [scheduling](#) functions.

Overload

The condition where a work station has more work scheduled to be performed than it has available time in a given period

Parameter File

This contains system- and user-defined codes which set control parameters or allow the amendment of standard code descriptions.

Phantom Item

This represents a collection of [inputs](#), which are collectively linked together via a 'phantom' item number. This is an item which is not physically stocked but which may be referred to as a generic route input, and will [trigger](#) the planning of its [component](#) parts via a phantom explosion.

Phantom Operation

A phantom [Bill of Material](#) is provided with a pseudo [operation](#) to link its [inputs](#) together on a [route](#). This is a [phantom operation](#), and it has no operational impact, although a [work station](#) may be assigned to the operation for the purpose of calculating material overheads when the phantom is introduced.

Physical Stock

This is the total quantity of an item in a stockroom. It is expressed as a [balance](#) quantity at item/stockroom level and also at [item stockroom](#) lot level.

Pick List

This is a document detailing the [inputs](#) required to be picked for a particular [operation](#) on an order or [production schedule](#). It is also referred to as a pulling list.

Planned Available

The quantity calculated to be [available](#) at any point in time if [MRP](#) or recommendations are implemented

Planned Down Time

See [Down Time](#).

Planned Material Scrap Rate

This is another way of expressing [input shrinkage](#).

Planned Production Order

This is a production order that is not yet confirmed, but represents an intention to generate a [supply](#). It does not have [input](#) and [operation](#) details, and is based on a standard production [route](#).

Planner

A logical grouping of items for the purpose of planning

Planning Filter

This determines the sensitivity of [MPS](#) and [MRP](#) rescheduling logic when balancing [supply](#) and [demand](#).

Planning Horizon

The end date of an item planning run in [MPS](#) or [MRP](#)

Planning Model

This is a method of defining a view of [supply](#) and [demand](#) for planning purposes. It is defined in terms of stockrooms. Multiple planning models may be defined to produce differing views of the production environment. One particular model must be defined as that from which [MPS](#) or [MRP](#) suggestions may be confirmed to production.

Planning Route

This is the [route](#) designated for an item to be used in the planning of its [input](#) materials and [scheduled](#) manufacturing dates and times in [MPS](#) and [MRP](#).

Planning Type

The planning category of an item, [MPS](#) controlled or [MRP](#) controlled

Potency

A percentage defining the strength of an item in an inventory lot

Primary Co-product

The dominant item in a set of process group [co-products](#), which is used to drive the planning for that group of [outputs](#)

Primary Process Group

For a co-product, which can be produced in a number of manufacturing process groups, this is the process group to be used as the preferred group in its [costing](#) calculation.

Primary Stockroom

This is the default stockroom for issuing and receipt of an item, when defining a [route](#). On [costing routes](#), the issuing stockroom for an [input](#) must be its primary stockroom.

Priority

This is the relative importance of an order in the work flow. It is used to control the sequence of jobs queuing at [work stations](#).

Process Group Type

The parameter that indicates whether or not the item is a process group in which multiple [co-products](#) may be defined

Process Route

This is a definition of the processes, that is, [operational](#) stages, and materials required to produce an item or set of items. It may also be referred to as a production [route](#).

Process Yield

This is the yield of a [process route](#). It is calculated as the ratio of [inputs](#) to the [route](#) to [outputs](#) from the route.

Product Family

This is the grouping of related items for forecasting and planning purposes. Group codes are defined on the Inventory Management, [Descriptions File](#), and entered against items in the Inventory Management Product Group Minor field.

Production Calendar

This is the definition of the production environment in terms of working days, non-working days, holidays and shutdown periods.

Production calendars, once defined may be assigned to:

- Company profile
- Work stations
- MPS/MRP planning profiles

Production Lead Time

This is the amount of manufacturing time required to produce an item from its immediate [inputs](#) and [operations](#). No reference is made to the [lead time](#) of its inputs.

Production Schedule

The plan which contains the sequence and timings of items and [operations](#) to achieve the planned production [output](#)

Production Sequence (Major)

An item parameter, which controls the sequence in which items are planned in [MPS](#) and [MRP](#)

Production Sequence (Minor)

An item parameter which controls the sequence in which item [operations](#) are performed, recognising the need to make products in a preferred sequence due to, for example, colour change or [set up costs](#)

Quantity Per

This is the standard quantity of an [input](#) that is required to make its standard parent lot size.

Quantity Reporting Policy

This policy determines how a [WIP inventory](#) quantity booked is interpreted. The quantity recorded may represent the total quantity inclusive or exclusive of scrap and held values.

Queue Time

This is the length of time that a job will wait, on average, at a [work station](#) after arrival before it is worked upon. It is an element of inter-operation time, and should be reduced wherever possible.

Re-order Point

This is the quantity of an item in a stockroom which, when reached, should [trigger](#) a re-order action. It may be set manually. This Inventory value is used as the [safety stock](#) value when using [cellular planning](#). In non-cellular planning, safety stock is taken from the production item master file.

Recipe

See [Bill of Material](#).

Recommended Supply Orders

Suggested replenishments generated by [MPS](#) and [MRP](#) to support defined inventory stocking policies and to meet outstanding [demand](#)

Regenerative

An [MRP](#) planning method in which every MRP controlled item is re-planned, regardless of its [demand](#) and [supply](#) status

Release Lead Time

This is the time set against a [lot controlled](#) item to represent a standard delay between its manufacture or purchase date and its availability for further use or despatch. This [lead time](#) is expressed in its [Release Lead Time Unit](#).

Release Lead Time Unit

This indicates the unit in which the [Release Lead Time](#) is measured.

It may be:

- Days
- Weeks
- Months
- Years

Released Lead Time Policy

This parameter is pertinent to [lot controlled](#) items and allows a set time delay to be taken into account during planning.

Released Production Order

This is a production order which has been released to the production process, that is, the shop floor. [Inputs](#) may be allocated and issued to it, and production activities may be booked against it. Any [bookings](#) of material or production will automatically change its status to Active.

Repetitive Manufacturing

This is the style of manufacturing in which high volumes of similar products are produced. Typically, production orders are *not* used in these environments but daily production is [scheduled](#) against [work stations](#) by item and quantity.

Reporting Profile

Although [MPS](#) and [MRP](#) calculate [supply](#) and [demand](#) on a daily basis, information pertaining to the production plan may be [bucketed](#), that is, grouped into time slots, in accordance with a reporting profile defined for each [planning model](#). Usually, this requires the grouping of data into small time periods at the start of the plan then longer time periods as the plan moves out into future periods.

Reporting Type

On a [process route](#) this indicates whether an [operation](#) is a [count point](#) for [WIP inventory](#), or a [backflush](#) (non-count) operation. The last operation must be a count point.

They are a part of standard processing rules and transactions, which control the effects of [booking](#) production.

Resources

These are the facilities which contribute to the production of items.

Within the Production system, these comprise:

- Cost centres
- Work stations
- Work centres
- Production calendars
- Shift profiles
- Labour grades
- Operators
- Crews
- Subcontractors

Revision Level

Indicates the current revision level of a [route/structure](#)

Rework

This is work necessary to correct a sub-standard item rejected during or after its manufacture.

Rough Cut Capacity Planning

This is a method of testing the feasibility of an [MPS](#) plan by comparing the planned [capacity requirements](#), that is, the [load](#), with available [capacity](#) at the required production [resources](#) at the times required. This may be completed at early planning stages to highlight [bottleneck](#) or [overload](#) situations before firming or progressing the plan.

Rough Cut Route

This is the summary bill of [capacity](#) used in [Rough Cut Capacity Planning](#), that is, a [route](#) or structure that may be set up purely for the purposes of rough cut capacity planning and may be an abridged version of the usual [planning route](#).

Route

A definition of the [operational](#) stages involved in producing an item, sequenced in order of manufacture, and specifying the [inputs](#) required in terms of materials and [resources](#)

Route Code

This is the identification code representing an item structure and production method. There can be different [routes](#) created for an item. A preferred planning and [cost route](#) can be defined.

Route/Structure

This defines both the [route](#), that is, the production stages, and material requirements, that is, the [Bill of Materials](#) required to produce an item.

Run Time

The length of time required by an [operation](#)

Safety Lead Time (Planning)

This is used to set an end date beyond the [cumulative lead time](#) of an item. The end date is calculated as item horizon plus safety [lead time](#).

Safety Stock

The desired level of stockholding for an item to support a customer service or availability policy

Sales Forecast

This is a statement of the anticipated market [demand](#) for a product. It can be compared with actual sales orders, in [MPS](#) or [MRP](#) calculations to determine the [net demand](#) to be met by production. This is dependent upon the [Demand Policy](#) code set for the item.

Schedule

See [Production Schedule](#).

Schedule Control

An environment in which item/[work station schedules](#) are used in preference to production orders - usually in a high volume, repetitive form of production

Schedule Controlled Item

This is an item that is [schedule](#) and not production order controlled in [MPS](#) and [MRP](#) processes. A production order can be raised if required.

Scheduled Receipt

This is a planned [supply](#) in [MPS/MRP](#): it may be a released or active production or purchase order or a suggested or confirmed [schedule](#).

Scheduling

The process of calculating and suggesting due dates, quantities and action dates for the [supply](#) of an item to meet required [demand](#) quantities and dates

Seasonal Profile

This is a method used to spread forecasts using indices for each forecast period and entering a total figure to spread. It can be used to speedily determine forecast values which display seasonal fluctuations.

Serial Number Control

A form of [lot control](#), which maintains single, uniquely identified (serialised) units

Set Up

This is the activity of preparing machines or processes for production. [Set up time](#) forms part of the [lead time](#) of an [operation](#).

Set Up Time

This is the duration of the [set up](#) for a [work station](#). It is expressed as a [labour time](#).

Shelf Life

The life of an item expressed in its [Shelf Life Unit](#)

Shelf Life Unit

This indicates the unit in which an item's [shelf life](#) is measured.

It may be:

- Days
- Weeks
- Months
- Years
- Unlimited

Shift Length

The duration of an individual working shift for a [work station](#)

Shift Profiles

These describe the pattern of shifts in a day. Shift profiles use effectivity dates to reflect planned changes in patterns. A default shift profile may be assigned to a work station, or a shift profile assigned to each working day within a week at a work station. The shift profile defines the number of productive hours [available](#) on a working day.

Shipper Number

A number assigned to each shipment of items to or from a subcontractor if [Shipper Tracking](#) is in use

Shipper Tracking

A method of tracking materials or [WIP inventory](#) to or from subcontractors

Shrinkage (Material)

The planning factor applied to an [input](#) on a [route](#) to reflect expected loss

Shrinkage (Operation)

This is the planning factor applied to an [operation](#) to reflect expected losses. [Scheduling](#) uses the factor to inflate the standard times to make the required lot size.

Shrinkage Cost

This is the amount of item [unit cost](#) attributable to [operational](#) or material shrinkage in the production process. It is held by [Cost](#) Element and can optionally be consolidated into the item [cost elements](#). A shrinkage element can be configured to display the total shrinkage cost.

Simulated Cost

A function which projects product [costs](#) by applying variables to the cost structure to ascertain likely future costs, or by changing [inputs](#) to ascertain the cost impact of the changes

Single Level Enquiry

A one level explosion of a [bill of material](#) and [route](#) and which [costs](#) the [inputs](#) and [operation](#) processes required to make the parent item

Smoothing Policy

A planning policy which smoothes sale forecast [demand](#) to provide a level [production schedule](#)

Specification Ref

This refers to the way in which an item is specified.

Standard Capacity

The daily [capacity](#) in hours of a [work station](#) when operating at its normal rate, and normal shift patterns

Standard Capacity Factor

This may be applied to a shift profile to determine the standard number of hours available at a [work station](#). In situations where the work station comprises multiple machines or personnel, the factor will represent the number of machines and people at that work station. For example, for a shift profile of 10 hours at a work station where 2 machines operate, a [capacity](#) factor of 2 would be entered, to indicate a [standard capacity](#) of 20 hours.

Standard Costs

This is a [costing method](#) available in Production and Inventory. Standard costs are calculated for items based on standard [cost](#) rates and [operation](#) times and the standard costs of [inputs](#). They form the yardstick for performance measurement in a given period.

Standard Efficiency

This is the percentage of the [standard capacity](#) of a [work station](#) which you expect to achieve under normal [operational](#) circumstances. This percentage may be used in [capacity planning](#) enquiries and reports.

Standard Lot Size

Standard batch size in terms of which [input](#) quantities and [operation](#) times are expressed in a [route/structure](#)

Standard Potency

This is the standard strength of an item expressed as a percentage. It applies to lot-controlled items only.

Standard Production Orders

Production orders which are based on a standard [route](#) to obtain [input](#) requirements and [operation](#) details

Start Date

The scheduled release date of a production or purchase order or [schedule](#)

Start Date (Planning)

This is the first date considered by [MPS](#) and [MRP Demand](#) and [Supply](#) prior to this date is ignored. It is the Current Date less Overdue days set for the planning run.

Stock Forecast

A forecast used in [MPS](#) and [MRP](#) to plan variable levels of inventory availability to maintain desired customer service levels over and above standard [safety stock](#).

Stock Monitor

This is an Inventory Management function, which maintains the integrity of lot-controlled stock availability. It determines whether a lot is available or has passed its [Last Available Date](#) or [Expiry Date](#). All lots are frozen when the Last Available Date is passed.

Stock Run-out Policy

This controls the planning of requirements of an item based on its stock [balance](#), rather than effective dates.

The available policies are:

- Use up stock and do not re-plan
- Use up stock and then use a nominated replacement item or items

Subcontract Operation

This is work on the production of an item that is carried out by another manufacturer. It entails sending materials or [WIP](#), which are worked on by the subcontractor before being returned for further [operations](#), or quality inspection or receipt into stock.

Subcontractor Stockroom

This is a [logical stockroom](#), which holds all subcontractor material [balances](#). Subcontractor [WIP inventory](#) balances are held as balances at [operations](#) in the associated [work station WIP location](#).

Substitute

This is an item which has been designated as an allowable replacement for another item. It may be issued in whole or part to a production order, if there is insufficient stock of the primary item.

Substitution Policy

This is defined on a [route/structure input](#) item definition, indicating whether it is permissible to use a [substitute](#) item if there is a stock shortage of the primary item.

Suggested Production Order

An [MPS](#) or [MRP](#) recommendation to create a production order to satisfy a shortage identified by the planning process

Suggested Purchase

An [MPS](#) or [MRP](#) recommendation to create a purchase order to satisfy a shortage identified by the planning process

Supply

The planned or [scheduled receipt](#) of item quantity from a purchase order or production order or a [production schedule](#) item

Target Yield

Desired yield of a [route](#)

This Level

The final level of manufacture for an item with a multi level [route/structure](#), as opposed to lower levels of manufacture such as sub-assemblies

Time Basis Code

This is the code indicating how [operation](#) times are expressed on a [route](#).

Codes are:

- Time per lot
- Time each
- Quantity per hour
- Fixed time
- Time per 1000
- Time per 100
- Time per fixed batch

Time Booking Policy

This parameter is set on the [Organisational Model](#) to control the time [booking](#) format in Production reporting. It may be in decimal hours or hours and minutes. This policy is set only if the [Time Reporting Policy](#) is set to elapsed time.

Time Fence

This is the period between the current date and the time fence date. During this time fence, the [schedule](#) is fixed and no recommendations are made by [MPS](#) or [MRP](#) to change existing production or suggest new production.

Time Fence Days (Planning)

The number of days that are added to the Current Date to calculate the [Time Fence](#) Date

Time Fence Policy

Parameter set at item level indicating whether shortages occurring within the [time fence](#) should be ignored, or satisfied on the Time Fence Date

Time Reporting Policy

This parameter is set on the [organisational model](#) to control the format in which operator and [work station](#) times at an [operation](#) are entered. It may be set for entry as elapsed time or as work start time and stop time.

Time Units

These are the units in which [operation](#) times are expressed. They are defined in the [company profile](#) and can be in hours or minutes.

Total Shelf Life

This is the life of an item lot. The [shelf life](#) is added to the [Creation Date](#) to calculate the [Expiry Date](#).

Transaction Manager

This is the function that processes production and [WIP inventory](#) transactions, generates movement records and updates [balances](#). It runs in its own subsystem and may be started and stopped. It must be running in order to keep balances and transaction details up to date during production [bookings](#).

Transaction Number

Each production [booking](#) entered on the system is allocated a system transaction number which may be accessed and displayed for subsequent reference in enquiries and reports.

Transaction Type

These are System21 transaction codes, which represent a particular [balance](#) update or movement generation. The transaction type calls a program, which ultimately updates the database.

Trial Kit

A method of simulating [input](#) allocation to a production order or [route](#) to assess availability to meet the requirements (also known as Material Availability Enquiry)

Trigger

This is the mechanism used to drive [Net Change MRP](#). Item Triggers are created when transactions are recorded for unplanned events.

Triggers may be generated through:

- Maintenance changes
- Sales, purchase or production orders
- Set up changes
- Stock issues and receipts
- MPS/MRP schedule amendments

Trigger Tolerance

This is the percentage (above or below) of [safety stock](#) which, if breached by the projected [available stock](#), will cause a [net change trigger](#) to be written for the item.

Unit Cost

The amortised [cost](#) of a single unit of an item

Unplanned Issue

Issue of [inputs](#) to a production order, which has not been previously allocated

Unplanned Receipt

Receipt into inventory of an item or items not expected at the [booking operation](#), i.e., not standard on the [route](#), or order.

Usage

The quantity of an item issued from a stockroom in a given period

Usage Profile

A user defined profile which specifies the pattern of periods to be included in the calculation of [average usage](#)

Utilisation

The extent to which the [capacity](#) of a [work station](#) is expended by actual work performed

Value/Usage

This is the value/usage setting for an item in Inventory. It positions the item in a matrix of value/usage. It is a selection criterion for selective [MRP](#).

Variance

A difference between the standard [cost](#) or volume of a process and the actual recorded cost or volume

Waste Product

An [output](#) from a [process route](#) which does not have any intrinsic worth or saleable value and which may incur a [cost](#) in its disposal or shortage

WIP

Acronym for Work-in-progress (also known as Work-in-process)

WIP Inventory

[Work-in-progress](#) inventory, transparent to Inventory Management, but accessible through enquiries in Production WIP Inventory Control

WIP Location

A WIP location is a stockroom that has been logically associated with one or more [work stations](#) as the stockroom to hold [WIP inventory balances](#) produced at [count point operations](#).

Work Centre

This is a collection of [work stations](#) that have been grouped together for [capacity requirements](#) analysis purposes. Work centres are not used in planning or work station [scheduling](#).

Work Station

The standard production unit or facility for which [capacity requirements](#) are measured

Work Station Schedule

A daily work plan for a [work station](#), containing item and order quantities and duration of [set up](#) and operating hours

Work-in-progress

This is the value of work currently underway in the factory in terms of the material issued, and the [operations](#) performed. For a given order or [schedule](#), it is calculated as the value of material and work [input](#) less the value of receipts made into stock. Work-in-progress (WIP) can be valued at standard or [current cost](#).

Yield Item

This is an item that is sensitive to yield either as an [input](#) or an [output](#). Yield is the ratio of total quantity of outputs compared to the total quantity of inputs.