



Infor System21 Forecasting

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 Forecasting Module.

Intended audience

The guide is intended for any users of the FC Forecasting business module.

Related documents

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

Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at www.infor.com/inforxtreme.

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Introduction

Forecasting provides a method of avoiding costly stockouts and inventory excesses which inhibit cash flow. This is particularly true when the forecasts are used to drive the creation of supply plans within DRP and MPS/MRP applications.

The Forecasting application contains seven simple forecasting methods. They are methods which people use every day, such as:

- Whatever was sold in the last three periods divided by three is what will be sold in the next period.
- Whatever was sold in the last twelve or thirteen periods divided by twelve or thirteen is what will be sold in the next period.
- Whatever was sold in the corresponding next three periods of last year divided by three is what will be sold in the next period.

These are simple forecasting methods. The application selects the one best method to forecast this [item](#), or [group](#) of [items](#), at this moment in time. This is done through a process of [simulation](#), where the application goes back in time, evaluating each formula for each item or group of items.

The application projects these simulated periods, using each of the methods, pretending they did not happen. Whichever forecast method best projects these periods that have already happened, by comparing their forecasts with actual data, is the one the application uses to predict the future.

Forecasting goes through this simulation every time the period end forecast run is invoked. It is a dynamic simulation. To pick the one forecast method that worked best, the application calculates a forecast error percentage. The closer to zero the error is, the better the method. The actual sales are extracted from the Sales Analysis application.

This is the whole Forecasting approach - it simply picks the forecast method which is most likely to work in the future, for each item at that time.

Relationship to Other Applications

The Forecasting application is a fully standardised application, and as such operates under the control of System Manager. Forecasting is one of the [group](#) of Advanced Application Modules that extends the functionality of Base Application Modules.

The applications which are prerequisite for the operation of Forecasting are:

- Inventory Management
- General Ledger
- System Manager

[Item](#) information is extracted from the Inventory application. Sales history can, if required, be extracted for these items from the Sales Analysis application.

However, if these applications are not installed, it may be possible to obtain this information from equivalent applications. Contact your software support organisation for further details.

In addition to this, the application is designed to be used in conjunction with, and to enhance, the following applications:

- Distribution Requirements Planning
- Material Requirements Planning
- Master Production Scheduling
- Service Management

Note: *Although demand can be extracted from Service Management, it cannot currently be extracted from Equipment Servicing.*

Once Forecasting has generated forecasts, and these have been reviewed and manipulated, they may be transferred into DRP and/or Material Requirements Planning/Master Production Scheduling. This can be done at Minor Item [Group](#) or Item Level.

Alternatively, this Requirements file could be downloaded to a PC for further evaluation.

Application Configuration

Like all applications, Forecasting can be operated for a number of companies, the characteristics of each being maintained on control files. Forecasting does not use control data stored for any other application. The policies which can be controlled for each company are:

- Period (month) descriptions
- Backup parameters
- Forecast formula descriptions
- Interface defaults
- Sales Analysis database details

- 12 or 13 periods forecasting

Forecasting can take place at two levels - Minor Item Group (as defined in Inventory Management) and Item. Every [group](#) or [item](#) must have a profile record in this application.

The Item code used in Forecasting must match the one in Inventory Management. If sales history is required, it is extracted from Sales Analysis files.

Forecasting enables the creation and transfer of forecasts for individual locations or groups of locations. This is achieved by defining Forecasting Models.

A Forecasting [Model](#) is any logical grouping of Inventory stockrooms. This may represent a Central Warehouse, a Distribution [Centre](#), a Manufacturing facility, or any other meaningful association.

Forecasting can be adapted to use either 12 or 13 periods per year. Tasks exist within the Forecasting application to extract items from Inventory Management and sales quantities from Sales Analysis for selected models. Depending on whether 12 or 13 period forecasting is selected, a thirty-six or thirty-nine period sales history is extracted and stored in the application. This history is also aggregated and stored at Minor Item Group level.

Forecasts are generated and maintained for selected models.

Forecasts can be transferred into DRP and/or Production applications at Minor Item Group or Item level for selected models.

In addition to the period [spread profile](#) in Forecasting, the spread profile can be extended to include [seasonal profiles](#) from annual to period, period to weekly, and weekly to daily when transferring forecasts into DRP and/or Production applications.

Backup routines are built into the Forecast Period End task and may be selected with relevant parameters in the company profile.

Forecasting Methods

Seven forecasting methods are available within this application. These methods vary slightly according to whether 12 or 13 periods per year have been selected. Below is a list of abbreviations used in the forecast analysis:

NPF	Next Period Forecast
L3P	Sum of last 3 periods' sales
L12P/L13P	Sum of last 12 or 13 periods' sales respectively
2NPLY	Two times next period sales last year
NPYBL	Next period sales year before last
N3PLY	Sum of next 3 periods' sales last year
L3PLY	Sum of last 3 periods' sales last year
LP-5	Sales 6 periods ago
LP-4	Sales 5 periods ago
LP-3	Sales 4 periods ago
LP-2	Sales 3 periods ago
LP-1	Sales 2 periods ago
LP	Sales last period

Each method corresponds to a separate computer program. Any addition of further forecasting methods will require new programs to be written. Contact your software support organisation for further details. However, the description held against any of the existing seven forecasting methods may be amended in the company profile. The following descriptions relate to 12 periods a year.

Forecast Method A

Formula: $NPF = L3P / 3$

Method A calculates the next period forecast as the sum of the last 3 periods' sales divided by 3.

Example:

If the [item](#) had the following sales history for the last 36 periods and method A was chosen, the forecast would be as shown:

Period	1	2	3	4	5	6	7	8	9	10	11	12
3 Years ago	402	912	704	588	762	581	728	1004	698	412	802	879
2 Years ago	1259	853	695	690	939	655	661	697	880	528	861	1096
Current Year	1161	1137	926	820	841	761	752	961	759	702	733	818
Forecast	751	767	779	76	771	772	770	771	771	771	771	771

Note: The first forecast is a third of periods 10, 11 and 12 and the second forecast is a third of periods 11, 12 and 01.

From the above example,

$$\begin{aligned} \text{NPF for Period 1} &= (702 + 733 + 818) / 3 \\ &= 751 \end{aligned}$$

Forecast Method B

Formula: $NPF = L12P / 12$

Method B calculates the next period forecast as the sum of the last 12 periods' sales divided by 12.

Example:

If the [item](#) had the following sales history for the last 36 periods and method B was chosen, the forecast would be calculated as shown:

Period	1	2	3	4	5	6	7	8	9	10	11	12
3 Years ago	402	912	704	588	762	581	728	1004	698	412	802	879
2 Years ago	1259	853	695	690	939	655	661	697	880	528	861	1096
Current Year	1161	1137	926	820	841	761	752	961	759	702	733	818
Forecast	864	840	815	806	804	801	805	809	796	799	808	814

Note: The first forecast is a twelfth of periods 1 to 12, and the second forecast is a twelfth of periods 2 to 12 and forecast 01.

From the above example,

$NPF \text{ for Period 1} = (1161 + 1137 + 926 + 820 + 841 + 761 + 752 + 961 + 759 + 702 + 733 + 818) / 12$

$= 1037 / 12$

$= 864.25$

Note: If 13 periods have been specified, the formula is based on $L13P / 13$.

Forecast Method C

Formula: $NPF = (2NPLY + NPYBL) / FACTOR$

Method C calculates the next period forecast as twice next periods' sales last year, plus next periods' sales from the year before last, divided by a factor.

To determine the factor, calculate $NPLY / NPYBL$.

- If this is greater than or equal to 1.5, use 2 as the factor.
- If this is less than or equal to 0.25, use 4 as the factor.
- If the result falls between 0.25 and 1.5, use 3 as the factor.

Example:

If the [item](#) had the following sales history for the last 36 periods and formula C was chosen, the forecast would be calculated as shown:

Period	1	2	3	4	5	6	7	8	9	10	11	12
3 Years ago	402	912	704	588	762	581	728	1004	698	412	802	879
2 Years ago	1259	853	695	690	939	655	661	697	880	528	861	1096
Current Year	1161	1137	926	820	841	761	752	961	759	702	733	818
Forecast	1194	1042	849	777	874	726	722	873	799	644	776	911

The forecast for period 01 is calculated as follows:

NPLY = 1161

NPYBL = 1259

$NPLY/NPYBL = 1161 / 1259$

NPF = 0.922 therefore the factor will be 3

(i.e. value between 0.25 and 1.5)

$= ((2 \times 1161) + 1259) / 3$

= 1193.66

Forecast Method D

Formula: $NPF = (2NPLY + NPYBL) / 3$

Method D calculates the next period forecast as twice next periods' sales last year plus next periods' sales from the year before last divided by 3.

Example:

If the [item](#) had the following sales history for the last 36 periods and method D was chosen, the forecast would be calculated as shown:

Period	1	2	3	4	5	6	7	8	9	10	11	12
3 Years ago	402	912	704	588	762	581	728	1004	698	412	802	879
2 Years ago	1259	853	695	690	939	655	661	697	880	528	861	1096
Current Year	1161	1137	926	820	841	761	752	961	759	702	733	818
Forecast	1194	1042	849	777	874	726	722	873	799	644	776	911

The forecast for period 01 is calculated as follows:

NPLY = 1161

NPYBL = 1259

$NPF = ((2 \times 1161) + 1259) / 3$

= 1193.66

Forecast Method E

Formula: $NPF = N3PLY / 3$

Method E calculates the next period forecast as the sum of the next 3 periods' sales from last year divided by 3.

Example:

If the [item](#) had the following sales history for the last 36 periods and method E was chosen, the forecast would be calculated as shown:

Period	1	2	3	4	5	6	7	8	9	10	11	12
3 Years ago	402	912	704	588	762	581	728	1004	698	412	802	879
2 Years ago	1259	853	695	690	939	655	661	697	880	528	861	1096
Current Year	1161	1137	926	820	841	761	752	961	759	702	733	818
Forecast	1075	961	862	807	785	825	824	807	731	751	875	951

The forecast for period 01 is calculated as follows:

$$\begin{aligned}
 NPF &= (1161 + 1137 + 926) / 3 \\
 &= 1074.66
 \end{aligned}$$

Forecast Method F

Formula: $NPF = ((N3PLY / L3PLY) \times L3P) / 3$

Method F calculates the next period forecast as the sum of the next 3 periods' sales last year divided by the sum of the last 3 periods' sales last year, times the sum of the last 3 periods' sales divided by 3.

Example:

If the [item](#) had the following sales history for the last 36 periods and method F was chosen, the forecast would be calculated as shown:

Period	1	2	3	4	5	6	7	8	9	10	11	12
3 Years ago	402	912	704	588	762	581	728	1004	698	412	802	879
2 Years ago	1259	853	695	690	939	655	661	697	880	528	861	1096
Current Year	1161	1137	926	820	841	761	752	961	759	702	733	818
Forecast	974	778	653	602	553	576	589	589	518	515	564	624

The forecast for period 01 is calculated as follows:

N3PLY = 1161 + 1137 + 926 = 3224

L3PLY = 528 + 861 + 1096 = 2485

L3P = 702 + 733 + 818 = 2253

NPF = $((3224 / 2485) \times 2253 / 3$

= 974.336

Forecast Method G

Method G calculates the next period forecast as sales 6 periods ago times 1, plus sales 5 periods ago times 2, plus sales 4 periods ago times 3, plus sales 3 periods ago times 4, plus sales 2 periods ago times 5, plus sales last period times 6, all divided by 21 (the number of periods calculated).

Note: This formula equates to a simple single-level [exponential smoothing](#) approach with a smoothing factor of around 0.15.

Example:

If this [item](#) had the following sales history for the last 36 periods and formula G was chosen, the forecast would be calculated as shown:

Period	1	2	3	4	5	6	7	8	9	10	11	12
3 Years ago	402	912	704	588	762	581	728	1004	698	412	802	879
2 Years ago	1259	853	695	690	939	655	661	697	880	528	861	1096
Current Year	1161	1137	926	820	841	761	752	961	759	702	733	818
Forecast	778	775	770	773	776	776	775	775	775	775	775	775

The forecast for period 01 is calculated as follows:

$$\begin{aligned}
 \text{NPF} &= [(752 \times 1) + (961 \times 2) + (759 \times 3) + (702 \times 4) + (733 \times 5) + (818 \times 6)] / 21 \\
 &= 16332 / 21 \\
 &= 777.71
 \end{aligned}$$

Maintenance of Reference Data

This application uses minimal primary data from the Inventory Management application. There is, however, additional information which must be entered in order to obtain maximum benefit from the application, such as:

- A generic search on item code
- Minimum use of codes and where they are employed: a prompt is always available to assist in selecting the correct one
- Selection is normally from a displayed list. Information for the following may be maintained:
 - Models
 - Group/Item Profiles
 - Sales History
 - Spread Profiles

Forecasting Models

Forecasting [models](#) enable the creation and transfer of forecasts for individual locations or [groups](#) of locations. For each forecast model, the following details are maintained:

- Model Code
- Model Description

Up to 30 characters may be maintained for the model record.

- Model Type
- Target Model

Any DRP Distribution [Centre](#) or Production Model, dependent on the entered Model Type

- Simulation Period
- Stockrooms

Any valid Inventory-defined stockroom directly attached to the entered DRP [DC/Centre](#) or Production Model

Group/Item Profiles

For a [model](#) to be processed by this application, a profile must be maintained for each [item](#) or [group](#) of items in the model. Group/item profiles contain details including:

- Model Code
- Simulation Period
- Locked In Forecast Method
- Conversion Factor

- Marketing Masks
- Text
- Description

Up to 35 characters may be maintained, per [group](#) and [item](#).

- Model Code

This assigns the item or group of items to a forecast [model](#). Items and groups of items can be assigned to several models. This enables forecasts created from the same Sales Analysis data to be maintained and transferred separately.

- Simulation Period

This is the number of months the month end run simulates when selecting the most accurate forecast method.

- Locked In Forecast Method

This is a specific forecast method which can be locked in for the group or item. The lock in forecast will be used to calculate the next 12 or 13 periods respectively, (no [simulation](#) is performed). Alternatively, the item can be flagged as manually forecasted. In this case the period end will ignore the item. If no locked in or manual method is specified, all forecast methods will be evaluated.

- Conversion Factor

This is an equivalent units [conversion factor](#) which allows you to convert items sold in different pack sizes into equivalent units.

The equivalent units are accumulated to item group level on all reports that print forecast quantity.

- Marketing Masks

These direct the program to adapt the calculated forecast for a selected group of items or an individual item so as to correspond to a changing market situation which is not evident in the past. They are particularly useful for promotional or new items.

The marketing masks consist of 12 or 13 sets of adjustment factors which correspond to the next 12 or 13 periods. These factors in the format 999.99 will be multiplied by the original forecast.

If the factor is 1 or 0, the forecast remains unchanged.

If all factors for the item are 0, the system will take factors from masks set up for the item's group.

- Text

Up to 999 lines of text may be maintained for each item and/or group.

This is for memo purposes only.

Demand History

For each [group](#) of [items](#), or individual item, the last three years' demand history may be amended for selected [models](#).

This is particularly useful for volatile items and new items just extracted from the Inventory Management application (which have no history).

Spread Profiles

[Spread Profiles](#) are required to download forecasts from this application into Distribution Requirements Planning (DRP) and Production applications. This is because these applications process forecasts on a weekly or daily basis whereas Forecasting deals with twelve or thirteen periods per year.

Processing

Processing for each [model](#) within this application can be divided into three distinct stages:

- Extracting groups of items and their sales
- Applying forecasting techniques
- Downloading forecasts

Extraction

This involves the extraction of selected [groups](#) of [items](#) from the Inventory Management application, followed by sales history for these groups and items from Sales Analysis. It must be noted that no profile records may be created until an associated [model](#) record has been created.

Items may be selected by Inventory Minor Item Group, or all items can be transferred together. This may be done as required. New items will be added to the Forecasting database, and existing item details will be updated.

Note: *Group/item profiles cannot be maintained in Forecasting until this combination has been extracted.*

Full sales history, or last period sales only, can be selected for extraction from the Sales Analysis application. The extraction of last period sales should be done immediately after Sales Analysis Period End has been run for the company, and before the Forecast Period End run.

These sales quantities are extracted for every [item](#) which has a profile defined in Forecasting. Item Sales quantities are aggregated to Minor Item Group level and are also stored as part of the [model](#) records.

The Transfer Full Sales History task will attempt to extract three years of sales demand from Sales Analysis.

Applying Forecasting Techniques

The Forecast Period End job will attempt to calculate forecasts for the next twelve or thirteen periods respectively, for all item/item [group](#) profiles defined within Forecasting. Groups or items having a locked in forecast method immediately use the corresponding formula to create forecasts. Items with a locked in [manual forecast](#) are ignored.

Otherwise, the process of [SIMULATION](#) is used. The application goes back in time evaluating each forecast method for each item and group of [items](#). This period of time, or [simulation period](#), is defined for each item/item group in its profile record.

The application predicts sales figures for the simulation period by applying each of the forecast methods. It then calculates the difference between the forecast sales figures and the actual sales figures for each period, i.e. the error.

The Forecasting application decides which is the best method by calculating forecast errors for each method. The error is expressed in terms of a percentage.

The totals are accumulated over the simulation period. The absolute value of this error percentage is used to compare methods.

There are seven forecasting methods supplied in this application, and used in this period end processing. For specific details of these methods, refer to the Application Configuration section.

Each of the seven methods has the forecast error percentage calculated and the method with the lowest error is selected to project forecasts for the particular item or group of items.

Note: *Forecasts created by the period end run can be manually changed by using the Forecast Manipulation task. This is identical to the Forecast Enquiry but with update facilities.*

Note: *Item Forecasts may be optionally aggregated up to Group Level using the Forecast Aggregation task.*

Downloading Forecasts

Forecasts can be downloaded into the DRP and/or Production applications. This can be done at Minor Item [Group](#) or [Item](#) Level.

Forecasts can be downloaded into a specified DRP [CentreDC](#) or a Production [model](#).

This will apply the DRP/Production [spread profiles](#) set up within Forecasting Maintenance and distribute the forecasts over working weeks/days.

Forecasts can also be downloaded into a Requirements file. This can then be removed from this application for further evaluation and downloaded into your own applications. Software programs must be written to achieve this.

Enquiries

You can select an enquiry to see forecasts for a specific [item](#), or a [group](#) of items within a selected [model](#). (A model is a grouping of Inventory stockrooms.)

Note: *Forecasts for the group are generated by the period end run using Sales History quantities stored for the group. Forecasting treats the group as just another set of figures to be evaluated.*

The Forecast enquiry displays the last three years' sales demand figures, together with the forecasts for the next year.

Also shown is the code for the forecast method selected together with the calculated forecast error.

The forecast method code can be changed to one of the other seven. This results in the forecast quantities being re-calculated and displayed. No update is performed, as this is for viewing the impact of changes without affecting the data.

A bar chart is also available for displaying these quantities pictorially.

Note: *This only applies to a 5250 emulation such as Client Access. Bar charts are currently not fully supported in Workspace.*

Reports

As part of the general policy of applications, selection parameters are available where appropriate before a report is run.

In general, reports are printed on standard listing paper with 132 print positions and 6 lines to the inch.

All reports are printed with the procedure or program number in the top left-hand corner and the page number, date and time in the top right-hand corner.

The reports can be grouped into one of three categories:

- Forecast Details
- Forecast Performance
- Static Information

Forecast Details

The Demand Forecast report provides a detailed listing of all forecasting [items](#), showing the forecasts for the next 12 or 13 periods. Cost and/or sales values may also be output on the report. A range of [models](#) and [groups](#), or all items, may be selected. Totals are accumulated and printed for groups.

The Detail Forecast report shows the last three years' sales history as well as the forecasts for the next year. This is by quantity only. Selection and totals are as per the Demand Forecast report.

Forecast Performance

The [Forecast History](#) report outputs details of historical forecast, and the actual sales demand for comparison. This shows only the latest forecast for each period, together with the actual sales.

The Forecast Evaluation report shows historical and predicted forecasts for each period, together with the actual sales for comparison. Up to 6 periods of historical and 12/13 periods of predicted forecasts are included.

Static Information

Item profiles, group profiles and marketing mask details may be selected for printing.

Implementing Forecasting

After installing the software provided, the recommended steps for implementing Forecasting are outlined as follows:

- 1 Define and create the company profile
- 2 Define and create Forecasting [models](#)
- 3 Run the Transfer [Item](#) Details processing task.
- 4 If necessary, review the profile records created by Step 3, particularly those allocated to the dummy [group](#) 999, as these have no Minor Item Group defined to them in the Inventory Items file.
- 5 Re-run the Transfer Item Details task, if necessary.
- 6 Run the Transfer Full Sales History processing task.
- 7 If necessary, review/maintain the demand history created by Step 6 via the appropriate maintenance task, or the Detail Forecasts report.
- 8 At the end of the current period, after Sales Analysis period end has been run, the Forecasting Transfer Last Period Sales processing task must be run.
- 9 If necessary, review/maintain the last period's demand quantity created by Step 8 via the appropriate maintenance task.
- 10 Run the Forecast Period End processing task.
- 11 Review/maintain the forecasts created by Step 10.

Note: Steps 8-11 must then be followed for subsequent periods and can be scheduled to run automatically via Machine Manager

Preparing to Use Forecasting

Preparing to use the Forecasting application requires careful planning and preparation. Your existing forecasting procedures and data need to be transferred to the application.

Entering Basic Data

You must initialise your application by entering the following basic data:

Company Profile

This is a record which contains control and parameter information for the operation of your company within the application and the definition of the links to attached modules.

The primary information maintained per company is as follows:

- Company name
- Current period and year
- Period names
- Backup parameters
- Activate conversion flags (Yes/No)
- Forecast history save period (in periods)
- Forecast method descriptions
- Seasonal profiles flag
- Interface company code
- Sales Analysis database details
- Default forecasting model (optional)

Within each company, the reference data described in the remainder of this section must be maintained.

Forecasting Models

These [models](#) enable the creation and transfer of forecasts for individual locations or [groups](#) of locations.

Items

These must be defined in the Inventory Management Items file. Forecasting extracts [items](#) from this source to create profile records in the Forecasting database.

Minor Item Groups

These should be defined in the Inventory Management Parameters file and allocated to appropriate items in the same application.

Forecasting extracts these groups, if selected, and creates a profile record for each group within the Forecasting database.

The Minor Item Group must also be defined in the Sales Analysis application for the appropriate company.

Forecasting extracts invoiced sales from Sales Analysis at item level, and accumulates these quantities at minor item level before updating them in Forecasting at both levels.

The Forecasting application expects that the Stockroom (depot), Minor Item Group and Quantity fields exist within the Sales Analysis database. If this is not the case, please contact your software support organisation.

Demand History

The demand history for the last three years is created using the Transfer Full Sales History processing run.

DRP Spread Profile

If Distribution Requirements Planning is installed, a [spread profile](#) must be used to split the period forecast quantities into weekly or daily quantities for DRP.

You have the option of specifying a weekly spread profile in Forecasting, or to use the weekly and daily spread profiles defined in DRP. It is unnecessary to set up both: only one will be used (based on the company profile [Seasonal Profiles](#) setting).

When you are defining the spread profiles in Forecasting, the appropriate DRP weekly calendar for each period is displayed. Against each week a percentage is entered.

The second option will automatically recognise the spread profiles already defined and maintained in DRP.

These spread profile records are used by the Transfer Forecasts to DRP task within Forecasting.

MPS/MRP Spread Profile

If Master Production Scheduling and/or Material Requirements Planning are installed, spread profiles can be used for the same purpose as described above.

Preparing to Use Forecasting

Forecasting is one of a [group](#) of advanced modules that extend the functionality of the System21 base modules.

The following modules are prerequisites for the operation of Forecasting:

- Inventory Management
- General Ledger
- System Manager

After installing the software, the recommended steps for implementing Forecasting are outlined as follows:

- 1 Define and create the company profile. This contains the control and parameter information for your company; it also defines any links to attached modules. Forecasting uses some primary data from Inventory Management but to get maximum benefit from Forecasting, you need to enter additional information, beginning with the company profile.
- 2 Define and create forecasting [models](#). Using forecasting models allows you to create and transfer forecasts for individual locations or [groups](#) of locations or both. A forecasting model is any logical grouping of Inventory stockrooms. This may represent a central warehouse, a distribution centre, a manufacturing facility, or any other association meaningful to your business.
- 3 Run the Transfer Item Details task. This transfers the details of the [items](#) that you want to use in Forecasting, from Inventory Management. The process creates a profile for each item or group, using the minor item group codes from Inventory. Existing profile details are updated.
- 4 Review and maintain the profile records created by step 3 in the Maintain Profile task, particularly those allocated to the dummy group 999, as these have no minor item group defined to them in the Inventory Items file.
- 5 Run the Transfer Full Sales History task.
- 6 If necessary, review and maintain the demand history created by step 5, using the Maintain Demand History task or the Detail Forecasts report.
- 7 At the end of the current period after Sales Analysis period end has been run, run the Transfer Last Period Sales task.

- 8 If necessary, review and maintain the last period's demand quantity created by step 7 using the Maintain Last Period Demand task.
- 9 Run the Forecast Period End task.
- 10 Review and maintain the forecasts created by step 9, using the Forecast Manipulation task.

Note: Steps 7 - 10 must then be followed for subsequent periods. They can be scheduled to run automatically via Machine Manager.

Model Maintenance [1/FCM]

You use this task to create and maintain forecasting [models](#). You can use these models to create and transfer forecasts for individual locations or [groups](#) of locations.

Maintain Model Selection Window

To display this window, select the Model Maintenance task.

You use this window to select the model and stockrooms you want to maintain. If you want to define a model as the default model for Forecasting, you must already have defined the model code to the Forecasting company profile.

Fields

Model

Enter a two-character [model](#) code. This can be an existing code, or a new code to set up a new model.

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

Include All Stockrooms

When you create a new model, use this checkbox as follows:

Unchecked - To enter individual stockroom codes

Checked - To include all stockrooms in the model

If you **check** this, all existing stockrooms, as defined in Inventory Management against this model, are displayed on the Maintain Model Details window. You can delete stockrooms that you do not require.

Note: You must leave this field unchecked to maintain stockrooms individually within an existing model.

Press Enter to display the Maintain Models Details window. If you are creating a new [model](#), a confirmation window is displayed. **Select Create (F8)** to continue creating the new model.

Maintain Model Details Window

To display this window, either select an existing model code and then press Enter or enter a new model code and then select **Create (F8)** on the Maintain Model Selection window.

You use this window to maintain model details.

The model code you entered on the previous window is displayed. If the model already exists, the software displays the current stockrooms. You can amend them if you want. If you are creating a new model, the Stockroom field will either be blank or be populated by all stockrooms for the company, depending on the setting of the Include All Stockrooms field on the previous window.

Fields

Description

You must enter a description of up to 35 characters for this model.

Model Type

You must enter one of the following to define the model type:

- 1 If the forecasts for this model will be transferred to a DRP distribution centre
- 2 If the forecasts for this model will be transferred to a DRP centre
- 3 If the forecasts for this model will be transferred to a production model
- 4 If the forecasts for this model will be transferred to another destination or held internally only

Target Model

Enter the code of the destination of the forecast.

Alternatively, use the prompt facility to select from a pop-up. The pop-up displayed will depend on the model type you have entered.

The destination must be compatible with the model type previously selected.

Model type 1 must have a DRP distribution [centre](#) as its destination.

Model type 2 must have a DRP [centre](#) as its destination.

Model type 3 must have a production model as its destination.

Model type 4 cannot have any destination; the target model must be blank.

Simulation Period

Enter the number of periods to be used when comparing forecasts with actual demand figures to decide which forecasting method to use.

The default is 3, but you can enter a value from 0 to 13, depending on the number of periods you have defined for the company.

Enter Stockrooms to be Included

Enter the stockroom codes you want to include in the [model](#). Blank out any stockrooms that you do not require.

Select **Update (F8)** to validate all fields on the window and save the changes you have made.

Profile Maintenance [2/FCM]

You use this task to maintain a profile for each [group](#) of items, or individual [items](#), within each forecasting [model](#).

Caution: Forecasting only processes groups and items that have a profile defined. These profiles are created by the Transfer Product Details task; therefore this processing task must be run before maintaining item group profiles.

Profile Maintenance Selection Window

To display this window, select the Profile Maintenance task.

You use this window to select the [group](#) or [item](#) profile that you want to maintain.

Fields**Model**

Enter the [model](#) code to specify the forecast model for which you want to maintain the group item profiles.

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

Group

Enter a group code.

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

Note: A group code is a minor item group extracted from the Inventory Management application (using Transfer Product Details).

Item

You can optionally enter an [item](#) code. You can only use items defined to Inventory.

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

Note: *If you enter a group code and leave the item code blank, the Profile Maintenance Details window is displayed for the specified group. If you enter both codes, the Profile Maintenance Details window is displayed for the specific item.*

Press Enter to display the Profile Maintenance Details window.

Profile Maintenance Details Window

To display this window, specify a forecast [model](#), forecast [group](#) and optionally an [item](#) and then press Enter on the Profile Maintenance Selection window.

Use this window to maintain profile details for the selected item, or group of items within the selected model. You can also maintain text.

The model code you entered on the previous window is displayed. If the model already exists the details are displayed, and you can amend them. If the model is new, the fields are blank.

Fields

Model

This field displays the forecast model entered on the previous window.

Group

This field displays the group entered on the previous window.

Item

This is the item entered on the previous window.

Note: *If profile details exist for either a group or item, details are displayed. You can amend any of the existing information.*

Description

This field displays either the inventory minor [group](#) code description, or the [item](#) description, depending on whether you are maintaining a group or item profile. You can amend the description if necessary.

Lock-in Forecast

If you always want to use the same forecast method for this particular group or item, you can enter a [forecast code](#) here.

If you leave this field blank, Forecasting uses the forecasting method with the lowest calculated percentage error during the period end run.

If you use [manual forecasts](#) for this group or item, enter *. Forecasting accepts the group or item, but does not perform any calculations on it.

Note: You can enter manual forecasts through the Forecast Manipulation task.

Simulation Period

Enter the length of the [simulation period](#). If the currently used company profile has 13 periods defined per year, the valid range is from 0 to 13; otherwise it is from 0 to 12.

During the period end run, the value entered here determines the number of periods to apply the forecast method to in simulating the actual demand.

If the [item](#) period is 0, Forecasting uses the period defined for the [group](#). If both item and group periods are 0, the software uses the default of three periods.

Cost Price

Enter the cost price of the item. The default is one of the following, depending on the settings of the item's inventory details:

- The latest cost value from the stockroom balance record, if you have set the item's costing to latest
- The average cost value from the stockroom balance record, if you have set the item's costing to average
- The standard cost value from the stockroom balance record, if you have set the item's costing to standard

If the item's costing method is blank, the software uses the costing method from the Inventory company profile to determine the cost from the stockroom balance record.

Sales Price

This field displays the sales price of the item. It defaults from the base list price in Inventory Management. You can change the price if you want.

Conversion Factor

If you have set the Activate Conversion Factor field on the company profile to **1** (Yes), you can enter a [conversion factor](#) here.

The software uses this factor to convert [items](#) sold in different pack sizes into the smallest units.

For example, if you sell in boxes of 12 and also in single units, enter a [conversion factor](#) of 12 to make sure all forecasts are produced on the basis of the single units.

The quantities are not converted if you enter **0** or **1**.

Note: The cost price, sales price and conversion factor are blank if maintaining a group profile.

Marketing Masks (Untitled)

You can choose to enter 12 or 13 sets of adjustment factors, depending on whether the current company profile supports 12 or 13 periods per year. These adjustment factors correspond to the

next 12 or 13 periods respectively. They are used to multiply the original forecast to produce a [final forecast](#), and to adapt the calculated forecast to a changing market situation that is not evident from the sales history.

If the factor is **0** or **1**, the forecast is unchanged.

The period end run uses these masks. If all the masks for an item are 0, the application applies the masks for its [group](#), if appropriate.

For example, if you enter 1.10 then 10% will be added to the original forecast.

Note: *The Transfer Item Details processing run writes new profiles. This creates profiles for new minor item groups and new items.*

Note: *Select **Delete (F11)** to delete the profile from the file. This action writes an audit record.*

Functions

Text (F15)

Use this to display the Maintain Text pop-up for this [group](#) or particular [item](#).

Select **Update (F8)** to write the details to the Group Item Profiles file and write an audit record with before and after images.

Maintain Text Pop-up

To display this pop-up, select **Text (F15)** on the Profile Maintenance Details window.

You use this pop-up to maintain text for the selected [group](#) of [items](#), or for a specific item within the selected forecasting [model](#).

Any current lines of text for this group or item are displayed. The text is for memo purposes only.

Fields

Text Lines

You can enter up to 99 lines of text. Use **Page Up** and **Page Down** view all the lines.

Position To

Specify the line number to position at the top of the window and then press Enter.

Insert Lines

Specify the number of blank lines to insert and the line number after which to begin insertion. Press Enter to insert.

Delete Lines

Specify the number of lines to delete, and the line number at which to begin deletion. Press Enter to delete.

Functions**Refresh (F5)**

Use this to display text details as at the last update.

Select **Update (F8)** to update the file.

Demand History [3/FCM]

You use this task to maintain up to the last three years' sales history, either for a [group](#) of [items](#) or for a specific item within a selected forecasting [model](#).

Initially, extract the history using the Transfer Full Sales History processing run, and then use the Period End run to maintain it.

Note: *If you do not run the Transfer Full Sales History process before maintaining demand history, all fields on the detail window will be zero.*

Demand History Maintenance Selection Window

To display this window, select the Demand History task.

Use this window to select the forecasting [model](#) and the [group](#) or [item](#) for which you want to maintain demand history.

Fields**Model**

Enter the forecasting [model](#) for which you want to maintain demand history.

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

Group

Enter a [group](#) code.

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

Item

You can optionally enter an [item](#) code. If you do enter an item, it must exist in Inventory Management.

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

Note: *If you enter a group code, and leave the item blank, the software displays the Demand History Maintenance Details window for this group of items. If you enter both codes, the Demand History Maintenance Details window for the specific item is displayed.*

Press Enter to display the Demand History Maintenance Details window.

Demand History Maintenance Details Window

To display this window, specify a forecast [model](#), forecast [group](#) and optionally an [item](#) and then press Enter on the Demand History Maintenance Selection window.

Use this window to maintain the last three years of sales history for the selected item or group of items within the selected forecasting model.

Fields

Model

This field displays the selected forecast model.

Group

This field displays the selected group.

Item

This field displays the selected item.

Description (Untitled)

This field contains a description for the group or item from the profile record.

Delete Forecast

Use this checkbox as follows:

Unchecked - If you do not want to delete this information

Checked (default) - To delete the forecasts when you amend the history, so that misleading forecasts are not retained

Period

The software displays any sales history quantities found for the selected [item](#), or [group](#) of items.

You can change any of the 36 or 39 quantities. The number of periods will depend on how you set the period parameter in the company profile.

Select **Update (F8)** to write the quantities to the Demand History file and write before and after images to the Demand History Audit file.

Last Period Demand [4/FCM]

You use this task to maintain the last period's sales history quantity for a [group](#) of [items](#) or a specific item, within a selected forecasting [model](#). The quantity is originally extracted by the Transfer Last Period Sales task, is updated in Demand History, and zeroed by the Period End run.

Last Periods Demand Maintenance Selection Window

To display this window, select the Last Period Demand task.

Use this window to select the forecasting [model](#) and the [group](#) or [item](#) for which you want to maintain the last period's demand history.

Fields

Model

Enter a model code to specify the forecasting model for which you want to maintain the last period's demand history.

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

Group

Enter a group code.

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

Item

You can optionally enter an [item](#) code. The code must exist in Inventory.

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

Note: *If you enter a group code and leave the item blank, the software displays the Last Period Demand Maintenance Details window for this group of items. If you enter both codes, the software displays the Last Period Demand Maintenance Details window for the specific item.*

Press Enter to display the Last Period Demand Maintenance Details window.

Last Periods Demand Maintenance Details Window

To display this window, specify a forecast [model](#), forecast [group](#) and optionally an [item](#) and then press Enter on the Last Periods Demand Maintenance Selection window.

You use this window to maintain the quantity extracted as the last period's demand, for the selected group, or individual item, within the selected forecasting model.

Fields

Model

This field displays the selected forecast model.

Group

This field displays the selected group.

Item

This field displays the selected item.

Description (Untitled)

This field displays the description for the group or item, from its profile record.

Demand

You can change the current figure for the last period's demand by overtyping it and selecting **Update (F8)**.

***Note:** Before and after images are written to the Demand History Audit file.*

Select **Update (F8)** to write this quantity to the Demand History file.

DRP Spread Profile [11/FCM]

You use this task to specify how the period forecasts created by Forecasting are spread over the weekly DRP forecast records. You must do this for each [centre](#) or [DC](#) in DRP to which you want to transfer forecasts.

DRP Spread Profile Maintenance Selection Window

To display this window, select the DRP [Spread Profile](#) task.

You use this window to select the DRP location ([centre](#) or DC), and calendar year that you want to maintain.

Fields

Centre/DC

Enter a DRP [centre](#) or DC code.

Alternatively, use the prompt facility to select from the Select DRP [Centre/DC](#) pop-up.

Year

Enter a year in YY format.

Press Enter to display the DRP Spread Profile Maintenance Details window.

DRP Spread Profile Maintenance Details Window

To display this window, enter a [centre](#) or [DC](#) and year and then press Enter on the DRP [Spread Profile](#) Maintenance Selection window.

You use this window to specify how each period forecast is spread over the weeks within the period.

Fields

Centre/DC

This field displays the DRP [centre](#) or DC code selected.

Year

This field displays the year selected.

Period

This field displays the forecasting period number for the year. The software displays one window per period.

Note: For each period, the software displays all weeks starting on a Monday, together with the number of working days in the week. These details are obtained from the DRP calendar defined to this [centre](#) or [DC](#).

Week

This field displays the week number within the DRP associated calendar.

Period Start Date

This field displays the date of the first day of the DRP week in this period.

No. Working Days

This field displays the number of working days in this week, as specified in the DRP calendar.

Percent of Period

Enter the percentage of the period forecast you want to apply to this week.

Caution: A warning message is displayed if the total percentage for the period is not 100%

Select **Update (F8)** to write the entered period percentages to the Spread Profiles file. The window is re-displayed for the next period. After you reach the year end period, the software will display period 1's details again.

Manufacturing Spread Profile [12/FCM]

You use this task to specify how the period forecasts created by Forecasting are spread over the weekly MPS or MRP forecast records. You must do this for each [model](#) defined to Production into which you want to transfer forecasts.

Manufacturing Spread Profile Maintenance Selection Window

To display this window, select the Manufacturing [Spread Profile](#) task.

You use this window to select the model and calendar year that you want to maintain.

Fields**Model Number**

Enter a production [model](#) number.

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

Year

Enter a year, in YY format.

Press Enter to display the Manufacturing Spread Profile Maintenance Details window.

Manufacturing Spread Profile Maintenance Details Window

To display this window, enter a [model](#) number and year and then press Enter on the Manufacturing [Spread Profile](#) Maintenance Selection window.

You use this window to specify how each period forecast is spread over the weeks within the period.

Fields

Model Number

This field displays the production model number entered.

Year

This field displays the year entered.

Period

This field displays the forecasting period number. The software displays one window per period.

Note: For each period, the software displays all the weeks, starting on a Monday, together with the number of working days in the week.

Week

This field displays the week number within the MPS/MRP calendar.

Period Start Date

The starting date will always be a Monday; and this is the first day of the period.

No. Working Days

This is the number of working days this week, as defined in the MPS or MRP calendar.

Percent of Period

Enter the percentage of the period forecast you want to apply to this week.

Caution: If the sum of the total period percentages does not equal 100% a warning message is displayed.

Select **Update (F8)** to write the period percentages to the [Spread Profiles](#) file. The window is re-displayed for the next period. After you reach the year end period, the software displays period 1's details again.

Forecasting Processing Introduction

You can divide forecast processing into three distinct stages:

- Extracting groups of items and their sales history from other System21 modules for each forecasting model
- Applying forecasting techniques
- Downloading forecasts into the planning applications

Extraction

For each forecasting [model](#), you must extract the Inventory Management profiles and Sales Analysis sales history for selected [groups](#) of [items](#).

You can either select items by Inventory minor item group, or transfer all the items.

You can run this as required. The extraction process adds new items to the forecasting model and updates existing item details on the Forecasting database.

Note: *You cannot maintain group or item profiles in a Forecasting model until you have extracted this combination from Inventory.*

You can extract full sales history, or the last period sales only, from Sales Analysis. You must extract the last period sales immediately after you have run a Sales Analysis Period End, and before you run the Forecast Period End. Full sales history extracts three years of sales demand.

You can extract sales quantities for every item with a profile already defined in the selected forecasting model.

Item sales quantities are aggregated to minor item group level and also stored in Forecasting.

You can transfer values from Service Management either before or after extracting the sales history from Sales Analysis.

Caution: When you transfer Service Management values, make sure that you specify that you do not want to overwrite existing data; otherwise the system will clear the Sales Analysis data you have just transferred.

Applying Forecasting Techniques

The Forecast Period End calculates forecasts for the next twelve or thirteen periods for all forecasting [models](#).

The Forecast Period End ignores any [item](#) or [groups](#) with a locked in or [manual forecast](#) flag. Items or groups with a locked in forecast method always use the corresponding formula to create forecasts.

For all other groups and items, Forecasting uses the [simulation](#) process. The module goes back in time evaluating the usefulness of each forecast method for each item and group of items over a pre-defined period. You define this period of time (that is, the [simulation period](#) for each group or item on its profile record) in each forecasting model.

The module projects forecasts for a number of actual, past periods as if they had not happened. Forecasts are produced, using each of the forecast methods, over the simulation period.

The Forecasting application decides which is the best method to use by calculating forecast errors for each method. The error is expressed in terms of percentage. The method with the closest error percentage to zero is the one used to generate the real forecast.

The absolute value of this error percentage is used to compare methods and is known as the MAPE (Mean Absolute Percentage Error).

There are seven forecasting methods used in Period End processing. Because the seven methods differ in the way they calculate the forecast, each will have more relevance to a certain type of business or product:

- Forecast methods A and B are calculations based on averages over a time period of the last three or 12 months, respectively. This type of forecast is of most use to project forecasts for established, every day products where there is a uniform demand, for instance, shampoo.
- Forecast methods C and D are calculations based on one period's sales in a previous year or years. This type of forecast is most useful to project for products that are very specifically seasonal, for instance, Christmas goods or Easter eggs.
- Forecast methods E and F produce forecasts based on sales for three periods in previous years. Again, they will be most useful for seasonal products, but those with a longer shelf life than the above, for instance, sun cream or summer clothes.
- Forecast method G is calculated using a weighted average. It looks at past period sales for several periods, but the most recent figures will be of premium importance. This type of forecast might be used when new products or new variations on an older product are launched.

Note: You can change a forecast created by the Period End run using Forecast Manipulation.

Note: You can aggregate [item](#) forecasts up to minor item [group](#) level using Forecast Aggregation. This is optional.

Downloading Forecasts

You can download forecasts into:

- The DRP or Production modules, or both
You can do this at item or item group level.
- A specified DRP [centre](#) or DC, or an MPS or MRP model
This applies the DRP or Production [spread profiles](#) set up within Forecasting, to distribute the forecasts over working weeks or days.
- DRP or Production modules, or both, using seasonal profiles defined and maintained within the DRP or Production modules
These [seasonal profiles](#) are a set of indices defining the spread of forecasts from annual to period, period to weekly, and weekly to daily forecasts. You can assign a seasonal profile to any forecasted [item](#) or minor item [group](#).
- A requirements file
You can load this into your own applications for further evaluation. Software programs must be written to do this.

Transfer Product Details [1/FCP]

You use this task to transfer [item](#) details from Inventory Management into forecasting [models](#), using the Inventory company code defined on the Forecasting company profile.

For new items, a [group](#) or item profile record is created in the selected forecasting model, using the minor item group or item code from Inventory. Existing profiles are updated.

You must use this task before maintaining an item or group profile, or using a forecasting model. You can subsequently use this task to transfer new items. This can be done at any time.

Note: If an Inventory item has had its minor item group re-assigned, this task copies it to the new group, with its existing demand and forecast quantities, and deletes the old records.

Transfer Product Details Selection Window

To display this window, select the Transfer Product Details task.

You use this window to select the forecasting [model](#) to update and the [group](#) of [items](#) to transfer.

Fields

Model to Transfer

Enter the forecasting model to receive the item details.

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

Leave this field blank if you wish to transfer all item and group details to all models.

Group to Transfer

Enter the minor item group to transfer.

Alternatively, use the prompt facility to select from the PGMN Item Group - Minor pop-up.

If you leave this field blank, the software transfers all the minor item groups from Inventory.

Note: *If you transfer all groups, the software also transfers all items with no minor item group assigned to them in Inventory. These are defined to a default group code 999 within Inventory.*

Select **Submit (F8)** to submit a job to perform the transfer.

Transfer Full Sales History [2/FCP]

You use this task to transfer the last 36 or 39 sales history periods from Sales Analysis into each forecasting [model](#). Sales history is transferred for all [items](#) that have an item [group](#) profile within Forecasting.

Sales history quantities are accumulated for each item within each group, and a group sales history quantity is transferred for each group within the forecasting model.

Caution: You normally run this task once, when you set up the company for the first time.

Note: *The current Forecasting year and period must match the current year and period in Sales Analysis. Any quantities for the current period are not extracted. If the year and period do not match, an error message is displayed and the batch job to perform the transfer is not submitted.*

When transferring details from Sales Analysis, you can use a task in Sales Analysis to hold quantities in the Inventory issue unit from the Item Master file (see the Company Profile Maintenance section of the Sales Analysis product guide for details). If you transfer the forecasts to Distribution

Requirements Planning, this must be the case, as DRP uses the Inventory issue unit from the Item Master file.

Note: *This also applies when transferring forecasts to MPS or MRP.*

Transfer Full Sales History Selection Window

To display this window, select the Transfer Full Sales History task.

You use this window to submit the job to update this module with the last three years' sales history for all [groups](#) and [items](#) defined to each forecasting [model](#).

You can specify whether or not you want to keep any Forecasting data already in the transfer files.

Fields

Delete Existing Forecasting Demand History

Use this checkbox as follows:

Unchecked - If you do not want to overwrite any Forecasting demand that exists in the files, but want to accumulate it with the new data when you update

Checked - If you do not want to keep any Forecasting demand that already exists in the files when you update

Select **Update (F8)** to submit a job to create or update records in the demand history and current forecasts file.

Transfer Last Period History [3/FCP]

You use this task to transfer the last period sales or demand quantities from Sales Analysis and Service Management (if Service Management is active) into each forecasting [model](#). This is done for all items with a profile in Forecasting.

The last period demand quantities are accumulated for each [item](#) within a [group](#) and also transferred.

You should select this task before using the Period End run, and just after processing the current period in Sales Analysis.

Note: *The current Forecasting year and period must be one period behind the Sales Analysis period.*

Note: *If Service Management is attached, the current Inventory period must match the current Forecasting period.*

Transfer Last Period History Selection Window

To display this window, select the Transfer Last Period History task.

You use this task to view the period to transfer and submit the job to perform the transfer and update the module with the last period's demand history.

The last period transferred by this task and the period to be transferred to this time are both displayed.

Select **Submit (F8)** to submit a job to perform the updates. The software also writes the last period sales quantities for all [items](#) defined to each forecasting [model](#) to the Demand History file.

Transfer Full Service Demand [4/FCP]

You use this task to transfer any [item](#) demand raised within Service Management into the same file that holds the sales history transferred from Sales Analysis.

Caution: If you have already transferred from Sales Analysis, make sure you do not overwrite that information. You can choose not to clear down information already in the Sales History file.

If you have not already done the transfer from Sales Analysis, you can do so after selecting this task.

Note: *You can only use this task if Service Management is attached for the interface company defined on the Forecasting company profile.*

Transfer Full Service Management Demand Selection Window

To display this window, select the Transfer Full Service Demand task.

You use this window to execute the Transfer Full Service Management Demand task and to choose whether you want to delete the existing forecast in demand history.

Fields

Delete Existing Forecasting Demand History

Use this checkbox as follows:

Unchecked - To accumulate any existing forecasting demand with the new data

Checked - To remove any forecasting demand that already exists in the files

Data is overwritten when you select to transfer the new forecasting history.

The submitted job extracts the usage of parts reported on the service engineer's technical report. The job only extracts data from closed technical reports, and excludes any returns. The demand is assigned to the forecasting [models](#) that include the engineer's stockroom. The demand falls on the date of the engineer's visit.

Select **Submit Job (F8)** to submit a job to create or update records in the Demand History and Current Forecasts files.

Forecast Period End [11/FCP]

You use this task to generate forecasts for the next year in each forecasting [model](#). Period End generates forecasts for all [groups](#) of [items](#), and individual items, with profiles in Forecasting.

Forecast Period End evaluates the performance of each forecast method over a pre-defined [simulation period](#). It selects the best method, and uses this to project the forecast quantities for the coming 12 or 13 periods.

Note: Select this task at the end of each period, after transferring the last period sales from Sales Analysis. If you have not done the latter, a warning message is displayed. However, you can still run the Period End (as you may have entered the last period's demand quantities manually) by selecting **Submit (F8)**.

Forecast Period End Selection Window

To display this window, select the Forecast Period End task.

You use this window to submit the Period End run. This window is for confirmation only.

Fields

Forecast Current Period

This field displays the current period, that is, the most recent period for which this task generated forecasts.

Forecast Current Year

This field displays the current year, that is, the most recent year for which this task generated forecasts.

Period to Forecast

The field displays the starting period for the forecasts from this run.

Year to Forecast

The field displays the starting year for the forecasts from this run.

The Period End process does the following:

- 1 It starts a backup of the forecasting files library, if you selected this option on the company profile. A message is displayed on the window informing the user to load a tape or cartridge onto the relevant backup device.
- 2 It increments the period number and description forward one period on the company profile. For each profile record ([group](#) or [item](#)) found in each forecasting [model](#), the process performs the steps 3 to 9.
- 3 It increments the [marketing masks](#) back one period, with the last one being re-set to zero.
- 4 It establishes the [simulation period](#). The period for an item is retrieved from the item profile, unless it is zero, in which case it comes from the group profile.
- 5 It increments the demand history quantities back one period, losing the oldest period. The last period sales figure moves into the most recent period's figure, and the last period is zeroed.
- 6 It applies each of the forecast methods over the simulation period, calculating a forecast error for each. The software selects the method with the error closest to zero. Items with a locked in or [manual forecast](#) specified on their profile do not go through this [simulation](#).
- 7 It applies the selected forecast method and writes the forecast quantities to the Demand History and Current Forecast files. These are the forecast quantities before applying marketing masks, known as the [initial forecast](#). If you flag forecasts as manual in the profile record, this will not happen.
- 8 It applies [conversion factors](#) to these forecast quantities, if you selected this as a requirement in the company profile.
- 9 It writes the forecasts to the [Forecast History](#) files, after incrementing the forecast back one period and losing the oldest one. You specify on the company profile the number of periods' forecast history you want to retain before purging. Use the Forecast History files for reporting and evaluating forecast performance.
- 10 After all profile records for the company have been processed, a report is produced, summarising the number of times each forecast method code was selected within each group of items.

Select **Submit (F8)** to submit a job to perform the Forecast Period End run.

Forecast Manipulation [12/FCP]

You use this task to maintain the current forecasts for any [item](#), or [group](#) of items, in any forecasting [model](#). You can select an alternative forecast method and re-calculate the forecasts, or enter the forecast quantities yourself.

The last three years' sales demand is shown for comparison.

You can choose to display the sales and forecast quantities in bar chart form.

A warning is given that any manual changes to any forecast quantity will override adjustments made to the forecast as a result of Transaction Control and/or Item Supersession logic.

Forecast Manipulation Selection Window

To display this window, select the Forecast Manipulation task.

You use this window to select the forecasting [model](#) and the [item](#), or [group](#) of items, to be maintained.

Fields

Model

Enter the forecasting model.

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

Group

Enter a group code.

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

Item

You can choose to enter an item code. If you do, the item must have a profile record within this group.

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

Note: *If you enter a group and leave the Item field blank, the details displayed are for this group of items.*

Press Enter to display the Forecast Manipulation Details window.

Forecast Manipulation Details Window

To display this window, select a [group](#) or [item](#), or both, and then press Enter on the Forecast Manipulation Selection window.

This window displays the sales history and forecasted quantities for the selected item or group in the selected forecasting [model](#).

Fields

Locked In Forecast (in blue border)

This field displays the forecast method locked into this item or group. If specified, this is the one always used in the period end run for generating forecasts. This field is only displayed if you have specified a locked in forecast method.

Model/Group/Item

The model, group and item that you selected on the previous window are displayed.

Description (Untitled)

This field contains the description for the item, or group of items, from the profile record.

Forecast Code

The [forecast code](#) displayed is the code used to generate the forecast for this group or item.

You can use the prompt facility to select from the Select Forecast Method Code pop-up.

If you enter or select a different code and then press Enter, the forecasts are immediately re-calculated, as is the forecast error. Use this to view the effect of alternative forecast methods on the selected item or group of items.

If you enter * you can enter your own forecast values in the quantity fields by simply over-typing the existing figures.

Error %

This is the percentage error calculated for the forecast method selected by the [simulation](#) in Forecast Period End. For a more detailed explanation of this error calculation, see the Applying Forecasting Techniques section at the beginning of this chapter.

In the main body of the window, quantities are shown for the last three years' sales demand and the next 12 or 13 periods' forecasts. The number of periods displayed corresponds to the number of periods used in your company.

The forecast quantities shown are [initial forecasts](#), that is, before the application of [marketing masks](#). The marketing masks in the final column are those for the selected [item](#) or [group](#), as specified on the profile record. If the masks for an item are all 0, the software uses the group masks. If the group masks are all 0, all masks default to 1, which leaves the forecasts unaffected.

Note: The Forecast Period End task overwrites any [manual forecasts](#) you enter, unless you set the locked in forecast code to * in the profile record.

Functions

Demand Capture Enquiry (F13)

This is available if you use demand capture as the source of demand.

Text (F15)

Use this to maintain text for an [item](#) or [group](#) of items. The Maintain Text window is displayed.

Graph (F18)

Use this to display the graph window.

Select **Update (F8)** to write the manipulated forecasts to the Sales Demand and Current Forecasts files. The manipulated figures will overwrite the Forecast Period End figures.

Forecast Manipulation Graph Window

To display this window, select **Graph (F18)** on the Forecast Manipulation Details window.

This window displays the [final forecasts](#), for the selected forecasting [model group](#) or [item](#), as a bar chart.

Note: *This only applies to a 5250 emulation such as Client Access. Bar charts are currently not fully supported in Workspace.*

You can maintain the [marketing masks](#) used to calculate the forecasts. The selected [model](#), [group](#) and [item](#) (with description) are displayed.

Fields

Strt Mth (Start Month)

This field displays the first month for the forecasts.

Code Used

This field displays the Forecast Method code used for generating the forecasts, as specified on the previous window.

Fin. Fcst (Final Forecast)

This field displays the [final forecast](#) quantities for the next 12 or 13 periods; that is, after the displayed masks have been applied to the forecast quantities from the window.

Mask

The current [marketing masks](#) are shown unless the [item](#) or [group](#) uses [manual forecasts](#) (when masks are not applied).

If you change the mask factors, the final forecasts are re-calculated and the graph changes accordingly.

The left-hand side of the graph shows the demand history, and the right-hand side shows the forecast quantities.

The scale on the Y-axis is calculated so that the highest peak just fits on the window.

Select **Update (F8)** to update the revised masks in the Forecasting Model Group/Item Profile record.

Forecast Aggregation [13/FCP]

You use this task to select the forecasting [model](#) and groups for forecast re-calculation. Use it when you feel that the aggregated [item](#) forecasts are more accurate than the [group](#) forecasts.

This is done by aggregating all forecasts for items in each selected group, and updating the group forecast record with the totals. The previous group forecast is lost.

Forecast Aggregation Selection Window

To display this window, select the Forecast Aggregation task.

You use this window to select the forecasting [model](#) and [groups](#) you want to process and update.

Fields

Model

Enter the forecasting model in which forecasts are to be aggregated.

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

Leave this field blank to select all models.

Group From/Group To

Enter the range of groups to update.

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

Note: *If you enter a From group and leave the To group blank, only the From group is processed. Leave both fields blank to process all groups.*

This totals the forecasts for the [items](#) in the [group](#), and updates the group record in the sales demand and current forecasts file. The previous group forecast is lost.

[Conversion factor](#) and [marketing masks](#) are applied to each item as part of the aggregation. You can maintain the aggregated forecast using the Forecast Manipulation task.

Select **Submit (F8)** to submit the batch job to perform the forecast aggregation on each selected group.

Generate Requirements File [21/FCP]

You use this task to create a file of forecast requirements for type 4 [models](#), that is, forecasts to transfer to another destination or be held internally. The software submits a batch job that transfers the forecast quantities for the next 12 or 13 periods to the Requirements file. You can then remove the file from Forecasting and transfer it to your own application.

Note: *Software programs must be written to achieve this.*

You can select individual or all forecasting type 4 models. The transfer can be for a single [group](#) or for all groups and can be at either group or [item](#) level.

[Conversion factors](#) and [marketing masks](#) are applied before the requirements record is written.

Note: *You do not need this task for Forecasting model types 1-3, as these forecasts transfer directly from Forecasting into DRP or the Production modules, or both.*

Generate Requirements File Selection Window

To display this window, select the Generate Requirements File task.

You use this window to select the forecasting [model](#) forecasts to transfer and to select the level of forecast to transfer, that is, for individual [items](#), or for [groups](#) of items.

Fields

Model

Select the type 4 forecasting model that is to have forecasts transferred to the Requirements file.

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

Leave this field blank to transfer all type 4 forecast [models](#).

Group to Transfer

Enter the [group](#) to transfer.

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

Leave this field blank to transfer all groups.

Level to Transfer

Select one of the following

Item (1) - To transfer [item](#) forecasts only

Group (2) - To transfer group forecasts only

Note: Before you run this task, you must transfer any forecasts already in the Requirements file into their respective destination applications.

Select **Submit (F8)** to submit a job to transfer the forecasts. The job writes the relevant [final forecasts](#) to the Requirements file.

Transfer Forecast to DRP [22/FCP]

You use this task to transfer forecasts from the forecasting [models](#) into the Distribution Requirements Planning module.

There are two methods of transferring forecasts to DRP, which you specify in the Forecasting company profile. On the Forecast Options window you specify whether to transfer the forecasts:

- By using spread profiles maintained within the Forecasting module

Or

- By using seasonal profiles maintained in DRP

When you select Transfer Forecasts to DRP, the windows that you use will vary depending on the way in which you have set your company profile.

Whichever method you choose, a Forecasting to DRP report is produced automatically. This shows all [items](#) or [groups](#) that have failed to transfer forecasts into DRP, together with a reason. If this exception report is blank, all the forecasts have transferred successfully into the DRP forecast files.

Transfer Forecasts to DRP Selection Window

To display this window, select the Transfer Forecasts to DRP task.

You use this window to select the forecast [model](#), [group](#) and transfer period range for forecasts to transfer to DRP.

Note: This window is displayed if the Use [Seasonal Profiles](#) in Forecast Transfer flag in the company profile is unchecked.

Only forecasts from forecasting model types 1 and 2 are eligible for transfer. Each type 1 forecasting model has a DRP distribution [centre](#) as its target model. Each type 2 forecasting model has a DRP [centre](#) as its target model.

Fields

Model

Select either a type 1 or 2 forecasting model from which to transfer forecasts to DRP.

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

Leave this field blank to select all type 1 and 2 models.

Group to Transfer

Enter a group code.

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

Level to Transfer

Select one of the following:

Item (1) - To transfer item forecasts

Group (2) - To transfer group forecasts

Period to Transfer From/To

Enter the range of periods to transfer to DRP. Forecasting suggests a range of forecasts to transfer. Enter periods in the format YYPP.

When transferring these periods, the software applies the [spread profiles](#) maintained in Forecasting, to convert the period forecasts into the weekly or daily DRP forecasts.

Any existing forecasts found within DRP for the selected minor [item groups](#) are deleted before adding this new data.

Select **Submit (F8)** to submit the batch job to transfer all selected forecasts into DRP.

Transfer Forecasts to DRP Using DRP Seasonal Profiles [22/FCP]

This section describes the transfer of forecasts using [seasonal profiles](#) that you maintain within DRP. Seasonal profiles are a set of indices defining the spread of forecasts from annual to period, period to weekly, and weekly to daily forecasts.

You can assign a particular seasonal profile to any [item](#) or minor item [group](#).

Note: *The following windows are displayed if the Use Seasonal Profiles in Forecast Transfer flag in the company profile is checked.*

If you do not enter a seasonal profile for a particular item or group, forecasts are spread evenly over the time intervals required.

Transfer Forecasts to DRP Using Seasonal Profiles Selection Window

To display this window, select the Transfer Forecasts to DRP task.

On this window, you can select the option to use when transferring forecasts to DRP.

Only forecasts from type 1 and 2 forecasting [models](#) are eligible for transfer into DRP. Each type 1 forecasting model has a DRP distribution [centre](#) as its target model. Each type 2 forecasting model has a DRP [centre](#) as its target model.

Fields

Model

Enter either a type 1 or 2 forecasting model to transfer forecasts to DRP.

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

Leave this field blank to select all type 1 and 2 models.

Level to Transfer

Select one of the following:

Item (1) - To transfer [item](#) forecasts

Group (2) - To transfer [group](#) forecasts

Period to Transfer

Enter the range of periods to transfer to DRP. Forecasting suggests a range of forecasts to transfer. Enter periods in the format YYPP.

Press Enter to display the Transfer Forecasts to DRP Using [Seasonal Profiles](#) - Transfer All [Models](#) window. The format of the new window depends on the values you enter here.

Transfer Forecasts to DRP Using Seasonal Profiles - Transfer All Models Window

To display this window, press Enter on the Transfer Forecasts to DRP Using Seasonal Profiles Selection window. The format of this window depends on the values you entered on the previous window.

You use this window to select the daily and weekly transfer periods for this transfer method.

Note: This window is displayed when you leave the Model field blank on the Selection window.

Fields

Daily Forecasts From Week/To Week

Enter a range of week numbers for which you want to transfer daily forecasts.

Leave both fields blank to select the whole transfer period defined on the initial window.

Weekly Forecasts From Week/To Week

Enter a range of week numbers for which you want to transfer weekly forecasts.

Leave both fields blank to select the whole transfer period defined on the initial window.

Select **Submit (F8)** to submit the job to transfer the forecasts into DRP, using the DRP [seasonal profiles](#).

Transfer Forecasts to DRP Using Seasonal Profiles Group/Item Selection Window

To display this window, press Enter on the Transfer Forecasts to DRP Using Seasonal Profiles Selection window. The format of this window depends on the values you entered previously.

You use this window to select a single [item](#) or a range of items, or a single [group](#) or a range of groups to transfer using [seasonal profiles](#). You can also specify the time intervals for which you require daily or weekly forecasts.

Note: This window is displayed when you enter a [model](#) on the Selection window and set the Level to Transfer field to 1 (Item) or 2 (Group).

The window displays the forecasting [model](#) and transfer periods you specified on the initial window.

Fields

From Group/To Group

Enter the [group](#) range to which you want to restrict the transfer.

Leave both fields blank to transfer all groups.

Note: These fields are displayed when you set the Level to Transfer field to 2 (Group) in the Selection window.

From Item/To Item

Enter the [item](#) range to which you want to restrict the transfer.

Leave both fields blank to transfer all items.

Note: *These fields are displayed when you set the Level to Transfer field to 1 (Item) in the Selection window.*

Daily Forecasts From Week/To Week

Enter the range of weeks for which you want to transfer daily forecasts.

Leave both fields blank to select the whole period defined on the initial window.

Weekly Forecasts From Week/To Week

Enter the range of weeks for which you want to transfer weekly forecasts.

Leave both fields blank to select the whole transfer period defined on the initial window.

Functions**Select Group/Seasonal (F16)**

Note: *This function is labelled Select Items/Seasonal if you set the Level to Transfer field to 1 (Item) in the Selection window.*

Use this to display the Transfer Forecasts to DRP Using Seasonal Profiles Select Profiles window. You use this window to attach an existing [seasonal profile](#) to the selected [item](#) or [group](#).

Select **Submit (F8)** to submit the job to transfer the selected forecasts into DRP, using the DRP seasonal profiles.

Transfer Forecasts to DRP Using Seasonal Profiles Select Profiles Window

To display this window, select Select **Group/Seasonal (F16)** or Select **Items/Seasonal (F16)** on the Transfer Forecasts to DRP Using Seasonal Profiles Group/Item Selection window.

Use this window to assign any [seasonal profile](#) to the selected [item](#) or [group](#) range. You maintain these seasonal profiles within DRP.

The window displays the [model](#) code and description, the list of item or group codes and descriptions selected and the transfer periods.

Fields

Seasonal Profile

Enter a seasonal profile code that is to be associated with the selected item or group.

Options**Select**

Use this to select the line to be transferred using the DRP seasonal profile you specify.

Functions**Select All (F15)**

Use this to select all items or groups for transfer.

Select **Submit (F8)** to submit the job to transfer the forecasts to DRP.

Transfer Forecasts to Manufacturing [23/FCP]

Use this task to transfer forecasts from forecast [models](#) into the MPS/MRP runs in Manufacturing.

There are two methods of transferring forecasts to the Production modules. In the Forecasting Company Profile task, on the Forecast Options window, you specify whether to transfer the forecasts:

- By using spread profiles maintained within the Forecasting module

Or

- By using seasonal profiles maintained in MRP or MPS

When you run this task, the windows you use will vary depending on how you have set your company profile.

Whichever method you choose, a Forecasting to Manufacturing Exceptions report is produced automatically. This shows all [items](#), or [groups](#), which have failed to transfer forecasts into Production together with a description of the reason. If this Exceptions report is blank, all forecasts have transferred successfully into the Production forecast files.

The Transfer Forecasts to Manufacturing task works in exactly the same way as the Transfer Forecasts to DRP task. To find out more about transferring forecasts to Production, refer to the Transfer Forecasts to DRP section: the windows you need to use are the same and the transfer process takes place in exactly the same way.

Forecast Enquiries Introduction

There is just one comprehensive enquiry available in Forecasting. You can view the sales history and current forecasts for a selected [item](#) or [group](#) of items, within a forecasting [model](#).

The Forecast Enquiry task displays the last three years' sales demand figures, together with the forecasts for the next 12 or 13 periods. The number of periods displayed depends on how many periods you chose to use on the company profile.

You can also see the code for the selected forecast method, together with the calculated forecast error.

You can change the [forecast code](#) to one of the other six. The software re-calculates and displays the forecast quantities.

There is no update here; this is purely to allow you to see the impact of different forecasting methods.

You can display the forecasts in bar chart form, if you prefer.

Note: *This only applies to a 5250 emulation such as Client Access. Bar charts are currently not fully supported in Workspace.*

Forecast Enquiry [1/FCE]

You use this enquiry to display sales history and current forecasts for a selected [item](#), or [group](#) of items within a forecast [model](#). You can see the last three years' demand history and the next twelve or thirteen periods' forecasts.

You can also view these quantities in a bar chart.

Forecast Enquiry Selection Window

To display this window, select the Forecast Enquiry task.

Use this window to select the forecast [model](#) and the [item](#), or [group](#) of items, for your enquiry.

Fields

Model

Enter the forecasting model code.

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

Group

Enter a group code.

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

Item

You can optionally enter an item code. If you do enter an item, it must have a profile record for this group within Forecasting.

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

Note: *If you enter a group and leave the Item field blank, the Forecast Enquiry Details window is displayed for this group of items. If you enter both codes, the Forecast Enquiry Details window is displayed for the item.*

Press Enter to display the Forecast Enquiry Details window.

Forecast Enquiry Details Window

To display this window, enter your criteria and then press Enter on the Forecast Enquiry Selection window.

This window displays the sales history and forecasted quantities for the selected [item](#), or [group](#) of items within the selected forecast [model](#).

You can see the last three years' demand history and the next twelve or thirteen periods' forecasts.

Fields

Model

This field displays the forecasting [model](#) selected on the Forecast Enquiry Selection window.

Group

This field displays the [group](#) selected on the Forecast Enquiry Selection window.

Item

This field displays the [item](#) selected on the Forecast Enquiry Selection window.

Description (Untitled)

This field displays a description for the selected item or group of items.

Forecast Code

This field displays the selected forecast method code.

You can overtype the displayed code with a different code; if you enter *, you can change the quantity fields for the forecasts. Press Enter to display the details for the specified [forecast code](#).

Note: *You can use this facility to view the impact of using different forecast methods. Re-calculating the forecasts in this enquiry will not change any data or update any files; you can only do this through Forecast Manipulation.*

If you change the forecast code, the software re-calculates the forecasts and the forecast error immediately, using the appropriate formula for this method code.

Note: * indicates a manually entered forecast.

Locked-in Forecast

This field displays the forecast method locked into this [item](#) or [group](#). If specified, this is the one always used in the Period End run for generating forecasts. This field is only displayed if you have specified a locked-in forecast method.

Error %

This field displays the percentage error calculated for this forecast method. For more information on the percentage error calculation, refer to the Applying Forecasting Techniques section in the Processing chapter of this product guide.

The forecast quantities shown are those before the application of [marketing masks](#), that is, the [initial forecasts](#).

The marketing masks in the final column are those for the selected item or group, as specified on the profile record for the selected model.

If the masks for an item are all 0, Forecasting uses the masks for the group. If the group masks are all 0, all the masks default to 1.

Note: *The [forecast code](#) selected is normally the best method for forecasting this [item](#), or [group](#) of [items](#). However, it may have been changed, using the Forecast Manipulation task.*

Functions

Text (F15)

Use this to display the Maintain Text window. You can use this window to maintain text for this [group](#) or particular [item](#).

Graph (F18)

Use this to display the Forecast Enquiry Graph window.

Select a valid function to display the next window, select **Previous (F12)** to return to the Forecast Enquiry Selection window or select **Exit (F3)** to leave the task.

Forecast Enquiry Graph Window

To display this window, select **Graph (F18)** on the Forecast Enquiry Details window.

This window displays the [final forecasts](#) for the selected [group](#) or [item](#) as a bar chart. You can modify the appearance of this chart from the previous window, or by using Forecast Manipulation.

***Note:** This only applies to a 5250 emulation such as Client Access. Bar charts are currently not fully supported in Workspace.*

Fields

Model

This field displays the forecast [model](#) entered on the Selection window.

Group

This field displays the group entered on the Selection window.

Item

This field displays the item entered on the Selection window.

Strt Mth (Start Month)

This field displays the first month for the forecasts.

Code Used

This field displays the forecast method used for generating the forecasts.

Fin Fcst (Final Forecast)

These fields display the final forecast quantities for the next twelve or thirteen periods, that is, after the corresponding factor from the [marketing masks](#) has been multiplied by the originally calculated forecast.

Mask

The corresponding marketing mask factors are displayed for the next 12 or 13 periods, unless the [item](#) or [group](#) uses [manual forecasts](#), in which case masks are not applied.

The left-hand side of the graph shows the sales history, and the right-hand side shows the forecast quantities.

The scale on the Y-axis is calculated so that the highest peak just fits on the window.

Note: *The quantities used for the forecasts in the graph are the [final forecasts](#). You can see the final forecasts down the right-hand side of the window.*

Select **Previous (F12)** to return to the Forecast Enquiry Details window and then select **Exit (F3)** to leave the task.

Reports Introduction

There are six reports available in the Forecasting module. You can base the production of all the reports on a number of selection criteria.

In general, these standard reports print on standard listing paper with 132 print positions and six lines to the inch. All reports print with the task or program number in the top left-hand corner and the page number, date and time in the top right-hand corner.

Demand Forecast Report [1/FCR]

This report provides a detailed listing of the demand forecasts for the next twelve or thirteen periods, for all forecast [models](#), [groups](#) and [items](#).

The software also aggregates item forecasts to group level and these are shown at the end of the report, after each item forecast. You can run this report whenever you require it.

Totals

The totals included on this report are forecasts by item and item forecasts by group.

Demand Forecast Report Selection Window

To display this window, select the Demand Forecast Report task.

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

Fields

Model

Enter the forecast model on which to report.

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

Leave this field blank to include all [models](#).

Group From/Group To

You can enter a range of [groups](#) on which to report, by entering group codes in both fields. To report on one group, enter the group code in the From field. Leave both fields blank to report on all groups.

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

Print Values

Select one of the following:

- None (0) (default) - To print forecast quantities only
- Cost (1) - To print forecast cost values
- Sales (2) - To print forecast sales values
- Both (3) - To print both cost and sales values

Select **Submit (F8)** to submit the job to print the report.

Marketing Masks Report [2/FCR]

This report provides a detailed listing of all [marketing masks](#) that you have set up for both [items](#) and [groups](#) of items within forecasting [models](#). You can run this report as often as required.

Totals

There are no totals included on this report.

Marketing Masks Report Selection Window

To display this window, select the Marketing Masks Report task.

Use this window to enter your selection criteria for the Marketing Masks report.

Fields

Model

Enter the forecast model on which to report.

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

Leave this field blank to include all [models](#).

Group From/Group To

You can enter a range of groups to report on by entering group codes in both fields. To report on one [group](#) only, enter the group code in the From field. Leave both fields blank to report on all groups.

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

Select **Submit (F8)** to submit the job to print the report.

Detail Forecasts Report [3/FCR]

This report includes the last three years' demand history, plus the forecasts for the next twelve or thirteen periods for the selected forecasting [models](#), by quantity only. The report prints these details for each selected [group](#) and the [items](#) that the group contains. The forecast formula, [simulation period](#) and forecast error percentage are also displayed for each item or group of items.

The system also aggregates item forecast quantities to group level, and prints them at the end of the report. You can run this report as often as required.

Totals

The totals included on this report are annual demand by item, forecasts by item and item forecasts by group.

Detail Forecast Report Selection Window

To display this window, select the Detail Forecasts Report task.

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

Fields

Model

Enter the forecast [model](#) on which to report.

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

Leave this field blank to report on all models.

Group From/Group To

You can select a range of groups on which to report by entering [group](#) codes in both fields. To report on one group only, enter the group code in the From field. Leave both fields blank to report on all groups.

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

Select **Submit (F8)** to submit the job to print the report.

Forecast History [4/FCR]

This report provides a listing of historical forecasts alongside the corresponding actual sales demand, so that you can compare the forecasts with the actual history. This shows only the latest forecast for each period, together with the actual sales. For each forecast, the quantity before and after applying the appropriate marketing mask factor is displayed.

The forecast, after the mask factor has been applied, is known as the [final forecast](#).

Forecasts and actual demand figures are shown for the whole item [group](#) and for each [item](#) within the group individually. You can run this report as often as required.

Totals

The totals on this report are the last twelve or thirteen periods' demand by item, the last twelve or thirteen periods' demand by group and the item forecast by group.

Forecast History Report Selection Window

To display this window, select the Forecast History task.

You use this window to enter your selection criteria for the [Forecast History](#) report.

Fields

Model

Enter the forecast [model](#) on which to report.

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

Leave this field blank to report on all models.

Group From/Group To

You can enter a range of groups on which to report by entering [group](#) codes in both fields. To report on one group only, enter the code in the From field. Leave both fields blank to report on all groups.

Forecast Year/Forecast Period

Enter the year and period at which you want the history report to start. The report details the selected period and also the eleven or twelve preceding periods.

Note: These fields default to the current year and period. The year and period must not be in the future.

Select **Submit (F8)** to submit the job to print the report.

Forecast Evaluation [5/FCR]

This details historical and predicted forecasts for each [group](#) and [items](#) within the group, together with the actual sales figures for comparison. Up to six periods of historical forecasts and twelve or thirteen periods of predicted forecasts are included.

This is printed for the selected forecast [model](#), item groups and individual items within those groups. You can run this report as often as required.

Totals

The totals on this report are forecasts by item, demand by item, item forecasts by group and item demand by group.

Forecast Evaluation Report Selection Window

To display this window, select the Forecast Evaluation task.

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

Fields

Model

Enter the forecast [model](#) on which to report.

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

Leave this field blank to report on all models.

Group From/Group To

You can enter a range of groups on which to report by entering [group](#) codes in both fields. To report on one group only, enter the group code in the From field. Leave both fields blank to report on all groups.

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

Forecast Type

Select one of the following:

Initial (1) - To display [initial forecast](#) quantities before the marketing mask factors are applied

Final (2) - To display [final forecasts](#) after applying masks

Select **Submit (F8)** to submit the job to print the report.

Profiles Report [6/FCR]

This report shows all the details of the forecasting profiles that you have maintained for selected forecasting [models](#), [groups](#), and [items](#). You can run this report as often as required.

Totals

There are no totals included on this report.

Group/Item Profiles Report Selection Window

To display this window, select the Profiles Report task.

You use this window to enter your selection details for the Group/Item Profiles report.

Fields

Model

Enter the forecast [model](#) on which to report.

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

Leave this field blank to report on all models.

Group From/Group To

You can enter a range of groups on which to report by entering [group](#) codes in both fields. To report on one group only, enter the group code in the From field. Leave both fields blank to report on all groups.

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

Item From/Item To

You can enter a range of items on which to report by entering [item](#) codes in both fields. To report on one item only, enter the item code in the From field. Leave both fields blank to report on all items.

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

Note: *You can only specify a range of items if you select a single item group.*

Select **Submit (F8)** to submit the job to print the report.

Forecasting Company Profile [1/FCU]

The company profile specifies the environment in which the Forecasting module operates. You must set up and maintain a company profile for each company that you use in Forecasting.

This profile controls the working environment, by specifying:

- Period terminology and backup details, to ensure there are correct security copies of Forecasting
- Whether a year contains twelve or thirteen periods
- The addition and maintenance of forecasting methods

Maintain Profile Records Selection Window

To display this window, select the Forecasting Company Profile task.

You use this window either to create a new company profile or to maintain an existing one.

The software displays a list of existing company codes and descriptions.

Fields

Enter New Company

Enter the new two-character code for the company you want to add. The code must not already exist.

Options

Select

Use this to select the company you want to maintain.

Select a company or enter a new company and then press Enter to display the Maintain Forecast Company Profile Interface Defaults window.

Maintain Forecast Company Profile Interface Defaults Window

To display this window, select a company or enter a new company code and then press Enter on the Maintain Profile Records Selection window.

You use this window to maintain details of how Forecasting interfaces to the other active modules.

Fields

Interface Company

Enter the code for the Inventory company whose [items](#) will be used by Forecasting; this is also used as the interface with Sales Analysis, Distribution Requirements Planning, and the MPS and MRP modules.

Default FC Model

Enter the default forecast [model](#) for this company.

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

Note: You can select **Update (F8)** on this window, or any of the subsequent windows, to validate and save the company profile changes you have made. The software saves all changes made to the Company Profile Audit file.

Press Enter to display the Forecast Company Profile Maintenance Periods/Backups window.

Forecast Company Profile Maintenance Periods/Backups Window

To display this window, press Enter on the Forecast Company Profile Interface Defaults window.

You use this window to maintain period details and period backup parameters. The backup parameters determine how to make security copies of Forecasting files.

Fields

Forecast Start Period

Company Name

Enter the company name, using up to 36 alphanumeric characters.

Number of Periods

This field displays the number of periods used by the Forecasting company. The number of periods is taken from the Inventory Management interface company calendar and cannot be amended.

Note: Forecasting can support either twelve or thirteen periods per year.

Period

Enter the current period.

Year

Enter the current year.

Period Maintenance

Enter titles for the periods, using up to three alphanumeric characters for each. You can call the periods whatever you like in order to reflect how your business operates. They are often called by the calendar month names. The first one should be the current period.

Periodical Backup Required**Backup Required (Untitled)**

Select one of the following:

No (0) - To control the backups outside the Forecasting module

Yes (1) - To initiate backups automatically at the start of the Period End run

Note: Select Yes to back up the whole of the Forecasting files library at Period End.

The Period End Run updates the following:

Period - Incremented by one each time

Period Maintenance - Each period title is rolled forward each time

Device Name

Enter the device name for the cartridge or tape drive you want to use for the backup, using up to 10 alphanumeric characters.

Tape Density

If you want to use a backup tape, enter the tape density. This must be 1,600, 3,200, 6,250 or 10,000.

Press Enter to display the Forecast Company Profile Maintenance Forecast Options window.

Forecast Company Profile Maintenance Forecast Options Window

To display this window, press Enter on the Forecast Company Profile Maintenance Periods/Backups window.

You use this window to maintain miscellaneous options available for the Forecast Period End processing run.

Fields

Activate Conversion Factor

You can enter a [conversion factor](#) to make sure different units of measure are taken into account when you generate forecasts.

Use this checkbox as follows:

Unchecked - If you do not want to use a conversion factor

Checked - To apply the [group](#) and [item](#) conversion factors, between different units of measure, to the calculated forecasts and the demand history

Purge Forecast History

Enter the number of periods for which you want to retain [forecast history](#) records before purging them.

Note: *The recommended minimum is twelve periods.*

Use Seasonal Profiles in Forecast Transfer

Use this checkbox as follows:

Unchecked - To use the [spread profiles](#) defined in Forecasting when transferring forecasts to DRP or Production

Checked - To use the seasonal profiles defined in DRP or Production when transferring forecasts

Press Enter to display the Forecast Company Profile Maintenance Forecast Methods window.

Forecast Company Profile Maintenance Forecast Methods Window

To display this window, press Enter on the Forecast Company Profile Maintenance Forecast Options window.

You use this window to maintain descriptions of existing forecast methods, or to add new methods.

Fields

Note: *To add a new forecast method, a new program must be written and added to the Period End processing run. Contact your software agent for further details.*

Forecast Descriptions

The seven forecast methods (A to G) and a description of the formula used by each method are displayed.

You can amend the descriptions for methods A to G without affecting the formulae. You can change the descriptions to be more meaningful or personalised for your business. The descriptions are displayed whenever you use the prompt facility on the forecast methods.

Press Enter to display the Forecast Company Profile Maintenance Database Options window.

Forecast Company Profile Maintenance Database Options Window

To display this window, press Enter on the Forecast Company Profile Maintenance Forecast Methods window.

You use this window to specify the Sales Analysis database fields for stockroom, minor [item group](#) and quantity that Forecasting uses. You must complete all three fields.

Note: *If Sales Analysis is not active, this window is not displayed.*

Note: *The Depot (Stockroom), Minor Item Group and Quantity fields must already be defined on the Sales Analysis database.*

Fields

Sales Analysis Stockroom Field

Enter the Sales Analysis Stockroom field that Forecasting uses.

Alternatively, use the prompt facility to select from the Select Sales Analysis Fields pop-up.

Note: *Select the Depot field (in Sales Analysis).*

Sales Analysis Minor Item Group Field

Enter the Sales Analysis Minor [Item Group](#) field that Forecasting uses.

Alternatively, use the prompt facility to select from the Select Sales Analysis Fields pop-up.

Note: *Select the Minor Item Group field (in Sales Analysis).*

Sales Analysis Quantity Field

Enter the Sales Analysis Quantity field that Forecasting uses.

Alternatively, use the prompt facility to select from the Select Sales Analysis Fields pop-up.

Note: *Select the Quantity field (in Sales Analysis).*

Select **Update (F8)** to validate and save the company profile details. The software saves all changes to the Company Profile Audit file.

Delete Company [2/FCU]

You use this task to remove company data from the Forecasting module. This task removes all records associated with the selected company.

Caution: This task permanently removes data from the Forecasting module.

Delete Forecast Company Selection Window

To display this window, select the Delete Company task.

You use this window to select the company that you want to delete from Forecasting.

Fields

Select Company

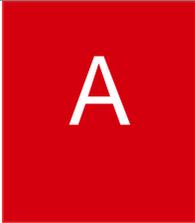
Enter the Forecasting company you want to delete.

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

Caution: This task permanently removes data from the Forecasting application.

Select **Submit (F8)** to submit the job to delete the company and its associated records

Appendix A Glossary

A

Centre

A site within the company that acts as a central supply source by stocking and shipping [items](#) to regional [DCs](#) as required

Conversion Factor

This is a factor that is used to convert [items](#) sold in different pack sizes into equivalent units. This is achieved by multiplying quantities by the conversion factor in the demand history and forecasts (unless manually forecast).

DC

A Distribution Centre dealing directly with customers' orders, whilst normally holding minimal stock

Error (Mean Absolute Percentage Error)

A representation of the forecast error in terms of a percentage

It is calculated as the absolute value of:

$$\frac{(\text{Total Forecast Qty} - \text{Total Actual Qty})}{\text{Total Actual Qty}} \times 100\%$$

Where totals are accumulated over the specified [simulation period](#).

Exponential Smoothing

A well-established statistical technique used to calculate forecasts based on a moving average

Final Forecast

The forecast quantity obtained by applying any [Marketing Masks](#) to the [Initial Forecast](#)

Forecast Code

This is a letter, in the range A to G inclusive, which represents one of the forecast formulae provided within the application. You can use other letters if you have defined extra formulae and added these into the product. Alternatively, this may be an asterisk (*) which signifies that you have manually entered or updated a forecast.

Forecast History

Forecasting automatically saves all forecasts generated; these are subsequently referred to as Forecast History.

Group

An Inventory Management Minor [Item](#) Group

Initial Forecast

The generated forecast quantity, before any Forecasting applies [Marketing Masks](#) but after any [Conversion Factor](#) is applied

Item

The forecasted item represented by its unique Inventory Management Item Code

Lock-in Forecast

A [Forecast Code](#) representing the definitive forecast formula for the [Group](#) or [Item](#)

If specified in the range A to G, then the corresponding formula will be applied automatically, in other words, without [simulation](#), in the month-end run.

Manual Forecast

This is a forecast designated as being manually controlled. In other words, it will be ignored by the month-end run so that the forecast may be keyed in by the user.

Marketing Masks

This is a set of twelve or thirteen factors, one per period, which are used to cater for any future demand which is not obvious from the demand history. These are particularly useful where there is a limited demand history, or where Sales/Marketing exercises are to be undertaken.

These factors are used to multiply the [Initial Forecast](#) for the corresponding period.

Model

Within Forecasting, this represents a logical grouping of Inventory stockrooms for the purpose of creating consolidated [item](#) and [group](#) forecasts.

Simulation

This is a process of regressing in time whilst evaluating each of the Forecast formulae. This evaluation is done by comparing the forecasted quantities with the actual demand history, so as to calculate an error.

Simulation Period

The length of time, in months, over which the [simulation](#) is to be performed

Spread Profile

A representation of how the monthly forecasts in Forecasting are to be split into weekly forecasts for use by DRP, MPS or MRP

Seasonal Profile

A representation of how the monthly forecasts in Forecasting are to be split into daily or weekly forecasts for use by DRP, MPS or MRP

Start Month

The month in which forecasts commence