# Infor Demand Planning User Guide

# Contents

# About this guide

This help file is concerned only with the Web-based functionality.

## About Infor Demand Planning

Infor Demand Planning includes two key applications:

**The Windows-based application**
The Windows-based application comprises these modules:

- Demand Forecaster
- Inventory Planner
- Replenishment Planner
- Database Administration

**The Web-based Collaborate**
Collaborate comprises these modules:

- Collaborate Demand Forecaster
- Collaborate Replenishment Planner
- Collaborate Database Administration
- Sales and Operations Planner
- Demand Forecaster Reports
- Replenishment Planner Reports
- Demand Planning Monitor

This help file is concerned only with the Windows-based functionality.

# What's New?

New features and enhancements introduced in Infor Demand Planning Release 11:

**Enhanced user experience**

Infor Demand Planning 11 sees the introduction of a Tool Bar Ribbon, Selection Navigation Tree, and Enhanced Exception Alerting.

The Interactive Navigation Tree provides a more modern and user-intuitive manner to select Channel Products. Selections can be performed based on Views, Filters, Hierarchies or a combination of these, and drilled into at different levels. Each of the types of possible selections are displayed in a series of Selection Panes.

The different Selection Panes can be set to display or not and be resized if required.

**Demand Planning Exception Alerting**

This function provides management by exception logic to the Core user. Time to plan is reduced by alerting to problem areas.

The new floating Exceptions pane is enabled. When a planner selects a channel product, each channel product in the selection is checked. The enabled exceptions enabled that are triggered by the current CP are identified.

The Exception can be easily viewed. The planner can easily remove exceptions that pertain to the selected Channel Product.

**Offline Channel Balancing**

Offline Channel Balancing provides an option for Channel Balancing to occur in a non-user-interactive model, improving planner productivity for large scale problems or complex Channel Structures.

A setting at the product level determines whether balancing occurs interactively or offline.

If the **offline** option is used, during edits to a Channel Product, the Channel Product is flagged as requiring balancing and the balancing is performed in the background.

**Forecast BOMs**

Forecast BOMs enable the Net Forecast at a parent channel product to be added as Market Intelligence to any component products that are linked to the parent. The quantity of Market Intelligence added, and any offset can be specified to suit requirements.

Forecast BOMs are channel specific and can be created for numerous channels.

**Enhanced Edit Grid in Core**

Customer Forecast is included, replacing Net Forecast where Customer Forecast periods exist.

Customer Forecast is displayed as default with the option of editing in the Detail view of the grid.

Option to display a single User Data Series in the grid instead of Customer Forecast.

**Enhanced Edit Grid in Collaborate.**

Provides the ability to work with forecast in Calendar Months whilst still using a weekly database, as per the Core Edit Grid.

Inclusion of Customer Forecast, replacing Net Forecast where customer forecast periods exist.

Customer Forecast displayed as default with the option of editing in the Detail view of the grid.

A Single User Data Series can be displayed in the grid instead of Customer Forecast.

The Edit Grid functionality now gives more consistency between Core and Collaborate.

# Contacting Infor

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

If we update this document after the product release, we will post the new version on this Web site. We recommend that you check this Web site periodically for updated documentation.

If you have comments about Infor documentation, contact documentation@infor.com.

# Getting Help

1

## Ways to get help while you work

The easiest way to get help while you work is to use Infor Demand Planning Help.

### To get help about a dialog or window

Many dialog boxes and windows in Infor Demand Planning have Help buttons, marked either by the word "Help" or a help icon.

Click the **Help** button to view a topic about the dialog or window.

### To get help about a particular task

1. Select **Help > Help Index** or **Help Contents**.
2. If the table of contents is not visible in the left-hand pane of the Infor Demand Planning Help window, click the **Contents** tab.

   Use the table of contents to find a help topic about the task.

### To get help about a particular subject

1. Select **Help > Help Index** or **Help Contents**.
2. In the Infor Demand Planning Help window, click the **Index** tab.
3. Type the subject about which you want help, in the box just below the **Index** tab.
   The index adjusts automatically to highlight the index term that best matches what you type.
4. Click the index term.
   If the term is associated with only one help topic, that topic is displayed. If the term is associated with more than one topic, a shortcut menu appears from which you can select the most appropriate topic.

## To view related topics

If a help topic doesn't contain all the information you need, you may be able to view related help topics.

1 Click **See Also** at the bottom of the topic.
2 Select the most appropriate topic from the shortcut menu.

**Note:**

- The **See Also** button is not available for all topics.
- To print the current topic, click **Print** in the button bar.

# About the types of help topics

Infor Demand Planning Help includes several different types of help topics. These types are marked by icons that appear in the topic titles.

| Icon | Type of help provided |
|---|---|
|  | dialogs and windows |
|  | Data tables and reports |
|  | Graphs and charts |
|  | Wizards |
|  | Tasks and procedures |
|  | Concepts, examples and background information |
|  | Processes |
|  | Reference information |

# How database fields are identified

Infor Demand Planning uses Oracle databases. In the Help system, and in the user manual, the tables and fields within these databases are identified in either of two ways.

### By their Oracle names

Oracle table and field names are shown in uppercase. They cannot contain spaces.

Example: the ANNUALISED_FC field of the CHAN_PRODS table

Another way of identifying a field is to write the table name followed by the field name, separated by a period.

Example:CHAN_PRODS.ANNUALISED_FC

You need to know the Oracle table and field names whenever you are editing SQL expressions that address the database.

### By their descriptive names

Because the Oracle names are sometimes hard to read, tables and fields also have more descriptive names. For example, the Annualized Forecast field of the Channel Products table. You can change the names of fields by editing the database's application defaults.

See "Editing application defaults" on page 70.

Another way of identifying a field is by writing its descriptive name followed by a table abbreviation in brackets.

*Example:* Annualised Forecast (CPt)

Usually, in the Help system, this kind of field reference is followed by a small "Annualised Forecast (CPt)" symbol. If you click the symbol, you get a definition of the field.

Here is a list of the most common table abbreviations:

| Abbreviation | Table |
|---|---|
| Ct | Channels table |
| CPt | Channel Products table |
| Ot | Orders table |
| Pt | Products table |
| St | System table |

# How toolbar command buttons are identified

In Infor Demand Planning, many menu commands have toolbar equivalents. In the Help system, and in the manual, whenever you are given instructions for performing a task, the menus and the commands are always identified in bold. For example:

Select **Modules > Demand Forecasting > Generate Forecasts**.

However, if there is also a toolbar equivalent for a menu command, the icon that appears on the toolbar button is shown in front of the command. For example:

Select **Modules > Demand Forecasting > Edit Forecasts**.

This tells you that, instead of using the menus, you can simply click the **Edit Forecasts** button on one of the toolbars that are available at this point in the task.

# Hiding the help navigation pane

By default, the Infor Demand Planning Help window has a navigation pane with **Contents**, **Index**, and **Search** tabs. You can hide and show this pane to give more room to display help topics.

Click **Help Topics** in the button bar.

# Searching help topics

1. Select **Help > Help Index** or **Help Contents**.
2. In the Infor Demand Planning Help window, click the **Search** tab.
3. Follow the numbered instructions on the tab.
   To set search options, select **Search > Options**.

# Defining bookmarks for help topics

You can define bookmarks for topics so that you can return to them later.

## To define a bookmark for the current topic

1. Select **Bookmark > Define**.
2. Type a name for the bookmark in the **Bookmark** name box and click **OK**.
   The default name is the title of the current topic.

## To return to a bookmark

On the **Bookmark** menu, click the name of the required bookmark.

**Note:**

- Each top-level book in the help file has its own separate set of bookmarks.

- Your bookmarks are lost if the help file is updated.

# Annotating help topics

You can add an annotation to a help topic, for example, as a reminder.

## Annotating the current topic

1 Select **Edit > Annotate**.
2 Type an annotation for the topic in the **Current annotation** box. You can also use the **Copy** and **Paste** buttons to copy text to and from the annotation.
A paper-clip icon is displayed next to the topic title and shows that the topic is annotated.

## Deleting an annotation

1 Select **Edit > Annotate**.
2 Click **Delete**.

**Note:** Your annotations are lost if the help file is updated.

# International support

Technical support is available for Infor Demand Planning users in the form of telephone helpdesks. Infor Demand Planning users are requested to contact the helpdesk nearest to where the software was purchased.

### Infor UK Ltd, Solihull, UK

| | |
|---|---|
| Customer Care | +(44) (0)1252 556556 |
| Online | www.infor.com\inforxtreme |

### Infor (Australia) Pty Limited, NSW, Australia

| | |
|---|---|
| Helpdesk | 1800 895 681 (Outside Australia +65 6346 4636) |
| Fax | +(61) 2 9021 7298 |

| | |
|---|---|
| Online | www.infor.com\inforxtreme |

### Infor Inc, USA

| | |
|---|---|
| Helpdesk | +(1) 877-772-4111 |
| Online | www.infor.com\inforxtreme |

### European Computing Consultants, Madrid, Spain

| | |
|---|---|
| Helpdesk | +(34) 91 406 19 15<br>+(34) 902 900 190 |
| Fax | +(34) 91 406 19 16 |
| Email | soporte@ecc.es |

The lines are open during office hours and are answered by technical staff. Primarily, the technical personnel are responsible for the running of the Infor Demand Planning help desk service for our customers, the development of Infor Demand Planning to meet the needs of industry and, if required, the specialist customization of Infor Demand Planning for any individual needs of a company. Technical team members combine academic achievement in the field of computing, statistics and operational research with a sound level of expertise in the area of materials management.

# Common Tasks

2

## Starting Infor Demand Planning

1 On the Windows **Start** menu, select **Programs > Infor Demand Planning**, then click one of these options:

- **Database Administration**
- **Demand Forecaster**, for Demand Forecaster (including Sales Budgeting & Tracking and Inventory Planner).
- **Replenishment Planner**, for Replenishment Planner.

When the selected application starts, the Select Database Profile dialog is displayed.

2 Click the database profile you want, then click **OK**.
The Log On dialog box is displayed.

3 Type your user ID and password, then click **OK**.

## Opening a database

1 Select **File > Open** or **Open Database**.
The Select Database Profile dialog box is displayed.

2 Click the database profile you want, then click **OK**.
The Log On dialog box is displayed.

3 Type your user ID and password, then click **OK**.

**Note:** The current database profile is identified in the status bar.

## Closing a database

Select **File > Close** or **Close Database**.

# Passwords

## Changing your password

At first, your password is the same as your user ID. You can change your password in Database Administration, Demand Forecaster and Replenishment Planner.

**1** Do one of the following:

- In Database Administration, select **DB Admin > Change Password**.
- In Demand Forecaster, select **Tools > Change Password**.
- In Replenishment Planner, select **Tools > Change Password**.

**2** Specify this information:

**Old Password**
Type your current password.

**New Password**
Type your new password.

**Verify Password**
Type your new password again.

**Note:**

- Passwords are not case-sensitive prior to Oracle 11g, but are case-sensitive from Oracle 11g onwards.
- A password cannot include spaces or begin with a number.

## If you forget your password

If you forget your password, inform a steward. There is no easy way to recover a lost password.

# CP Notes

## About CP Notes

You can enter and store free-form information relevant to the current Channel Product. This is possible using a text edit dialog, accessed through a common menu option in all modules. Rather than be restricted to the limitation of a standard database character field, this information exists in a table, containing a large object for memo-type storage.

## Adding CP Notes

**1** Do one of the following:

- In Database Administration, select **Product Admin > Channel Products** and click the **Open the text editor to edit notes for this CP** icon in the Channel Products dialog toolbar.
- In Demand Forecaster, select **Tools > CP Notes**.
- In Replenishment Planner, select **Tools > CP Notes**.

The CP Notes dialog box is displayed.

**2** Type the new note in the box provided.

**3** Click **OK**.

## Viewing CP Notes

**1** Do one of the following:

- In Database Administration, select **Product Admin > Channel Products** and click the **Open the text editor to edit notes for this CP** icon in the Channel Products dialog toolbar.
- In Demand Forecaster, select **Tools > CP Notes**.
- In Replenishment Planner, select **Tools > CP Notes**.

The CP Notes dialog box is displayed.

**2** Click **OK** to close the dialog box.

# Messages

## About messages and broadcasts

You can send and read messages and broadcasts while using either Database Administration or Demand Forecaster.

- Messages are sent to individual Infor Demand Planning users. If the user is currently logged on, she can read the message immediately. Otherwise, her messages are kept and displayed automatically the next time she logs on.
- A broadcast is simply a message that is sent simultaneously either to all users or to all users who are currently logged on (excluding the sender, of course).

Messages and broadcasts are internal to Infor Demand Planning. However, in Demand Forecaster, you can also access your company's email system.

## Sending a message to a user

1 Do one of the following:

   - In Database Administration, select **Messages > Send Message**.
   - In Demand Forecaster, select **Tools > Messages > Send Message**.

2 Select the user ID of the intended recipient.

3 Type the message in the box provided.

4 Click **Send**.

   **Note:** Messages of more than 60 characters may be truncated when read.

## Broadcasting a message to more than one user

1 Do one of the following:

   - In Database Administration, select **Messages > Broadcast**.
   - In Demand Forecaster, select **Messages > Broadcast**.

2 Type the message in the box provided.

3 Click **Send**.

   **Note:** Messages of more than 60 characters may be truncated when read.

## Reading your messages

1 Do one of the following:

- In Database Administration, select **Messages > Open Messages**.
- In Demand Forecaster, select **Tools > Messages > Open Messages**.

The Mailbox dialog box shows each message, the user ID of the sender and the date and time it was sent.

2 To delete a message, click the message then click **Delete Message**.

3 To delete all messages, click **Delete All**.

4 To reply to a message, click the message then click **Reply to Sender**. The Mail – Send Message dialog box is displayed, in which you can type a reply message.

**Note:** If, when you log on to Database Administration, there are any messages for you, the Mailbox dialog box is displayed automatically.

## Sending an email

In Demand Forecaster, select **Tools > Mail**.
Your company's email client opens, ready for you to type an email.

# Language

## Changing the language

You can change the language used for the menus and dialog boxes in Demand Forecaster, Replenishment Planner and Database Administration.

1 In Demand Forecaster and Requirements Planner, select **Tools > Language** or **Set Language**.

In Database Administration, select **Settings > Set Language**.

The Set Interface Language dialog box is displayed.

2 In the **Available Languages** list, click the language you want to use.

3 Select the **Set As Default** check box if you want to keep this language until you change it again. Otherwise, the original language is restored when you next start Infor Demand Planning.

**Note:**

- Changing the language in Demand Forecaster or Replenishment Planner only affects these modules. Dialogs that rely on Microsoft Windows, including the help system, continue to use the language of your Windows installation.

- If **Set as default** is selected in Set Language in Database Administration, the language of all three core modules is changed.
- You cannot change the language of the Infor Demand Planning Help.

# Exception Views

## About exception views

There are currently 139 default exception views that are generated within Infor Demand Planning. Users may activate exceptions, categorize exceptions with a severity and assign exceptions to various user roles so the exception views can be used as a better basis for initiating a work flow.

Infor Demand Planning gives an overview of the exceptions within the system, but in a method that is applicable to the current user. It is possible to view exception detail, including applicable items affected, and directly drill down into the functionality to view or action those products.

There are currently two different ways to gain access to the core system and Collaborate functionality:

- Standard Product and Channel select.
- A predefined selection for a particular user stored on the database.

See "Index of exception views".

## Editing exception views in DF and RPD

You can edit exception views in which the currently selected Channel Product appears in both the Demand Forecaster and Replenishment Planner modules.

1. Select **Tools > Exception View Edit**.
   The Exception View Edit dialog box is displayed.
2. Select the required user role from the **Select Role** list box.
3. Either select the check box in the Remove column to remove the currently selected Channel Product from that exception view or click the **Remove CP from all available exception views** check box to remove it from all exception views.
4. Click **Save**.
5. Click **Yes**.

   **Note:** Removing a Channel Product from an exception view removes it from all user roles associated with that exception view.

# Selecting Products and Channels

3

## About Products

In Infor Demand Planning, a Product is typically any item which is produced, procured and consumed in discrete quantities.

### Product types

- Standard Product

The majority of items are likely to be of this type. Standard Products are further classified:

- Normal Products are items whose pattern of demand is regular and common enough to be forecast by dynamic linear modeling (DLM).
- Slow-Moving Products (SMPs) are items whose demand is too irregular to be forecast by DLM. SMPs typically show many periods in which there is no recorded demand at all; in fact, this is how Infor Demand Planning identifies them.

See "About Slow Moving Products" on page 271.

- Non-Standard Product (NSP)

A Product variant used in promotional activities (for example, 3-for-2 offers, or "buy one get one free"). Infor Demand Planning allows you to link NSPs to related Standard Products in a variety of ways. For example, a promotional pack may be assembled from two or more standard items, or a promotional pack may steal demand from one or more standard packs.

- Unspecified Forecast Product (UFP)

A dead Product that may become live, or a notional Product used to forecast a proposed item to allow its predicted sales to be taken into account in budgeting and capacity planning. A UFP can be upgraded to a Standard Product when appropriate.

See "About Unspecified Forecast Products" on page 274.

- Forecast Group Product

A notional Product used as the placeholder for a system view of Standard Products that are to be forecast collectively as a permanent forecast group (PFG). This is often useful in detecting seasonal demand patterns that can then be applied to new Products added to the group (for example, a new flavor or a new pack size).

See "About permanent forecast groups" on page 279.

- Returns Product

A Product returned to stock (linked to base Products in Demand Forecaster).

See "About Returns Products" on page 274.

- Scenario Product

A fictitious variant of a real Product created to try, and save, "what-if" forecast projections. If the projections prove valuable, the Scenario Product's forecast can replace the original Product's forecast.

See "About Scenario Products" on page 276.

### Product status

- Live

A live Product is one which is actively processed, forecast and reported by Infor Demand Planning.

- Dead

A dead Product can be kept in the database for future reference but is not used in any processing and does not appear in any reports.

# About Channels

The term "Channel" as it is used in Infor Demand Planning must not be confused with the more familiar concept of a distribution channel, although there are some similarities.

In Infor Demand Planning, a Channel can represent a physical location such as a factory, depot or warehouse, or a less tangible element such as a sales region or market sector. It can also be a theoretical aggregate, such as the sum total of all a company's depots.

### Channel types

Infor Demand Planning includes up to ten predefined Channel types which can be edited to suit your implementation.

| | |
|---|---|
| • Factory | • Region |
| • Depot | • Country |
| • Sales region | • Division |
| • Customer | • Field Stocks |
| • Distribution center | • Total (all-purpose aggregate) |

When you create a Channel, you must say what type of Channel it is.

See "About Channel types" on page 77.

### Channel behaviors

Every Channel is characterized by a set or vector of nine behaviors. Initially, these behaviors are inherited from the Channel type, but they can be replaced or edited when the Channel is added to a Channel matrix.

Collectively, a Channel's behaviors govern how the statistical forecast, sales/demand history and stock requirements are stored at, passed to or accepted from its superior and subordinate Channels in a Channel matrix.

See "About Channel behaviors" on page 72.

### Channel matrices

A Channel matrix is a collection of Channels assembled in a hierarchical or pyramidal structure.

You can define as many Channel matrices as you need. A Channel can appear in several different matrices, and its behaviors may be different in each one.

See "About Channel matrices" on page 78.

# About selecting Products and Channels

### Selecting Products

There are five methods of selecting Products or Channel Products:

"Selecting all Products" on page 40 By selecting all Products

"Selecting views" on page 46 By selecting one or more views

"Selecting Product codes" on page 46 By selecting Product codes

"Selecting recently-used Products" on page 47 By selecting recently-used Products

"Specifying a selection manually" on page 47 By specifying a selection manually

When making a selection you can filter it, sort it, and save it as a view.

### Selecting Channels

You can select Channels either by type or by choosing particular Channels. You have to select Products before you can select Channels.

See "Selecting Channels" on page 48.

### Pre-defined views

You can avoid both the above selection processes by using a predefined view.

See "About pre-defined views" on page 40.

**Note:**

- Your data access privileges may restrict the Products and Channel Products you are allowed to select.
- In Database Administration, selecting Channel Products automatically selects both the Products and the Channels. In other Infor Demand Planning modules, Products and Channels must be selected separately.
- In Replenishment Planner, to include Scenario Products in your selections you must first select Scenario Products on the View menu.
- Selections cannot be sorted in Database Administration.

# About Selection Panes

For Infor 11, a series of selection panes have been introduced providing a more modern and user-intuitive manner to select Channel Products.

All panes can be switched on or off. Use the check boxes that are displayed in the **Home** tab of the ribbon in the Navigation by Products and Channels, and Navigation by Channels and Products sections.

All panes can be resized to suit the user's requirements. The selection of panes is saved for future sessions of Demand Forecaster.

The selections that are displayed in the panes use all the channel products in the database and are not linked to any prior selections.

### Views by Products and Channels

In this pane, double-clicking at the top of the tree, Views by Products and Channels, shows all the types of view to which the user has set up or has access. Different types of view are possible:

- Exception views
- Exception views (products)
- Private Product views
- Public Product views
- Private Channel Product views
- Public Channel Product views
- Marketing Group views
- Predefined views

Double-clicking on the view type shows the views of that type to which the user has access.

Double-clicking on a shows the products in that view and double-clicking on the product code shows the channels that are linked to that product.

For Exception Views, the roles that a user has assigned to them and the Exception Views that are active for each role are observed.

The data access filters are observed. The users cannot see the views that only contain the channel products to which they do not have access.

### Views by Channels and Products

This pane shows the same views and channel products as the Views by Products and Channels pane, except that, when drilling down into the view, the channel level is displayed with products listed underneath it.

### Hierarchies by Products and Channels

In this pane, double-clicking at the top of the tree, Hierarchies by Products and Channels, shows all hierarchies on the database.

Double-clicking on each level of the tree drills down into the levels of the hierarchy and shows the products in that branch. When double-clicking on the product code, the channels are displayed.

Any data access filters will be observed and any hierarchy branch containing channel products that the user does not have access to will be displayed, but cannot be selected (the hierarchy will disappear if selected)

### Hierarchies by Channels and Products

This pane will show the same hierarchies and channel products as the Hierarchies by Products and Channels pane, with the difference being that when drill down into the hierarchy, the channel level is displayed with products listed underneath it.

### Filters by Products and Channels

In this pane, double-clicking at the top of the tree, Filters by Products and Channels, shows all filters on the database to which the user has access. Different types of filter are possible:

- Private Product Filter
- Public Product Filter
- Private Channel Product filter
- Public Channel Product filter
- Private Advanced Filter
- Public Advanced filter

Double-clicking on the filter type shows the filters of that type to which the user has access.

Double-clicking on a filter shows the products in that filter. When double-clicking the product code, the channels are displayed.

The data access filters are observed. The users cannot see the filters that only contain the channel products to which they do not have access.

### Filters by Channels and Products

This pane shows the same filters and channel products as the Filters by products and channels pane, except that, when drilling down into the filter, the channel level is displayed with products listed underneath it.

### Views by Hierarchies, Products and Channels

In this pane, double-clicking at the top of the tree, Views by Hierarchies, Products and Channels, shows all types of view that the user has set up or has access to.

Double-clicking on the view type shows the views of that type.

Double-clicking on a view shows all hierarchies on the database.

Drilling down into the hierarchy shows the channel products in that view that contained in each branch of the hierarchy

As per the Views by Products and Channels and the Hierarchies by Products and Channels panes, all data access filters are observed. Views or hierarchies may not be displayed if the user does not have access to these.

Any levels of the hierarchy that contain null values are hidden once drilled into.

### Views by Hierarchies, Channels and Products

This pane shows the same views by hierarchies and channel products as the Views by hierarchies, Products and Channels pane, except that, when drilling down into the hierarchy, the channel level is displayed with products listed underneath it.

### Views by Filters, Products and Channels

In this pane, double-clicking at the top of the tree, Views by Filters, Products and Channels, shows all types of view that the user has set up or has access to.

Double-clicking on the view type shows the views of that type that the user has access to.

Double-clicking on a view displays some or all of the six filter types. A filter type is not displayed if no filter of that type contains channel products in the selected view.

Expanding a filter type shows all filters that contain channel products in the selected view and double-clicking on that view will drill into it, displaying the product and then channel level branches of the tree.

As with all other panes, data access filters are observed. Views and filters are not displayed if the user does not have access to the channel products in them.

### Views by Filters, Channels and Products

This pane shows the same views by filters and channel products as the Views by Filters, Products and Channels pane, except that, when drilling down into the filter, the channel level is displayed with products listed underneath it.

## Filters by Views, Products and Channels

In this pane, double-clicking at the top of the tree, Filters by Views, Products and Channels, shows all filters on the database to which the user has access. The possible filter types are the same as in the Filters by Products and Channels pane.

Double-clicking on the filter type shows the filters of that type.

Double-clicking on a filter shows the view types that contain views that have channel products in the selected filter.

If all views of a particular type do not contain any channel products returned by the selected filter, the view type is not displayed at all.

Expanding the view type displays the views that contain the channel products that are returned by the selected filter. Double-clicking on that view will drill into it displaying the product and then channel level branches of the tree.

As with all other panes, data access filters are observed. Views and filters are not displayed if the user does not have access to the channel products in them.

## Filters by Views, Channels and Products

This pane shows the same Filters by views and channel products as the Filters by Views, Products and Channels pane, except that, when drill down into the view, the channel level is displayed with products listed underneath it.

In all the Selection Panes, when the selection is loading, if you press Escape, the selection stops loading up to the point that it has loaded. Selections can then be performed from what has been loaded.

## Select Group

For each of the above panes, once a view, hierarchy or filter has been opened and drilled into, the user can select a level of the tree, right-click and select **Select Group**.

If the group selection is performed at the lowest level of the tree, that is, the single channel product level, only this channel product is selected.

If the group selection is performed at each level of the tree, the channel products at that level and below are selected.

For example, in the Views by Hierarchies panes, the group selection is performed for an Exception view, all the channel products in that view are selected. On the contrary, if the group selection is performed at a level in the hierarchy seen under the exception view, only the channel products in that branch of the hierarchy and below for that exception view are selected.

Group selection cannot be performed at the level of filter type, view type or hierarchy name. Once these are drilled into, the **Select Group** option is available.

If more than one channel product is selected using this option, a temporary forecast group is created.

### Refresh

As the circumstances of a channel product can change, especially in the form of exception views, the channel products that are displayed in a view, filter or hierarchy must be refreshed in line with other changes.

For example, if a channel product is contained in a particular exception view, but changes are made to the channel product and the exception view no longer contains this channel product, the selection trees must be refreshed, either at the top level of the tree or, in this case, at the level of the exception view name. Refreshing is required in each pane.

If changes have been made prior to logging into Demand Forecaster, any changes are automatically reflected in the selection trees.

# About pre-defined views

In order to provide a more structured and user-friendly way to manage the 139 exception views that are generated within Infor Demand Planning, it is possible to use a predefined list of items selected by individual users which are stored on the database and may be used as an alternative to the standard Product and Channel selection process. As all exceptions views are categorized with a severity and can be assigned to various user roles, they can be used as a better basis for initiating a work flow.

There are currently two sign on options available when entering the core modules of Infor Demand Planning and Collaborate:

- The standard select Products and Channels dialog boxes. This is the default for all current users.
- The user will bypass the select Products and Channels dialog boxes and, using a predefined Product/Channel selection, open a default module or Collaborate page, stored on the database.

The predefined option is only available if the PREDEF sign-on option is allocated to the current user. The sign-on option for each user is maintained in the Maintain Users: ADD/EDIT dialog boxes within the Database Administration module. The default sign-on module or Collaborate page is also selected in these dialog boxes.

A predefined Product/Channel selection can be saved in any Infor Demand Planning core module and in Collaborate.

# Selecting Products

## Selecting all Products

**1** Select **File > Select Products**.

2 Do either of the following:

- Select the **All products** check box.
- In the **Select** box, click **All Products**.

3 Optionally, you can specify a filter, a sort order, or a view into which to save the selection when it is retrieved.

4 Click **OK**.

# Selecting by Hierarchy

## About hierarchies

A hierarchy is a useful way of arranging Products or Channel Products so that you can easily select those that have one or more values in common. (Remember that your data access privileges may prevent you accessing some Products or Channel Products.)

A hierarchy is defined by one or more Product or Channel Product database table fields. For each field, Infor Demand Planning creates a separate branch of the hierarchy for each distinct value found in that field, and includes in that branch the Products or Channel Products that share those values. As you add more fields to the hierarchy, Infor Demand Planning creates further nested, branches.

Once you have created a hierarchy, you can select which branches, or individual Products or Channel Products, you want for a particular selection. The hierarchy itself is stored in the database, and can be accessed by any user.

Hierarchies, unlike views, are not static collections of Products or Channel Products and are based on the current values of the Product or Channel Product fields on which the hierarchy is based.

Products and Channel Products with null values in any one of these fields are automatically excluded from the hierarchy. It is therefore possible for a hierarchy to be empty (that is, contain no Products or Channel Products).

## Examples of hierarchies

Suppose you have the following Products:

| Code | Description | ABC Class | Category | Group |
|---|---|---|---|---|
| DSU100 | Dual Sink Unit (Steel) | B | Commercial | |
| DSU103 | Dual Sink Unit (Marble) | A | Domestic | |
| Hob001 | Ceramic Hob (Standard) | C | Domestic | Electrical |
| Hob002 | Ceramic Hob (Enhanced) | B | Domestic | Electrical |
| Hob003 | Ceramic Hob (Deluxe) | A | Commercial | Electrical |

| | | | | |
|---|---|---|---|---|
| HobG002 | Gas Hob (2-ring) | C | Domestic | Gas |
| HobG012 | Gas Hob (4-ring) | B | Domestic | Gas |
| MWO101 | Microwave (Portable) | C | Domestic | Electrical |
| MWO220 | Microwave (Industrial) | B | Commercial | Electrical |

ABC Class is a standard Products table field. Category and Group are user-defined Products table fields, although ones that are often included in Infor Demand Planning installations.

## Example 1: A hierarchy based on only the ABC Class field

Such a hierarchy would look as shown below. Given this hierarchy, you could select one or more ABC classes.

| | | | |
|---|---|---|---|
| All Products | | | |
| | A | | |
| | | DSU103 | Dual Sink Unit (Marble) |
| | | Hob003 | Ceramic Hob (Deluxe) |
| | B | | |
| | | DSU100 | Dual Sink Unit (Steel) |
| | | Hob002 | Ceramic Hob (Enhanced) |
| | | HobG012 | Gas Hob (4-ring) |
| | | MWO220 | Microwave (Industrial) |
| | C | | |
| | | Hob001 | Ceramic Hob (Standard) |
| | | HobG002 | Gas Hob (2-ring) |
| | | MWO101 | Microwave (Portable) |

## Example 2: A hierarchy based on the Category and Group fields

A hierarchy that organized Products by Category first, and then Group, would look as shown below. Notice that DSU100 and DSU103 are excluded from the hierarchy because their Group fields are null. Given this hierarchy, it would be easy to select, for example, all commercial Products that are electrical.

| | | | | |
|---|---|---|---|---|
| All Products | | | | |
| | Commercial | | | |
| | | Electrical | | |
| | | | Hob003 | Ceramic Hob (Deluxe) |
| | | | MWO220 | Microwave (Industrial) |
| | Domestic | | | |

| | | | | |
|---|---|---|---|---|
| | | Electrical | | |
| | | | Hob002 | Ceramic Hob (Enhanced) |
| | | | Hob001 | Ceramic Hob (Standard) |
| | | | MWO101 | Microwave (Portable) |
| | | Gas | | |
| | | | HobG012 | Gas Hob (4-ring) |
| | | | HobG002 | Gas Hob (2-ring) |

## Creating a hierarchy

1. In Database Administration, select **Product Admin and Hierarchies**.
2. Click **Add**.
3. Specify the hierarchy name, up to 30 characters.
4. Specify the hierarchy description, up to 255 characters.
5. To select the field or fields on which you want to base the new hierarchy, select the **Display** check box.

   You can select several fields. A hierarchy can consist of just Product or Channel Product table fields, or a mix of the two.
6. To change a field's position in the nesting order, click it and click **To Top**, **Up**, **Down**, or **To Bottom** to move it up or down in the hierarchy.
7. Click **OK**.
   The hierarchy is saved to the database and listed in the Hierarchies dialog box.

   **Note:** Once created, the new hierarchy is immediately available to you and all other Infor Demand Planning users in the Selection panes in Demand Forecaster.

## Editing a hierarchy

1. In Database Administration select **Product Admin and Hierarchies**.
2. From the list, select the hierarchy that you want to edit and select **Edit**.
   The Hierarchies dialog box is displayed. Selected fields are listed first, in the order in which they have been saved. All other Channel Product and Product fields are listed below the selected fields.
3. To add fields to the hierarchy, select **Display** next to the field name.
4. To remove a field from the hierarchy, clear **Display** next to the field name.
5. To change a field's position in the nesting order, click it and click **To Top**, **Up**, **Down**, or **To Bottom** to move it up or down in the hierarchy.
6. Optionally, modify the hierarchy description.
7. Click **OK**.

## Deleting a Hierarchy

1 In Database Administration, select **Product Admin and Hierarchies**.
2 From the list, select the hierarchy that you want to delete and select **Delete**.
The hierarchy is removed from the list and deleted from the database.

# Selecting by Views

## About views

A view is a named, re-usable set of one or more Products or Channel Products. A view that contains only Products is a Product view; a view that contains Channel Products is a Channel Product view. Views are typically used to select related groups of items.

See "Selecting views" on page 46.

You can create, edit, copy, split, combine and delete your own views. When you create a view, you can save it as either a public view or a private view. A public view can be used by anyone with the correct access privileges. A private view can be used only by you or a steward. Views generated by Infor Demand Planning itself are known as exception views.

### Special uses of views

There are three special uses of views:

- Exception views

An exception view is a system-created view that contains Products or Channel Products that are in some way exceptional and which Infor Demand Planning wants to bring to your attention. All exception views only appear once and are always owned by the database steward. Exception views may be saved as predefined views.

See "About pre-defined views" on page 40.

In order to provide a more structured and user-friendly way to manage the 139 exception views that are generated within Infor Demand Planning, it is possible to use a predefined list of items selected by individual users which are stored on the database and may be used as an alternative to the standard Product and Channel selection process. As all exceptions views are categorized with a severity and can be assigned to various user roles, they can be used as a better basis for initiating a work flow.

The predefined option is only available if the PREDEF sign-on option is allocated to the current user. The sign-on option for each user is maintained in the Maintain Users: ADD/EDIT dialogs within the Database Administration module. The default sign-on module or Collaborate page is also selected in these dialogs.

A predefined Product/Channel selection can be saved in any Infor Demand Planning module and in Collaborate.

See "About exception views" on page 105.

- Permanent forecast groups

A permanent forecast group view is a system-created view containing Product or Channel Products that are grouped together for forecasting purposes.

See "About permanent forecast groups" on page 279.

- Marketing groups

A marketing group view is usually a public view containing Products or Channel Products that are grouped together for promotional purposes.

See "About promotions" on page 290.

### Ownership of public/private views

You are automatically the owner of all the public and private views that you create.

### Restrictions on managing views

Permanent forecast groups and marketing groups can be managed only in the Demand Forecaster module; all other views can be managed in the Database Administration module, provided that you have the correct access privileges.

Also, you can edit exception views in which the currently selected Channel Product appears in both the Demand Forecaster and Replenishment Planner modules.

See "Editing exception views in DF and RPD" on page 32.

If you are a non-steward user you can edit, copy, combine or split a view if you have data access privileges to all of the Products or Channel Products in that view and it is not a private view owned by another user. You can rename, overwrite or delete a view if it is a private or system view that you own.

If you are a steward, you have similar privileges except that you can also access other users' views.

See "About access privileges" on page 61.

### Reports

Infor Demand Planning has two reports that tell you what views there are and what Products and Channel Products they contain.

- Detailed Report (Views)

This report shows views, and the Products or Channel Products within them. It shows, for each selected view:

- The Products or Channel Products in that view.
- The view's owner.
- The date the view was created or last edited.
- The type of view (private, public or system).
- The total number of Products or Channel Products in the view.

- Cross Reference Report (Products and Channel Products)

This report shows Products and Channel Products, and the views of which they are members. It shows each view's owner, the date the view was created or last edited and the type of view (private, public or system).

## Selecting views

1. Select **File > Select Products**.
2. In the **Select** box, click **View**.
3. Optionally, you can specify a filter, a sort order, or a view into which to save the selection when it is retrieved.
4. Click **OK**.
   The Select Views dialog box is displayed.
5. Under Prod/CP View, specify whether you want to see Product views or Channel Product views.
6. Under View Type, specify the types of views you want to see: your private views, public views, system views and marketing group views. (If you are a steward, you can also select the **Select other private views** check box to see the private views of other users.)
7. Optionally, you can filter the views shown according to their names, descriptions or owners, by selecting the **Filter Views** check box.
   See "Filtering views" on page 55.
   The available views are shown in the central panel of the Select Views dialog box.
8. Select the views you want.
9. Click **OK**.

**Note:**

- At step 2, if you type **V** in the **Select** box and press ENTER, the Select Views dialog box is displayed immediately.
- If you select a marketing group view, you get all the items in the view to which you have access; but unless you have access to all the items in the view you are unable to edit the associated promotions.

# Selecting by Product Code

## Selecting Product codes

1. Select **File > Select Products**.
2. In the **Select** box, click Product Codes.
3. Optionally, you can specify a filter, a sort order, or a view into which to save the selection when it is retrieved.

4 Click **OK**.
The Select Products dialog box is displayed.
5 Select the Products you want.
6 Click **OK**.

**Note:** At step 2, if you type **P** in the **Select** box and press ENTER, the Select Products dialog box is displayed immediately.

## Selecting recently-used Products

Infor Demand Planning keeps a record of your four most recent Product selections.

1 Select **File > Select Products**.
2 In the **Select** box, click one of the recently-used selections.
Recent selections are either a list of one or more Product codes or a list of one or more views:
**p='code1','code2','code3'**
**v=view(user_ID),view(user_ID),view(user_ID)**
3 Optionally, you can specify a filter, a sort order, or a view into which to save the selection when it is retrieved.
4 Click **OK**.

## Specifying a selection manually

1 Select **File > Select Products**.
2 In the **Select** box, type either:
- A list of Product codes of the form:
**p='code1','code2','code3'**
- A list of views of the form:
**v=view(user_ID),view2(user_ID),view3(user_ID)**
where user_ID is the user ID of the view's owner.

3 Optionally, you can specify a filter, a sort order, or a view into which to save the selection when it is retrieved.
4 Click **OK**.

**Note:** Invalid codes are ignored; invalid views are reported as errors.

# Selecting Channels

## Selecting Channels

1 Select **File > Select Channels**.
2 Under Options, if you want to select Channels of a particular type, click that type. If you want all Channels, click **All**. Otherwise, the default option is **Choice**.
3 In the **Channels** box, select the Channels you want.
4 Click **OK**.

**Note:**

- You must select Products before you can select Channels.
- Infor Demand Planning retrieves only the Channels that are applied to the currently-selected Products.

# Selections

## Clearing the selection

Select **File > Clear Selects** or **Clear Selection**.

## Saving the selection as a view

You can at any time save the current selection, however it was produced, as a view.

1 Select **File > Save Current View**.
2 Specify whether you want to save the selection as a Product view or a Channel Product view.
3 Specify whether the view is a private or public view.
4 Type a name for the view, or select the name of an existing view.
5 Optionally, type a description of the view.

**Note:**

- You cannot save the selection as a Channel Product view unless both Products and Channels have been selected.

- At step 4, you can specify the name of an existing view if it is either a public view, or a private view that you own. If it is a public or private view that you own, then saving the selection overwrites the existing view. If it is a public view owned by someone else, then saving the selection produces a view with the same name but owned by you.
- Different Infor Demand Planning modules use slightly different dialog boxes for this function.

## Saving the selection as a pre-defined view

If your user id has been set up to use a predefined view, you can at any time overwrite your current predefined view with the current selection.

See "About pre-defined views" on page 40.

1. In the Demand Forecaster, Database Administration or Replenishment Planner module, select **File > Save selection as pre-defined view**.
2. Click **No** (unless you want to save the original predefined view as a private Product or Channel Product view).

## Preserving selections between sessions

1. In Database Administration, select **Settings > Edit Internal Settings**.
2. Select the **Save selections between sessions** check box.

   **Note:** This feature is usually restricted to stewards.

# Filtering

## About Product and Channel Product filters

### What is a filter?

A filter is a sequence of constraints based on the values of database table fields. A Product filter is based on Products table fields; a Channel Product filter is based on Channel Products table fields.

Each constraint includes three elements:

- A field from the Products or Channel Products table
- A constant value with which the field value is compared

- An operator that specifies the relationship between the field value and the constant value:

| | | |
|---|---|---|
| = | Equal | |
| > | Greater than | |
| < | Less than | |
| >= | Greater than or equal | |
| <= | Less than or equal | |
| <> | Not equal | |
| IS | Field is null | |
| IS NOT | Field is not null | |
| LIKE | Includes | (for alphanumeric values only) |
| NOT LIKE | Does not include | (for alphanumeric values only) |

Successive constraints are linked to each other by the logical operators AND and OR. You can also bracket constraints together to make the logic of the filter clearer.

See "Examples of Product and Channel Product filters" on page 51.

## What is an Advanced Filter?

An Advanced filter is a filter consisting of Product **and/or** Channel Product fields constructed using sql syntax.

Advanced filters give the user the ability to create more detailed filters using the free form text editor.

See "Examples of Product and Channel Product filters".

## When you can use filters

Product, Channel Product and Advanced filters can be used in two situations:

- **When you are selecting Products**

When you are selecting Products, you can apply a Product filter, a Channel Product filter, both a Product and Channel Product filter, or an Advanced filter, to refine the Products that would otherwise be retrieved. Notice that the filter always acts on some other selection, whether it is based on a view, or some other method. This sort of filter is known as a pre-retrieval filter.

In Database Administration, a pre-retrieval Channel Product filter also affects the Channels that are retrieved, as well as the Products (basically, it retrieves the Channels of the Channel Products that satisfy the filter).

- **After you have selected Products and Channels**

After you have selected Products and Channels, you can apply a Product filter, a Channel Product filter, or both to refine the current selection of Products and Channels via the File menu option.

This  form of filtering is not available in Database Administration.

### Private and public filters

You can save a Product or Channel Product filter as a private filter (one that only you can use) or a public filter (one that anyone can use). You are the owner of any filters that you save.

### The difference between filters and views

A filter always needs an existing selection of Products or Channel Products to which it is applied; therefore, the items that satisfy a filter vary depending on what has already been selected. Often, you will ensure that the initial selection contains all the Products and Channels that are accessible to you, so that the filter has the widest possible application.

In contrast, a view is a static collection of Products or Channel Products that does not change unless it is explicitly edited.

Another difference is that stewards cannot access the private filters of other users, but they can access the private views of others.

## Examples of Product and Channel Product filters

You build a filter by defining one or more constraints, linked by logical operators. The logic flows from the first constraint to the last, although this can be modified by bracketing constraints together.

### Example 1

To filter for Products whose codes begin with the text "Hob":

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| | Product Code | LIKE | Hob% | | | |

Note the % wildcard character.

### Example 2

To filter for Products that have a standard cost between €300 and €1000 inclusive (assuming the Euro is the base currency):

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| | Standard Cost | >= | 300 | | | AND |
| | Standard Cost | <= | 1000 | | | |

### Example 3

To filter for Products that either have a standard cost of at least €300 or are class A Products:

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| | Standard Cost | >= | 300 | | | OR |
| | ABC Class | = | A | | | |

### Example 4

To filter for Products that either have a standard cost between €300 and €1000 or are class A Products:

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| | Standard Cost | >= | 300 | | | AND |
| | Standard Cost | <= | 1000 | | | OR |
| | ABC Class | = | A | | | |

Another way of achieving the same effect would be:

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| ( | Standard Cost | >= | 300 | AND | | |
| | Standard Cost | <= | 1000 | | ) | OR |
| | ABC Class | = | A | | | |

It is a good idea to use brackets whenever you have more than two constraints in your filter, to make it easier to read.

### Example 5

To filter for either class A Products that cost less than €300 or class B Products that cost more than €1000:

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| ( | ABC Class | = | A | AND | | |
| | Standard Cost | < | 300 | | ) | OR |
| ( | ABC Class | = | B | AND | | |
| | Standard Cost | > | 1000 | | ) | |

### Example 6

The previous examples are all Product filters, but Channel Product filters are defined in exactly the same way.

To filter for class A Products that have a shelf life of less than 10 days, you need the following Product filter:

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| | ABC Class | = | A | | | |

And this Channel Product filter:

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| | Shelf Life | < | 10 | | | |

If you apply both a Product filter and a Channel Product filter when selecting Products, the Products that satisfy both filters are retrieved. (In Database Administration, the Channels of the Channel Products that satisfy both filters are also retrieved.)

## Creating a filter

You can at any time create a new Product or Channel Product filter to filter the current selection.

1 Select **File > Filter**.

**Note:** The Filter command is not available in Database Administration. However, you can filter a selection while you are making it.

The Filter Product Selection dialog box is displayed.

2 Click either the **Product Filter** tab, or the **Channel Product Filter** tab, as required.

3 For each line of the filter, select a field, an operator, then type a value. Click **Add** to add further lines to the filter, and link successive lines by AND or OR operators. If necessary, use brackets to group lines to make the logic of the filter clearer.

See "Examples of Product and Channel Product filters" on page 51.

4 Click **Verify** to verify the filter.

You can select the name of an existing filter if it is either a public filter, or a private filter that you own. If it is a public or private filter that you own, then saving overwrites the existing filter. If it is a public filter owned by someone else, then saving produces a filter with the same name but owned by you.

5 If you want to save the filter for future use, click **Save** (otherwise, click **OK**).
The Save Filter dialog box is displayed.

6 Specify whether this is a private or a public filter.

7 Type a name for the filter, or select the name of an existing filter.

8 Optionally, type a description of the filter.

## Loading a filter

You can at any time load a previously-saved filter to filter the current selection.

1 Select **File > Filter**.
The Filter Product Selection dialog box is displayed.

**Note:** The Filter command is not available in Database Administration. However, you can filter a selection while you are making it.

2 Click either the **Product Filter** tab, or the **Channel Product Filter** tab, as required.
3 Click **Load**.
The Select Filters dialog box is displayed.
4 Select the **Private** check box if you want to see your own private filters; click the **Public** check box if you want to see your own and other users' public filters.
5 In the **Click filters to select** list, click the filter you want, then click **OK**.

# Deleting a filter

1 In Database Administration, select at least one Channel Product.
See "About selecting Products and Channels" on page 35.
2 Select **File >** Delete Filters.
The Delete Filters dialog box is displayed.
3 Click either **Products** or **Channel Products**, depending on whether you want to delete a Product filter or a Channel Product filter, then click **OK**.
The Filter Deletion dialog box is displayed.
4 Under Filter Type, specify whether you want to see public or private filters, or both.
5 Click the filter you want to delete, then click **Delete**.

**Note:**

- Filters can be deleted only within the Database Administration module.
- You have to select at least one Channel Product before the **File > Delete Filters** command becomes available. It does not matter which Channel Product you select.
- Public filters can be deleted by anyone with the correct privileges. Private filters can be deleted only by their owners.

# Examples of view filters

You build a filter by defining one or more constraints, linked by logical operators. The logic flows from the first constraint to the last, although this can be modified by bracketing constraints together.

### Example 1

To filter for views whose names include with the word "Bath":

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| | View Name | LIKE | %Bath% | | | |

Note the % wildcard characters.

### Example 2

To filter for views whose descriptions include with the word "Depot" and are owned by John Doe:

| ( | Field | Operator | Value | Logical | ) | Logical |
|---|---|---|---|---|---|---|
| | Description | LIKE | %Depot% | | | AND |
| | Owner | = | JOHN_DOE | | | |

## Filtering views

If there are very many views from which to select, you may want to filter the views shown in the Select Views dialog box.

1 In the Select Views dialog, select the **Filter Views** check box.
The Filter Views dialog box is displayed.

2 Create a single- or multi-line filter to refine the views shown in the Select Views dialog box.

For each line of the filter, select either **View Name**, **Description** or **Owner**, an operator, and a value. Click **Add** to add further lines to the filter, and link successive lines by AND or OR operators.

See "Examples of view filters" on page 54.

3 Click **Verify** to verify the filter.

4 Click **OK** to return to the Select Views dialog, where the filter is applied to the listed views.

**Note:** This filter merely narrows the set of views from which you can select. It does not filter the Products or Channel Products within those views.

## Specifying a pre-retrieval filter

You can specify a Product filter or a Channel Product filter (or both) so that, when a selection is retrieved, only Products that satisfy the specified criteria are included. You can either create a new filter, or load a previously-saved filter.

### Creating a new Product or Channel Product filter

1 In the Select Products dialog, click either the **Product Filter** tab, or the **Channel Product Filter** tab, as required.

2 For each line of the filter, select a field, an operator, then type a value. Click **Add** to add further lines to the filter, and link successive lines by AND or OR operators. If necessary, use brackets to group lines to make the logic of the filter clearer.

See "Examples of Product and Channel Product filters" on page 51.

3 Click **Verify** to verify the filter.

## Creating a new Advanced Filter

1 In the Select Products dialog, click the **Advanced Filter** tab.
2 Select a product and/or channel product field from the drop downs. Once selected the free form text field is populated with the selected field(s).
3 Construct the filter using SQL syntax.
See "Examples of Product and Channel Product filters".
4 Click **Verify** to verify the filter.

## Loading a filter

1 In the Select Products dialog, click either the **Product Filter**, **Channel Product Filter**, or **Advanced Filter** tab as required.
2 Click **Load**.
The Select Filters dialog box is displayed.
3 Select the **Private** check box if you want to see your own private filters; click the **Public** check box if you want to see your own and other users' public filters.
4 In the **Click filters to select** list, click the filter you want, then click **OK**.

**Note:**

- If you create a filter, you can click **Save** to save it as a private or public filter for future use.
- In Database Administration, a pre-retrieval Channel Product filter affects not only the Products that are retrieved but also the Channels.

# Specifying a pre-retrieval sort order

You can specify a sort order so that, when a selection is retrieved, it is already sorted.

1 In the Select Products dialog, click the **Sort** tab.
2 In the **Source Data** list, select a Products table field by which you want to sort the selection, then click **Add** to move it to the **Ascending Columns** list. Repeat as necessary.
3 To move a chosen field up or down the sort order, click it in the **Ascending Columns** list and then click **Move Up** or **Move Down** as required.
4 To sort a field in descending rather than ascending order, clear the check box next to that field in the **Ascending Columns** list.

**Note:**

- In Database Administration, the Select Products dialog does not have a **Sort** tab.
- Without an explicit sort order, items are listed in alphabetical order by their Product codes.

# Specifying a pre-retrieval view

You can specify a Product view to which the selection should be saved when it is retrieved.

1. In the Select Products dialog, click the **Sort** tab.
2. Specify whether the view is a private or public view.
3. Type a name for the view, or select the name of an existing view.
4. Optionally, type a description of the view.

   **Note:** At step 3, you can select the name of an existing view if (a) you are a steward, or (b) it is a public view or (c) it is a private view that you own. If it is a public or private view that you own, then retrieving the selection overwrites the existing view. If it is a public view owned by someone else, then retrieving the selection produces a view with the same name but owned by you.

# Database Administration

4

## About Database Administration

The principal functions for which one may use the Database Administration (DBA) module include:

- Add, edit, copy and delete users, and specify their system access privileges and data access restrictions
- Add and delete Channels and Channel types
- Add, edit, copy, delete and apply Channel matrices
- Add and delete Products
- Add and delete Channel Products
- Add user-defined fields to the Products, Channels, Channel Products, Orders and Order Book tables.
- Create, edit, copy, split, combine and delete views
- Add, edit and delete static weightings
- Add, edit and delete time-phased weightings
- Edit the System, Products, Channels and Channel Products, Orders and Order Book tables
- Import and export data, and create, edit and delete import/export templates
- Add, edit, delete and apply discount factors
- Copy and aggregate history, and edit and delete open history
- Add, edit, copy and delete calendars
- Add and delete currencies and their rates of exchange
- Add, edit, copy, delete and apply interpolation vectors
- Add, edit and delete suppliers and supply channels
- Add, edit and delete transport types and alternative Channel transfer routes
- Edit application defaults and registry settings

At least one database must be available before starting this module. This may be Personal Oracle running on the same computer or a database located on a remote Oracle server.

# Users

## About user licensing

Infor Demand Planning supports two licensing schemes:

- Named users

Infor Demand Planning is limited to a specified total number of users. Each user must be logged on at only one client PC. For example, if your licence is restricted to 10 named users, you can define only 10 users in Infor Demand Planning.

- Concurrent users

Infor Demand Planning is restricted to a specified number of users logged on at the same time. For example, if your licence is restricted to 10 concurrent users, you can define any number of users in Infor Demand Planning but only 10 can be logged on at any one time.

Individual modules within Infor Demand Planning and Infor Demand Planning - Collaborate are licensed separately, possibly for different numbers of users; however, you cannot use different licensing schemes within these applications.

For example, you can use named user licensing for the core modules, and concurrent user licensing for Collaborate, and specify different numbers of named or concurrent users for each module within those applications. But you cannot use, for example, named user licensing for Demand Forecaster and concurrent user licensing for Replenishment Planner, because these are modules within the same application.

See "About Infor Demand Planning" on page 17.

**Note:**

- Distribution Planner is part of the Replenishment Planner module.
- Sales Budgeting & Tracking is part of the Demand Forecaster module.

## About user roles

Five default user roles exist based on standard process functions, although it is possible to extend this with up to 5 additional roles in order to match responsibilities more closely. The default roles are:

- Forecaster

- Planner
- Inventory Planner
- Database Administrator
- DRP Planner

User roles are maintained in the Database Administration module. The ROLE_SYS_VIEW table holds linked information between user roles and exception views. This table allows the storage of the exception views that each active user role is assigned to. This is used to restrict information seen when accessing exception views, based on the roles they have been assigned.

An exception view can be assigned to any number of active user roles, and a user role can be assigned to any number of exception views (and users). As each exception view is created only once for all items across the database, it is the use of user roles (assigned to users) that restricts exception view information that is applicable to the individual user.

# About access privileges

### System access privileges

Each user's access to Infor Demand Planning functions can be finely controlled, to the level of individual menu commands, by granting and removing system access privileges.

See "Granting system access privileges" on page 64.

The ability to grant and remove access privileges is itself controlled by the "System: Access Control" privilege.

See "Grantable access privileges".

### Data access restrictions

Each user's access to particular Product and Channel Product data can be restricted by defining a filter based on the values of selected Products or Channel Products table fields.

See "Restricting data access" on page 65.

# Defining generic users

You may want to define generic users and use them to define real users. For example, you can define a generic PLANNER user, then add individual planners by copying and, if necessary, editing the generic PLANNER user.

**1** Add the generic user.
See "Adding a user" on page 62.

2 Grant system access privileges to the generic user.
See "Granting system access privileges" on page 64.

3 Optionally, restrict the generic user's data access.
See "Restricting data access" on page 65.

4 Add a real user by copying, then editing the generic user's details.
See "Copying a user" on page 63.

## Adding a user

If your Infor Demand Planning installation uses named user licensing, you cannot add more users than permitted by your licence agreement.

1 In Database Administration, select **DB Admin > Maintain Users**.
2 Click **Add**.
3 Specify this information:

**User ID**
Specify a unique user ID for the user. User IDs must be uppercase, and cannot contain spaces.

**User Name**
Optionally, specify the name of the user.

**User Role**
Select the role with which the user can access Oracle from Infor Demand Planning.

This role is typically **ML_USER** or **ML_STEWARD**. See "Editing registry settings" on page 68.

> **Caution:** Three Oracle roles are predefined:
>
> - **ML_USER** for normal users
> - **ML_STEWARD** for stewards
> - **ML_READ** for users who have read-only access to the database
>
> To avoid accidental changes to the database, we strongly advise you to select **ML_READ** as the default role to access Oracle outside of Infor Demand Planning.

**Default Role**
Optionally, select a role with which the user can access Oracle outside Infor Demand Planning.

This role is typically **ML_READ**.

4 Optionally, specify the user location, that is, the address, phone number, fax number, and e-mail address.
5 Select the default Collaborate function screen and Channel Product selection option from the **Sign-on Options** lists.
6 Select the **Steward** option if the user is an Infor Demand Planning database steward.

7 Click **Next**.
8 Select the Infor Demand Planning modules that the user can access.
9 Click **Add User**.

**Caution:** After adding a user, you must grant the user specific system access privileges and, optionally, restrict the user's access to data.

## Copying a user

If your installation of Infor Demand Planning uses "named user" licensing, you cannot add more users than permitted by your licence agreement.

1 In Database Administration, select **DB Admin > Maintain Users**.
2 Click the user who you want to copy.
3 Click **Copy**.
4 Specify a unique ID for the new user.
5 Edit the other details as required.
6 If you want the new user to inherit the data access restrictions of the copied user, select this option: **Copy data access in addition to system access rights**.

The new user automatically inherits the system access privileges of the copied user.

## Editing a user

1 In Database Administration, select **DB Admin > Maintain Users**.
2 Click the user that you want to edit.
3 Click **Edit**.
4 Edit the user's details as required.

**Note:** You cannot edit the user's ID.

## Deleting a user

1 In Database Administration, select **DB Admin > Maintain Users**.
2 Click the user who you want to delete.

**Note:**

- You cannot delete the predefined **STEWARD** user.

- You cannot delete users who currently have this access privilege: **System: Protected User**. This privilege must first be removed by a steward.
- Users without any access privileges are automatically deleted.

3 Click **Delete**, then **Yes** to confirm.

## Granting system access privileges

1 In Database Administration, select **DB Admin > Maintain Users**.
2 Click the user for whom you want to grant or remove privileges.
You cannot change your own privileges.
3 Click **System Access**.
4 To grant privileges, select them in the **Grantable Privileges** list and click **Add**.
To grant all privileges except these privileges, click **Add All**:

- **System: Access Control**
- **System: Lock Access Privileges**
- **System: Protected User**

These three privileges must always be granted explicitly.
See "Grantable access privileges".
5 To remove privileges, select them in the **Privileges Held** list and click **Remove**. Click **Remove All** to remove all privileges.

## Granting user roles

1 In Database Administration, select **DB Admin > Maintain Users**.
2 Click the user for whom you want to grant or remove roles.
3 Click **Define Roles**.
4 To grant roles, select them in the **Grantable Roles** list and click **Add**.
To grant all roles, click **Add All**.
5 To remove roles, select them in the **Roles Granted** list and click **Remove**.
To remove all roles, click **Remove All**.

## Granting buyer groups

1 In Database Administration, select **DB Admin > Maintain Users**.
2 Click the user for whom you want to grant or remove buyer groups.

3 Click **User Buyers**.
4 To grant buyer groups, select them in the **Buyers Group Code** list and click **Add**.
To grant all buyer groups, click **Add All**.
5 To remove buyer groups, select them in the **Selected Buyer Groups** list and click **Remove**.
To remove buyer groups, click **Remove All**.

## Restricting data access

1 In Database Administration, select **DB Admin > Maintain Users**.
2 Click the user for whom you want to restrict access to data.
3 Click **Data Access**.
4 Create a single or multi-line filter to restrict the user's access to product or channel product data.
5 For each line of the filter, select a **Product** or **Channel Product** field, an operator, and a value. Click **Add** to add further lines to the filter, and link successive lines by **AND** or **OR** operators.
See "Examples of data access filters".
6 Click **Verify** to test the filter.
If a filter is not defined, the user has unrestricted access to all product and channel product data.

## Defining user roles

1 In Database Administration, select **View Admin > User Role Maintenance**.
2 In the Maintain User Roles dialog box, select the **Active** check box for the selected user role.
3 Click **OK**.

## Monitoring and locking users

You can find out who is currently logged on to Infor Demand Planning. You can also specify who can log on in the future.

1 In Database Administration, select **DB Admin > Monitor Users**.
The User Monitor dialog box lists the users who are currently logged on or locked out. Users who are logged on are indicated by a non-zero session count.
2 To prevent a user who is currently logged on from logging on in the future, select the **Lock Out** check box for this user.
The user is not immediately logged off.
3 You can lock out users who are not currently logged on:
a To lock out all users except yourself and stewards, click **Lock All**.

b Clear the relevant **Lock Out** check boxes.

You cannot lock yourself or stewards out.

## Changing your password

At first, your password is the same as your user ID. You can change your password in Database Administration, Demand Forecaster and Replenishment Planner.

**1** Do one of the following:

- In Database Administration, select **DB Admin > Change Password**.
- In Demand Forecaster, select **Tools > Change Password**.
- In Replenishment Planner, select **Tools > Change Password**.

**2** Specify this information:

**Old Password**
Type your current password.

**New Password**
Type your new password.

**Verify Password**
Type your new password again.

**Note:**

- Passwords are not case-sensitive prior to Oracle 11g, but are case-sensitive from Oracle 11g onwards.
- A password cannot include spaces or begin with a number.

## If you forget your password

If you forget your password, inform a steward. There is no easy way to recover a lost password.

# Databases

## About monthly- and weekly-controlled databases

A database can be set up to be either monthly-controlled or weekly-controlled. The decision rests primarily on whether you intend to adjust the statistical forecast with market intelligence on a monthly or weekly basis.

- In a monthly-controlled database, market intelligence is stored in monthly periods, and can be specified only in monthly amounts.
- In a weekly-controlled database, market intelligence is stored in weekly periods, although you can specify it in either monthly or weekly amounts.

However, the decision to use a weekly-controlled database has some important consequences:

- The monthly forecast must be interpolated into weekly periods (you specify this in the System table).
- You have to apply the same demand calendar at all Channels, because otherwise the forecast would not be interpolated in the same way at all levels.
- The type of the demand calendar must be either 4-4-5 or 13 equal periods, because there must be an integer number of weeks in each month.
- A weekly-controlled database cannot be changed to a monthly-controlled database, orvice-versa (at least, not easily).

In a weekly-controlled database, you can decide whether you want to store history monthly, weekly or daily, and also, for each Channel, whether to accumulate daily or weekly demand into monthly demand at period end. When populating the database for the first time, monthly history must be loaded because this is required to generate the statistical model.

# Registry Settings

## About registry settings

Database Administration needs to save certain parameters between sessions. These are stored in the Windows registry ready for the next time Database Administration is loaded.

There are three groups of registry settings:

- System settings

These settings include the path and file name of the Database Administration program file, language file (for the user interface), help file and resource folder (where the application’s bitmaps are stored).

You can also specify whether you want Infor Demand Planning to remember your Product and Channel Product selections between sessions.

- Products and Channel Products table settings

These settings relate to how the Products and Channel Products tables are displayed for editing.

- Oracle settings

These settings specify the default Oracle roles for Infor Demand Planning users and stewards. An Oracle role is a set of permissions that define what database tables a user with that role is allowed to access, and how. You must also specify what versions of Oracle are supported by this installation of Infor Demand Planning.

The three predefined Oracle roles are:

- ML_STEWARD; this role allows the user to read, select, write and delete data, and set user privileges in the Oracle database.
- ML_USER; this role allows the user to read, write and delete data.
- ML_READ; this role allows the user to read and select data.

Important

- You should rarely, if ever, need to edit this information. Do not edit this information unless you are sure you know what you are doing. If in doubt, contact Infor Demand Planning Technical Support.

## Editing registry settings

1. In Database Administration, select **Settings > Edit Internal Settings**.
   The Registry Editor dialog box is displayed.
2. On the **System Settings** tab, specify the path and file name of the Database Administration program file, language file (for the user interface), help file and resource folder.
3. Select the **Save selections between sessions** check box if you want Infor Demand Planning to preserve your Product and Channel Product selections from one session to the next.
4. Select the **Enable splash screen** check box if you want Infor Demand Planning to display a logo every time it starts.
5. On the **Product/CP Table Editing** tab, specify whether you want to see each Channel Product's local (that is, Channel-specific) code and description when editing the Channel Products table. You can also specify the point size of the font used to display database tables, and whether or not the column headings are to be displayed in bold.
6. On the **Oracle Roles and Settings** tab, specify the default Oracle roles for ordinary users and stewards. You can also specify up to three vendor codes that identify the Oracle database versions supported by this release of Infor Demand Planning.
   - You need to restart Infor Demand Planning for any changes to take effect.
   - You should be cautious about editing the registry settings. Inappropriate values may cause Infor Demand Planning to stop working properly.

# Database Profiles

## About database profiles

A database profile defines an Oracle database that can be accessed by Infor Demand Planning. A database profile consists of the following settings:

- A database name. This is the name by which the database is referenced within Infor Demand Planning.
- A TNS name. This is the command fragment required to connect to the database.
- A URL. This is the connection string to Collaborate.
- A schema name. This is the name of the Oracle schema that defines the database..
- The DBMS. This is the version of Oracleappropriate for this database, selected from among those defined in the registry settings.
- A connection pool. This is used when connecting to Collaborate.
- The maximum attempts allowed when connecting to Collaborate.
- The cycle time. This is the Collaborate pool cycle time in minutes.
- The default user ID to be suggested when users log on to this database. The user can, of course, use another valid user ID.

One or more database profiles are defined for you when Infor Demand Planning is installed.

Important

- You should rarely, if ever, need to edit this information. Do not edit this information unless you are sure you know what you are doing. If in doubt, contact Infor Demand Planning Technical Support.

## Maintaining database profiles

Database profiles are maintained in the Database Settings dialog box of the Infor Demand Planning Maintenance Tool. See the *Infor Demand Planning Installation Guide* for more information or contact Infor Demand Planning Technical Support.

# Application Defaults

## About application defaults

The application defaults do not relate to Infor Demand Planning itself but to the current database. More precisely, they are attributes of database table fields. You can change the following attributes of each field:

- The name or description of the field as it appears in editable tables within Infor Demand Planning.
- The width of the field as it appears in editable tables within Infor Demand Planning.
- The default initial value of the field.
- The field's active status; that is, whether it is unused, read-only or editable.
- The field's report category, if it is a user-defined Channel Products table field.

**Note:**

- If you change the status of a field whose value is calculated by Infor Demand Planning from read-only to editable, an Oracle error may result.
- A read-only field cannot be edited within Infor Demand Planning but can still be changed by importing data from outside Infor Demand Planning.

## Editing application defaults

1. In Database Administration, select **DB Admin > Application Defaults**.
   The Application Defaults dialog box is displayed.
2. In the left-hand panel, select the database table you want to edit.
   The fields of the selected table are displayed in the right-hand panel. You can edit the following attributes of a field:
   - The name or description of the field as it appears in editable tables and grids within Infor Demand Planning.
   - The width of the field as it appears in editable tables and grids within Infor Demand Planning.
   - The default initial value of the field.
   - The field's active status, that is, whether it is unused, read-only or editable.
   - The field's report category, if it is a user-defined Channel Products table field.
3. To edit an attribute, click its cell, type or select a new value, then click outside the cell.
4. Click **Apply** to save the changes you make.
5. Repeat steps 2 to 4 for each table you want to edit.
   If you change the status of a field whose value is calculated by Infor Demand Planning from read-only to editable, an Oracle error may result.

# Channels

## About Channels

The term "Channel" as it is used in Infor Demand Planning must not be confused with the more familiar concept of a distribution channel, although there are some similarities.

In Infor Demand Planning, a Channel can represent a physical location such as a factory, depot or warehouse, or a less tangible element such as a sales region or market sector. It can also be a theoretical aggregate, such as the sum total of all a company's depots.

### Channel types

Infor Demand Planning includes up to ten predefined Channel types which can be edited to suit your implementation.

| | |
|---|---|
| • Factory | • Region |
| • Depot | • Country |
| • Sales region | • Division |
| • Customer | • Field Stocks |
| • Distribution center | • Total (all-purpose aggregate) |

When you create a Channel, you must say what type of Channel it is.

See "About Channel types" on page 77.

### Channel behaviors

Every Channel is characterized by a set or vector of nine behaviors. Initially, these behaviors are inherited from the Channel type, but they can be replaced or edited when the Channel is added to a Channel matrix.

Collectively, a Channel's behaviors govern how the statistical forecast, sales/demand history and stock requirements are stored at, passed to or accepted from its superior and subordinate Channels in a Channel matrix.

See "About Channel behaviors" on page 72.

### Channel matrices

A Channel matrix is a collection of Channels assembled in a hierarchical or pyramidal structure.

You can define as many Channel matrices as you need. A Channel can appear in several different matrices, and its behaviors may be different in each one.

See "About Channel matrices" on page 78.

# About Channel behaviors

Every Channel is characterized by a set or vector of twelve behaviors. Each behavior can be either enabled or disabled by means of check boxes.

"Store History" on page 72 Store History

"Accept Forecast" on page 72 Accept Forecast

"Exclude Passing Up Net" on page 73 Exclude Passing Up Net

"Adjust Using Forecast Below" on page 73 Adjust Using Forecast Below

"Adjust Using MI Below" on page 73 Adjust Using MI Below

"Force Forecast Down" on page 73 Force Forecast Down

"Calculate Channel Requirements" on page 73 Calculate Channel Requirements

"Pass Up Requirements" on page 74 Pass Up Requirements

"Exclude From History Pass Up" on page 74 Exclude From History Pass Up

Note that some of these behaviors are mutually incompatible; Infor Demand Planning prevents you making impossible choices.

## Store History

Yes: History is stored at this Channel. In most databases this behavior is appropriate to the lowest Channels in the Channel matrix, but it is also possible to store history at aggregate Channels.

No: History is not stored at this Channel, but can be forcibly aggregated up from any subordinate Channels.

Back to top: "About Channel behaviors" on page 72

## Accept Forecast

Yes: The net forecast at this Channel is adjusted by accepting (a proportion of) the net forecast at a superior Channel in the Channel matrix from which the forecast is forced down. The adjustment is achieved by adding C-type market intelligence to this Channel’s statistical forecast.

The method of spreading the forced-down forecast for an item is defined by the "Forecast Forcing Code (CPt)" field at the superior Channel. There are four possibilities:

- Spread in proportion to the monthly forecasts held at the subordinate Channels.
- Spread in the proportions defined by the "Forecast Forcing Factor (CPt)" fields at the subordinate Channels.
- Spread in proportion to the annual usages held at the subordinate Channels.
- Spread in proportion to the last 12 months of adjusted history at the subordinate Channels.

No: The net forecast at this Channel is not affected by the forecast at any superior Channel.

Back to top: "About Channel behaviors" on page 72

### Exclude Passing Up Net

Yes: The net forecast at this Channel is not available to be passed up to any superior Channels in the Channel matrix. If a consistent forecast is not required at a superior Channel, this behavior often improves the performance of the database.

No: The net forecast at this Channel may be passed up to any superior Channels in the Channel matrix.

Back to top: "About Channel behaviors" on page 72

### Adjust Using Forecast Below

Yes: The net forecast at this Channel is adjusted using C-type market intelligence so that it equals the sum of the net forecasts held at any subordinate Channels (omitting only those subordinate Channels that have the Exclude Passing Up Net behavior).

No: The net forecast at this Channel is not affected by the forecast at any subordinate Channel.

Back to top: "About Channel behaviors" on page 72

### Adjust Using MI Below

Yes: The market intelligence at this Channel is adjusted so that it equals the sum of the market intelligence held at any subordinate Channels (omitting only those subordinate Channels that have the Exclude Passing Up Net behavior).

No: The market intelligence at this Channel is not affected by the market intelligence at any subordinate Channel.

Back to top: "About Channel behaviors" on page 72

### Force Forecast Down

Yes: The net forecast at this Channel is forced down to any subordinate Channels that can accept forecasts (that is, those subordinate Channels that have the Accept Forecast behavior).

No: The net forecast at this Channel does not affect the forecasts at any subordinate Channels.

Back to top: "About Channel behaviors" on page 72

### Calculate Channel Requirements

Yes: A schedule of requirements for stock to arrive at this Channel is calculated.

- If requirements are not passed to this Channel from below then the schedule is based on the net forecast at this Channel.
- If requirements are passed up from below then the schedule is based on the sum of the requirements from subordinate Channels and any extra needs for safety stock at the aggregate Channel.

It is not normally possible to sum requirements from subordinate Channels and at the same time incorporate a local forecast in the requirements calculation. If necessary, the local market must be defined as a separate Channel.

(However, if alternate sourcing is enabled, a Channel may have its own forecast requirements and also DRP requirements arising from items alternately sourced from there.)

No: The requirements for stock at this Channel are not calculated.

Back to top: "About Channel behaviors" on page 72

## Pass Up Requirements

Yes: Requirements at this Channel are passed up to the primary superior Channel in the hierarchy.

No: Requirements at this Channel are not passed up to superior Channels.

Back to top: "About Channel behaviors" on page 72

## Exclude From History Pass Up

Yes: History stored at this Channel cannot be aggregated to its superior Channels. This behavior is most often used to stop history being passed up both branches of a folded Channel matrix. For example, if history is stored at two subordinate Channels where one is a plant and the other a sales region, both sets of history should not be summed at the superior Channel.

See "About folded Channel matrices" on page 80.

No: History stored at this Channel can be aggregated up to its superior Channels.

Note that Infor Demand Planning does not aggregate history automatically; you must explicitly request this function.

See "About aggregating history" on page 162.

Back to top: "About Channel behaviors" on page 72

### Exclude Aggregated Mi

Yes: If this check box is selected, MI aggregated from other channels in the matrix, is not passed to other channels.

Used in relation to the Force Forecast Down, Force Mi Down and Adjust using forecast from below options.

No: If this check box is selected, MI aggregated from other channels in the matrix is passed to other channels.

A channel cannot be set to Force Forecast Down and Force Mi Down, it must be forcing down Mi or Forecast.

Back to top: "About Channel behaviors" on page 72

### Force Mi Down

Yes: If this check box is selected, all Market Intelligence at this level is forced down to lower level channels. Aggregated Mi is excluded from the spread when the Exclude Aggregated Mi option is also selected.

No: If this check box is selected, Market intelligence at this channel is not forced to lower level channels.

Back to top: "About Channel behaviors" on page 72

**Accept Mi**

Yes: If this check box is selected, MI is accepted at this channel from other channels in the matrix.

No: If this check box is selected, MI is not accepted at this channel.

Back to top: "About Channel behaviors" on page 72

Exclude Aggregated Mi, Force Mi Down and Accept Mi options allow the creation of three new types of channel relationship, creating 'Partial control channels'

- **Accept Mi, Force Forecast Down, Exclude Aggregated Mi**This allows the control to be maintained at the upper level of the channel structure without the individual MI below being over written.
- **Adjust using forecast from below, Force MI down, Exclude Aggregated Mi**. This allows the control to be maintained at the Lower level of the channel structure without the individual MI above being over written.
- **Accept Mi, Force MI down, Exclude Aggregated Mi**. This allows the control to be maintained at the upper level of the channel structure without the individual MI below being over written.

# Adding Channels

1 Database Administration, select **DB Admin > System > Add Channels**.
The Add Channels dialog box is displayed.

Use the **Help** button in the Add Channels dialog to get more information about each tab.

2 On the **Channels** tab, specify this information:

- A unique Channel code of up to 20 characters.
- The name or description of the Channel.
- The default type of this Channel, selected from the predefined Channel types.

  See "About Channel types" on page 77.
- The demand calendar to be used by this Channel.

  See "About demand calendars" on page 170.

  In a monthly-controlled database, different Channels can use different demand calendars, and have different fiscal years, provided that the calendars all have the same number of forecast periods per year.

- The end date of the current fiscal year.
- The end date of the most recent historical period.
- The number of periods of history that have been input for the current fiscal year.

3 On the **Details** tab, specify this information:

- The group code of the Channel group to which this Channel belongs, if any.
- The date that stock quantities at this Channel were last updated, if known.
- The first day of the working week (for replenishment planning).
- Whether recommended shipments are automatically processed without user review.
- A deployment horizon (expressed in days).
- An interval (expressed in days) in which recommended orders can be firmed to planned orders, and planned orders can be firmed to open orders.
- Whether daily history at this Channel is to be accumulated into weekly history, and whether daily or weekly history at this Channel is to be accumulated into monthly history.
- Whether back orders are allowed (that is, whether projected on-hand stock can fall below zero).
- How the forecast at this Channel is consumed by actual demand within a forecast period.

4 On the **User Dates**, **User Strings** and **User Numbers** tabs, specify the values of any user-defined, editable Channel fields.

"Editing user-defined Channel fields" on page 89

5 Click **OK**.

6 If you want to add another Channel, click **Add Another Channel** and repeat steps 2 to 5. When you have finished adding Channels, click **Finish**.
Infor Demand Planning confirms the number of channels added and asks if you want to edit the corresponding Channels table entries.

# Deleting Channels

1 In Database Administration, select **DB Admin > System > Delete Channels**.
The Delete Channels dialog box is displayed, showing all the currently-selected Channels.

2 On the Select Channels to be Deleted tab, select the channels you want to delete. To select all Channels, click **Select All**.

3 Click **Next**. The **Channels to be Removed from Database** tab appears, showing the selected Channels and indicating whether or not they can be deleted.

4 Click **Next** to delete the Channels marked as OK to Delete, then click **Yes** to confirm.

- Deleting a Channel also deletes any associated Channel Products and removes the Channel from any Channel matrices of which it is a part.

- Channels that are the primary or secondary parents in any Channel matrix cannot be deleted. You must first edit the relevant Channel matrices to remove this status.

**5** When the Channels have been deleted, click **OK** to acknowledge, then click **Close**.

# Channel Types

## About Channel types

The following Channel Types are available by default:

| No. | Description |
|---|---|
| 1. | Factory |
| 2. | Depot |
| 3. | Sales |
| 4. | Customer |
| 5. | Distribution |
| 6. | Region |
| 7. | Country |
| 8. | Division |
| 9. | Field Stocks |
| 10. | Total |

Each Channel type consists of:

- A name or description
- A set or vector of behaviors

- A symbol representing this type

A maximum of 100 Channel Types can be added to the database.

When you create a Channel, you must select one of these Channel types to be its default type.

When you add a Channel to a Channel matrix, the Channel inherits the behaviors and symbol of its default type.

You can, if necessary, edit a matrix to change the change the types and behaviors of its Channels. Thus a Channel's behaviors in one matrix may be quite different from its behaviors in another matrix. However, to avoid confusion it is best to define a set of default Channel types, and keep to them.

## Defining Channel types

You can define up to one hundred Channel types.

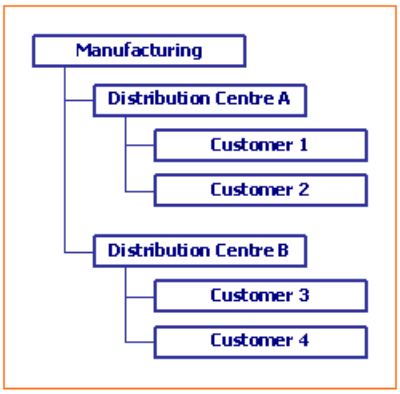
1. In Database Administration, select **DB Admin > System > Channel Types**.
   The Channel Types dialog box is displayed, showing an editable table of the existing Channel types.
2. To add a new Channel type, on the **Edit** menu click **Add New Channel Type**.
   You can use the Channel Types toolbar instead of the **Edit** menu.
3. To define the default behaviors of a Channel type, select or clear the corresponding check boxes in the table.
   See "About Channel behaviors" on page 72.
4. To assign a symbol to a Channel type, click the drop-down button in its **Channel Bitmap** cell and select a new symbol from the list.
5. To name or rename a Channel type, click its **Channel Description** cell, type the new name and then click outside the cell.

# Channel Matrices

## About Channel matrices

A Channel matrix is a collection of Channels assembled in a hierarchical or pyramidal structure.

For example, the Channel at the top of the hierarchy often represents a factory, intermediate Channels may represent distribution centers or depots, while the lowest Channels may represent customers.




In this example, sales/demand history and requirements are likely to be aggregated from the bottom upwards, while stock is distributed from the top downwards. However, many other structures are possible, including matrices with more than one branch.

Every Channel is characterized by a set or vector of nine behaviors that govern how the statistical forecast, sales/demand history and stock requirements are stored at, passed to or accepted from its superior and subordinate Channels in a particular matrix. (A Channel's behaviors in one matrix may be entirely different from its behaviors in another matrix.)

You can define as many Channel matrices as you need.

See "Adding a Channel matrix" on page 80.

## Folded Channel matrices

A folded Channel matrix is one which at least one Channel has a secondary as well as a primary parent. The secondary parent must be a in a separate branch of the matrix.

See "About folded Channel matrices" on page 80.

## Applying a Channel matrix to Products

Once defined, you apply a Channel matrix to selection to one or more Products. No Product can be associated with more than one Channel matrix.

Applying a matrix to a Product does not necessarily mean that the Product exists at all of the Channels in that matrix. But it does mean that the Channels where that Product does exist must be a subset of those in the matrix. In Infor Demand Planning, every combination of a particular Product at a particular Channel is known as a Channel Product.

Infor Demand Planning allows you to specify one Channel matrix to be a default which is automatically applied to all newly-imported Products.

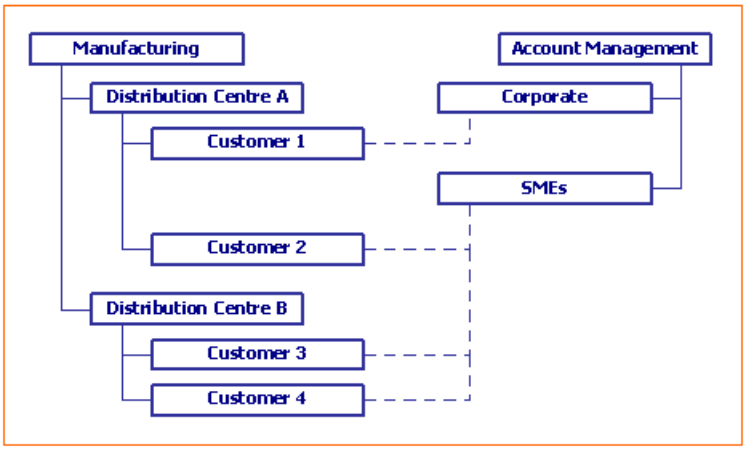
## Editing a Channel matrix

If you edit a Channel matrix, this change may not be immediately apparent to other Infor Demand Planning users because some data is cached locally. Users may have to log off from Infor Demand Planning and then log on again to see the changed matrix.

## About folded Channel matrices

In a regular Channel matrix, each subordinate Channel has only one parent Channel, the so-called primary parent. However, it is possible for a Channel to have a secondary parent in another branch of the matrix. In this case, the matrix is said to be "folded".

In the following example, the matrix comprises two branches, topped by the Manufacturing and Account Management Channels. Unbroken lines represent the primary structure, while the broken lines represent the secondary structure of the matrix.




Note that, even though a Channel's secondary parent is in another branch of the matrix, it must still be at a higher level in the matrix to qualify as a parent. For example, Corporate could not be a secondary parent to Distribution Centre A, because both these Channels are on the same level of the matrix.

### Why are folded matrices useful?

Folded matrices enable Infor Demand Planning to more accurately reflect the flow of information in your organization.

In the example above, it would be possible to define the individual Channel behaviors so that a forecast made at Account Management is forced down to the Customer Channels, and so that the requirements calculated at Customer Channels can be passed back up through Distribution Centre A and Distribution Centre B to Manufacturing.

See "About Channel behaviors" on page 72.

**Note:**

- A structure that links Channels in a '\/\' or a '/\/' shape, where market intelligence is moved down one side of the structure and then up the other (or up one side and down another, respectively) is perfectly acceptable, but structures shaped '/\/\' or '\/\/' are currently not allowed.

## Adding a Channel matrix

1 In Database Administration, select **DB Admin > Channel Structure**.
The Channel Matrix Maintenance dialog box is displayed.

2 Click **Add**.
The Channel Matrix Maintenance: Add dialog box is displayed. In the center of the **Channel Matrix Explorer** tab is the Matrix panel where the matrix is assembled. At first, the panel is empty except for the apex symbol.

3 Type a name for the new matrix in the **Matrix** name box.

4 In the **Channel** list on the left-hand side of the tab, select the Channels that you want to include in the matrix. You can select all Channels of a particular type by clicking the corresponding **Options** button.

5 Either click **Add**, or drag the selected Channels into the Matrix panel.

Each Channel in the matrix is identified by its Channel code, its symbol and, if you select the **Show Channel Names** check box, its name. Channels that have been added to the Matrix panel are shaded green in the **Channel** list.

6 Drag individual Channels to their required places in the matrix.

Click the Expand and Collapse icons to expand and collapse branches of the matrix. Click **Collapse** and **Expand** to collapse and expand the entire matrix.

7 To change the type of a Channel in the matrix, click the Channel and select a different type from the right-hand **Set to Channel** Type list box. The Channel acquires the symbol and behaviors of the selected type.

8 To change the behaviors of a Channel in the matrix, click the Channel and select or clear the check boxes in the Behaviour of selected channel area.

See "About Channel behaviors" on page 72.

9 To fold the Channel matrix, click each of the affected Channels in the matrix in turn and select a secondary parent from the **Secondary Chan** list box. This list is constrained to show only those Channels that are capable of being secondary parents.

See "About folded Channel matrices" on page 80.

10 To view a diagram of the matrix, click the **Channel Matrix Graphical Display** tab.

11 To apply the matrix to either the current or a new selection of Products, click **Apply Matrix to Products**.

See "Applying a Channel matrix to Products" on page 82.

12 To save the current state of the matrix, click **Apply**. When you are satisfied, click **OK**.

**Note:**

- Get advice from your Infor Demand Planning consultant before attempting to set up a folded matrix.
- Changing the type of a Channel in the Channel Matrix Maintenance: Add dialog does not change the Channel's default type; it changes only the symbol and behaviors of the Channel within this particular matrix.
- Use the **Help** button in the Channel Matrix Maintenance: Add dialog to get more information about each tab.

## Editing a Channel matrix

1. In Database Administration, select **DB Admin > Channel Structure**.
   The Channel Matrix Maintenance dialog box is displayed.
2. Click the matrix you want to edit, then click **Edit**.
   The Channel Matrix Maintenance: Edit dialog box is displayed.

   Use the **Help** button in the Channel Matrix Maintenance: Edit dialog to get more information about each tab.
3. You can edit any characteristic of the matrix, as if you were adding it for the first time.

   See "Adding a Channel matrix" on page 80.

## Copying a Channel matrix

1. In Database Administration, select **DB Admin > Channel Structure**.
   The Channel Matrix Maintenance dialog box is displayed.
2. Click the matrix you want to copy, then click **Copy**.
   The Channel Matrix Maintenance: Copy dialog box is displayed, showing a copy of the selected matrix.

   Use the **Help** button in the Channel Matrix Maintenance: Copy dialog to get more information about each tab.
3. Type a name for the new matrix in the **Matrix** name box.
4. You can edit any characteristic of the copied matrix, as if you were adding it for the first time.

   See "Adding a Channel matrix" on page 80.

## Deleting a Channel matrix

1. In Database Administration, select **DB Admin > Channel Structure**.
   The Channel Matrix Maintenance dialog box is displayed.
2. Click the matrix you want to delete.

   You cannot delete a matrix that is currently applied to one or more Products. You must first apply another matrix to those Products.
3. Click **Delete**, then click **Yes** to confirm.

## Applying a Channel matrix to Products

You can apply a Channel matrix to Products when creating the matrix, or by editing the matrix. The following procedure assumes you are editing the matrix.

1. In Database Administration, select **DB Admin > Channel Structure**.
   The Channel Matrix Maintenance dialog box is displayed.
2. Click the matrix you want to edit, then click **Edit**.
   The Channel Matrix Maintenance: Edit dialog box is displayed.

3 Click Apply Matrix to Products.

You can also effectively apply a matrix by editing the Channel Matrix Code column of the Products table. See the help topic on editing the Products table.

4 If there is a current selection of Products, click **Yes** if you want to apply the matrix to that selection, or **No** if you want to make another selection.

See "About selecting Products and Channels" on page 35.

Once the selected Products have been updated, the Channel Matrix Maintenance: Edit dialog re-appears.

# Products

## About Products

In Infor Demand Planning, a Product is typically any item which is produced, procured and consumed in discrete quantities.

### Product types

- Standard Product

The majority of items are likely to be of this type. Standard Products are further classified:

- Normal Products are items whose pattern of demand is regular and common enough to be forecast by dynamic linear modeling (DLM).
- Slow-Moving Products (SMPs) are items whose demand is too irregular to be forecast by DLM. SMPs typically show many periods in which there is no recorded demand at all; in fact, this is how Infor Demand Planning identifies them.

See "About Slow Moving Products" on page 271.

- Non-Standard Product (NSP)

A Product variant used in promotional activities (for example, 3-for-2 offers, or "buy one get one free"). Infor Demand Planning allows you to link NSPs to related Standard Products in a variety of ways. For example, a promotional pack may be assembled from two or more standard items, or a promotional pack may steal demand from one or more standard packs.

- Unspecified Forecast Product (UFP)

A dead Product that may become live, or a notional Product used to forecast a proposed item to allow its predicted sales to be taken into account in budgeting and capacity planning. A UFP can be upgraded to a Standard Product when appropriate.

See "About Unspecified Forecast Products" on page 274.

- Forecast Group Product

A notional Product used as the placeholder for a system view of Standard Products that are to be forecast collectively as a permanent forecast group (PFG). This is often useful in detecting seasonal demand patterns that can then be applied to new Products added to the group (for example, a new flavor or a new pack size).

See "About permanent forecast groups" on page 279.

- Returns Product

A Product returned to stock (linked to base Products in Demand Forecaster).

See "About Returns Products" on page 274.

- Scenario Product

A fictitious variant of a real Product created to try, and save, "what-if" forecast projections. If the projections prove valuable, the Scenario Product's forecast can replace the original Product's forecast.

See "About Scenario Products" on page 276.

### Product status

- Live

A live Product is one which is actively processed, forecast and reported by Infor Demand Planning.

- Dead

A dead Product can be kept in the database for future reference but is not used in any processing and does not appear in any reports.

## Adding Products

You can add new products manually. If you need to add more than a few products at once, it is usually quicker to import products table records.

1. In Database Administration, select **DB Admin > Add Products**.
2. On the **Product** tab of the Add Products dialog box, specify this information:
   - A unique product code of up to 20 characters.
   - The name or description of the product.
   - The type of the product:
     - Standard Product.
     - Non-Standard Product (NSP).
     - Unspecified Forecast Product (UFP).
     - Forecast Group Product.
     - Returns Product.

- Scenario Product.

  See "Product types" on page 33.

- The status of the product, that is, live or dead.

  See "Product status" on page 34.

- The channel matrix to which the product belongs.

  See "About Channel matrices" on page 78.

  If you specify the channel matrix to which a product belongs, the specific channels in that matrix are not added to the product. This action merely establishes which channels can be added. Adding channels to products to make channel products is a separate task.

3 If you want the product to be added to the NEW PRODUCTS exception view, select **Add to New Products View**.

  See "NEW PRODUCTS".

4 Optionally, on the **Details** tab, specify this information:

- The budgeted standard cost, that is, the average cost across the matrix.
- The budgeted selling price, that is, the average selling price across the matrix.
- The unit of measure. Specify a textual description, for example "Each" or "Case".
- The weight of each unit.
- For shipping purposes, the cubic volume of each unit.
- The barcode of the product.
- If known, the ABC classification.

  See "About ABC analysis" on page 344.

- The requirements horizon in days.

5 If you want the forecasts for this product to be interpolated into daily quantities, select **Daily Forecast Interpolation**.

6 Optionally, on the **User Dates**, **User Strings**, and **User Numbers** tabs, specify the values of any user-defined, editable product fields.

  See "Editing user-defined Product fields" on page 88.

  To get more information about each tab, use the **Help** button in the Add Product dialog box.

7 Click **OK**.

8 Perform one of these actions:

- To add another product, click **Add Another Product** and repeat steps 2 to 7.
- To specify channels for the new products, click **Add Channels to the Products Added**.

  See "Adding Channel Products" on page 86.

- To add another product, click **Add Another Product** and repeat steps 2 to 7.
- To specify channels for the new products, click **Add Channels to the Products Added**.

  See "Adding Channel Products" on page 86.

- If you have finished adding products, click **Finish**.

## Deleting Products

1. In Database Administration, select **DB Admin > Delete Products**.
   The Delete Products dialog box shows all the currently selected products.
2. On the **Select Products to be Deleted** tab, select the products that you want to delete. To select all products, click **Select All**.
3. Click **Next**.
   The **Products and Channels to be Deleted** tab shows the corresponding channel products and indicates whether or not they can be deleted.

   Products that have no corresponding channel product, that is, products to which no channel has been added, are not listed in this tab, but they are deleted.
4. To delete the channel products that are marked as OK to Delete, click **Next**. To confirm, click **Yes**.
   If a channel product cannot be deleted, the **Products/Channel Products not Deleted** tab shows a report. The report indicates the products and channel products that could not be deleted, the reason, and possible remedial action.

   See "When Products and Channel Products cannot be deleted".

   If not all of the channel products corresponding to a product can be deleted, the product itself cannot be deleted.
5. To print the report, click **Print**. To save the report as a text file, click **Save**.

# Channel Products

## Adding Channel Products

When you add products to the database or at any later time, you can manually add channels to products.

1. In Database Administration, select **DB Admin > Add Channel Products**.
   The Add Channel Products dialog box shows two tables:
   - The left-hand table shows the currently selected or newly added products.
   - The right-hand table shows the channels in the matrices to which the products belong.
2. In the right-hand table, select the channels that you want to add to the displayed products. To select all channels, click **Select All**.
   The sources of the channel that you select are automatically selected according to the channel matrix.
3. Click **Next**.
4. If the products belong to different matrices, your selection of channels may be invalid for some products. In this case, in the Add Channel Products dialog box, the invalid product and channel combinations are identified. Perform one of these actions:

- To ignore the invalid combinations and continue, click **Next**.
- To select a different set of channels, click **Back**.

5 In the Add Channel Products dialog box, the product and channel combinations that are already defined are identified. Perform one of these actions:

- To continue, click **Next**.
- To select a different set of channels, click **Back**.

6 In the Add Channel Products dialog box, the product and channel combinations that can be added to the database are identified. If you want to include these new channel products in the NEW CPS exception view, select **Add to New CPs View**. Click **Add CPs**.

See "NEW CPS".

7 If you want to edit the data for the new channel products, click **Yes**. Otherwise, click **No**.

See "Editing the Channel Products table" on page 116.

## Deleting Channel Products

1 In Database Administration, select **DB Admin > Delete Channel Products**.
The Delete Channel Products dialog box shows all the currently selected products and channels in two separate tables. You can select a product or channel.

2 On the **Select Channel Products to be Deleted** tab, select the products, then the channels that correspond to the channel products that you want to delete.

3 Click **Next**.
The **Channel Products to be Deleted** tab shows the selected channel products and indicates whether or not these channel products can be deleted.

4 To delete the channel products that are marked as OK to Delete, click **Next**. To confirm, click **Yes**. If a channel product cannot be deleted, the **Channel Products not Deleted** tab is shows a report. This report indicates the channel products that could not be deleted, the reason, and possible remedial action.

See "When Products and Channel Products cannot be deleted".

5 To print this report, click **Print**. To save the report as a text file, click **Save**.

# User-Defined Fields

## About user-defined fields

Various database tables include space for user-defined fields. These are fields that are already present in the tables but are idle until you decide to use them.

You can edit the following attributes of a user-defined field:

- The name or description of the field as it appears in editable tables within Infor Demand Planning.
- A label for the field, used in dialogs and reports within Infor Demand Planning.
- The default initial value of the field.
- The field's active status; that is, whether it is unused, read-only or editable.
- The field's report category, if it is a Channel Products table field. This is the report under which the field appears when editing the Channel Products table.

See "About table editing" on page 113.

User-defined fields may be alphanumeric strings, numbers or dates. The following grid shows how many user-defined fields of each format are available in each table:

| Table | String fields | Number fields | Date fields |
|---|---|---|---|
| Channels table | 10 | 10 | 5 |
| Products table | 20 | 20 | 10 |
| Channel Products table | 20 | 20 | 10 |
| Orders table | 5 | none | None |
| Order Book table | 5 | none | None |
| Customer table | 5 | none | None |
| Addresses table | 10 | 10 | 10 |
| Supplier Assortments table | 10 | 10 | 10 |

**Note:**

- A read-only field cannot be edited within Infor Demand Planning but can still be changed by importing data from outside Infor Demand Planning.

## Editing user-defined Product fields

**1** In Database Administration, select **DB Admin > System > User Fields > Products**.

The User Field Setup: Products dialog box is displayed, showing the user-defined fields of the Products table. You can re-order the columns by dragging the column headers.

2 To edit a blue value, click its cell, type a new value and then click outside the cell.

3 To make a field active, click its **Active** cell and select either **Read Only** or **Editable**. Either type of field can be imported, but an editable field can also be changed manually, for example when a Product is added to the database.

See "Adding Products" on page 84.

4 To specify a static weighting based on a Products table field, click **Adjust Weightings**.

See "Adding a static weighting" on page 107.

5 To save changes, click **Apply**. When you have finished editing, click **OK**.

## Editing user-defined Channel fields

1 In Database Administration, select **DB Admin > System > User Fields > Channels.**.
The User Field Setup: Channels dialog box is displayed, showing the user-defined fields of the Channels table. You can re-order the columns of the table by dragging the column headers.

2 To edit a blue value, click its cell, type a new value and then click outside the cell.

3 To make a field active, click its **Active** cell and select either **Read Only** or **Editable**. Either type of field can be imported, but an editable field can also be changed manually, for example when a Channel is added to the database.

See "Adding Channels" on page 75.

4 To specify a static weighting based on a Channels table field, click **Adjust Weightings**.

See "Adding a static weighting" on page 107.

5 To save changes, click **Apply**. When you have finished editing, click **OK**.

## Editing user-defined Channel Product fields

1 In Database Administration, select **DB Admin > System > User Fields > Channel Products**.
The User Field Setup: Channel Products dialog appears, showing the user-defined fields of the Channel Products table. You can re-order the columns of the table by dragging the column headers.

2 To edit a blue value, click its cell, type a new value and then click outside the cell.

3 To make a field active, click its **Active** cell and select either **Read Only** or **Editable**.

Either type of field can be imported, but an editable field can also be changed manually.

4 To change the table report category under which the field is listed when editing the Channel Products table, select a category from the list.

See "Editing the Channel Products table" on page 116.

5 To specify a static weighting based on a Channel Products table field, click **Adjust Weightings**.

See "Adding a static weighting" on page 107.

6 To save changes, click **Apply**. When you have finished editing, click **OK**.

## Editing user-defined Order fields

1 In Database Administration, select **DB Admin > System > User Fields > Orders**.
The User Field Setup: Orders dialog box is displayed, showing the user-defined fields of the Orders table. You can re-order the columns of the table by dragging the column headers.
2 To edit a blue value, click its cell, type a new value and then click outside the cell.
3 To make a field active, click its **Active** cell and select either **Read Only** or **Editable**.
Either type of field can be imported, but an editable field can also be changed manually.
4 To save changes, click **Apply**. When you have finished editing, click **OK**.

## Editing user-defined Order Book fields

1 In Database Administration, select **DB Admin > System > User Fields > Order Book**.
The User Field Setup: Order Book dialog box is displayed, showing the user-defined fields of the Order Book table. You can re-order the columns of the table by dragging the column headers.
2 To edit a blue value, click its cell, type a new value and then click outside the cell.
3 To make a field active, click its **Active** cell and select either **Read Only** or **Editable**.
Either type of field can be imported, but an editable field can also be changed manually.
4 To save changes, click **Apply**. When you have finished editing, click **OK**.

## Editing user-defined Customer fields

1 In Database Administration, select **DB Admin > System > User Fields > Customer**.
The User Field Setup: Customer dialog box is displayed, showing the user-defined fields of the Customer table. You can re-order the columns of the table by dragging the column headers.
2 To edit a blue value, click its cell, type a new value and then click outside the cell.
3 To make a field active, click its **Active** cell and select either **Read Only** or **Editable**.
Either type of field can be imported, but an editable field can also be changed manually.
The Customer table fields are not editable in all versions of Infor Demand Planning.
4 To save changes, click **Apply**. When you have finished editing, click **OK**.

## Editing user-defined Addresses fields

1 In Database Administration, select **DB Admin > System > User Fields > Addresses**.

The User Field Setup: Addresses dialog box is displayed, showing the user-defined fields of the Addresses table. You can re-order the columns of the table by dragging the column headers.

2 To edit a blue value, click its cell, type a new value and then click outside the cell.

3 To make a field active, click its **Active** cell and select either **Read Only** or **Editable**.
Either type of field can be imported, but an editable field can also be changed manually.

4 To save changes, click **Apply**. When you have finished editing, click **OK**.

## Editing user-defined Supplier Assortments fields

1 In Database Administration, select **DB Admin > System > User Fields > Supplier Assortments**.
The User Field Setup: Supplier Assortments dialog appears, showing the user-defined fields of the Orders table. You can re-order the columns of the table by dragging the column headers.

2 To edit a blue value, click its cell, type a new value and then click outside the cell.

3 To make a field active, click its **Active** cell and select either **Read Only** or **Editable**.
Either type of field can be imported, but an editable field can also be changed manually.

4 To save changes, click **Apply**. When you have finished editing, click **OK**.

## Configuring the Information tabs of the Data window in Edit Forecasts

In Database Administration, you can specify which user-defined Channel Product and Product fields are displayed to particular users on the **Chan Prod Info** and **Prod Info** tabs of the Data window in the Demand Forecaster module's Edit Forecasts feature. See "About the Data window" on page 236 and "Editing user-defined Product fields" on page 88.

1 If you have not already done so, edit the Channel Products and Products tables to activate the required user-defined fields.
See "Editing user-defined Channel Product fields" on page 89.

2 Select **DB Admin > System > DP Information Page Defaults**.
The DP Information Page Defaults dialog box is displayed.

3 In the **User** box, select the user, or one of the users, you want to configure.

4 Select either the **Product Fields** or **Channel Product Fields** tab.

5 Select the **Display** check boxes of the fields you want to include. Only active, user-defined Product/Channel Product fields are available for selection.
You can use the **Move** buttons to change the order in which the fields are displayed on the information tabs.

6 To apply these fields only to the selected user, click **OK**. To apply these fields to more than one user, click **Apply to**, select the users you want, then click **OK**.

# Views

## About views

A view is a named, re-usable set of one or more Products or Channel Products. A view that contains only Products is a Product view; a view that contains Channel Products is a Channel Product view. Views are typically used to select related groups of items.

See "Selecting views" on page 46.

You can create, edit, copy, split, combine and delete your own views. When you create a view, you can save it as either a public view or a private view. A public view can be used by anyone with the correct access privileges. A private view can be used only by you or a steward. Views generated by Infor Demand Planning itself are known as exception views.

### Special uses of views

There are three special uses of views:

- Exception views

An exception view is a system-created view that contains Products or Channel Products that are in some way exceptional and which Infor Demand Planning wants to bring to your attention. All exception views only appear once and are always owned by the database steward. Exception views may be saved as predefined views.

See "About pre-defined views" on page 40.

In order to provide a more structured and user-friendly way to manage the 139 exception views that are generated within Infor Demand Planning, it is possible to use a predefined list of items selected by individual users which are stored on the database and may be used as an alternative to the standard Product and Channel selection process. As all exceptions views are categorized with a severity and can be assigned to various user roles, they can be used as a better basis for initiating a work flow.

The predefined option is only available if the PREDEF sign-on option is allocated to the current user. The sign-on option for each user is maintained in the Maintain Users: ADD/EDIT dialogs within the Database Administration module. The default sign-on module or Collaborate page is also selected in these dialogs.

A predefined Product/Channel selection can be saved in any Infor Demand Planning module and in Collaborate.

See "About exception views" on page 105.

- Permanent forecast groups

A permanent forecast group view is a system-created view containing Product or Channel Products that are grouped together for forecasting purposes.

See "About permanent forecast groups" on page 279.

- Marketing groups

A marketing group view is usually a public view containing Products or Channel Products that are grouped together for promotional purposes.

See "About promotions" on page 290.

### Ownership of public/private views

You are automatically the owner of all the public and private views that you create.

### Restrictions on managing views

Permanent forecast groups and marketing groups can be managed only in the Demand Forecaster module; all other views can be managed in the Database Administration module, provided that you have the correct access privileges.

Also, you can edit exception views in which the currently selected Channel Product appears in both the Demand Forecaster and Replenishment Planner modules.

See "Editing exception views in DF and RPD" on page 32.

If you are a non-steward user you can edit, copy, combine or split a view if you have data access privileges to all of the Products or Channel Products in that view and it is not a private view owned by another user. You can rename, overwrite or delete a view if it is a private or system view that you own.

If you are a steward, you have similar privileges except that you can also access other users' views.

See "About access privileges" on page 61.

### Reports

Infor Demand Planning has two reports that tell you what views there are and what Products and Channel Products they contain.

- Detailed Report (Views)

This report shows views, and the Products or Channel Products within them. It shows, for each selected view:

- The Products or Channel Products in that view.
- The view's owner.
- The date the view was created or last edited.
- The type of view (private, public or system).
- The total number of Products or Channel Products in the view.
- Cross Reference Report (Products and Channel Products)

This report shows Products and Channel Products, and the views of which they are members. It shows each view's owner, the date the view was created or last edited and the type of view (private, public or system).

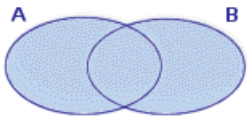
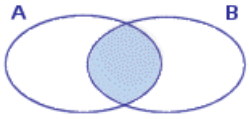
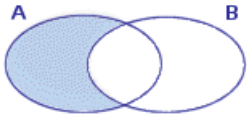
# About combining views

You can combine two or more views to make a new view, subject to the following limitations:

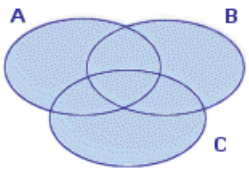
- You can combine views if you are a steward, or if they are private or system views that you own.
- You can also combine public views if you have data access privileges to all of the Products or Channel Products in those views.

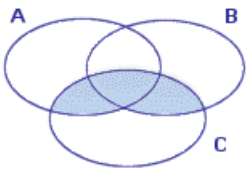
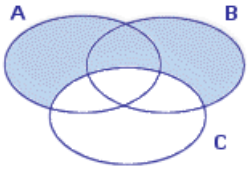
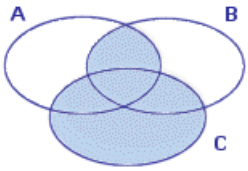
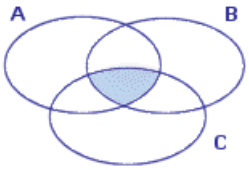
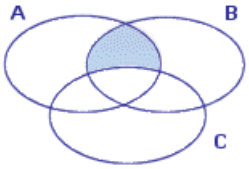
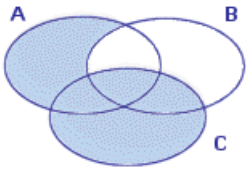
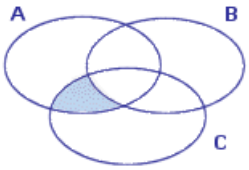
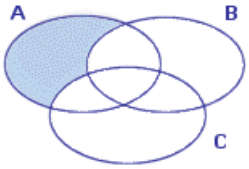
In all cases, the original views are unchanged.

You can combine two views A and B by specifying one of the three logical operations:

| Operation | Result |
|---|---|
| A OR B | All the items in view A and all the items in view B, without duplication. This is the union of A and B.   |
| A AND B | All the items that are in both view A and view B. This is the intersection of A and B. If A and B have no items in common, the result is an empty view.   |
| A NOT B | All the items in view A, minus any items that are also in view B. This is the difference between A and B. If A and B are identical, the result is an empty view.   |

You combine more than two views by assembling a series of such operations, each successive operation building on the result of the previous one. Note that the order of the views being combined is usually significant.

| | |
|---|---|
| A OR B OR C |   |

| | |
|---|---|
| A OR B AND C |  |
| A OR B NOT C |  |
| A AND B OR C |  |
| A AND B AND C |  |
| A AND B NOT C |  |
| A NOT B OR C |  |
| A NOT B AND C |  |
| A NOT B NOT C |  |

**Note:**

- The resulting new view can be saved as a public view or a private view but not an exception view.

# About splitting views

You can split a view into new views based on the value of a Products or Channel Products table field, depending on whether the original view is a Product view or a Channel Product view. The original view is unchanged.

- You can split a view if you are a steward, or if it is a private or system view that you own.
- You can also split a public view if you have data access privileges to all of the Products or Channel Products in that view.

You need to select a view, and a field by which to split it. Infor Demand Planning examines the value of that field for all the items in the view, and suggests possible new views based on items that have the same value. The default names of these possible views are of the form:

original_view_(field_description = `value’)

For example, if you wanted to split a Product view called Appliances according to the "ABC Class (Pt)" field, the possible views produced might be named:

Appliances_(ABC Class =‘A’)

Appliances_(ABC Class =‘B’)

Appliances_(ABC Class =‘C’)

Appliances_(ABC Class =‘U’)

Appliances_(ABC Class =‘NULL’)

You can decide which of these possible views you want to produce, and rename them as desired. (A view name is limited to 30 characters. If a default view name exceeds this you are compelled to rename it.)

You own the views you make by splitting, and you can save them as either private or public views.

**Note:**

- The resulting views can be saved as public views or private view but not as exception views.

# Creating a Product view

## Creating a Product view by selecting

You can create a view by selecting from among the currently-selected Products.

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed.
2 Click **New**.
The New View dialog box is displayed.
3 Under Create View Using, click **Select**.
4 Under View Type, click **Products**.
5 Click **OK**.
The New View (Product) dialog box is displayed.
6 In the Available Products table, select the Products you want to include in this view, then click **Add**.
To include all the currently-selected Products, click **Add All**.
7 Click **OK**.
The Save New View dialog box is displayed.
8 Specify this information:

**View Name**
Type a name for this view.

**View Type**
Specify whether this is a public or a private view.

**View Text**
Type a description of this view.

9 Click **OK** to return to the View Maintenance dialog box.

## Creating a Product view by filtering

You can create a view by filtering the currently-selected Products.

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed.
2 Click **New**.
The New View dialog box is displayed.
3 Under Create View Using, click **Use Additional Filter**.
4 Under View Type, click **Products**.
5 Click **OK**.
The New View – Filter dialog box is displayed.
6 Build a filter based on Products table fields.
See "Building a filter for a view".
7 Click **OK**.
The Save Filtered View dialog box is displayed.
8 Specify this information:

**View Name**
Type a name for this view.

**View Type**
Specify whether this is a public or a private view.

**View Text**
Type a description of this view.

9 Click **OK** to return to the View Maintenance dialog box.

**Note:** The filter can be saved, and used later to filter another selection of Products.

## Creating a Product view from a Channel Product view

1 Select the Channel Product view.
See "Selecting views" on page 46.

2 Create a Product view based on the current selection. Optionally, you can save it with the same name as the original Channel Product view, which causes the original view to be overwritten.
See "Creating a Product view by selecting" on page 96.

# Creating a Channel Product view

## Creating a Channel Product view by selecting

You can create a view by selecting from among the currently-selected Channel Products.

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed.

2 Click **New**.
The New View dialog box is displayed.

3 Under Create View Using, click **Select**.

4 Under View Type, click **Channel Products**.

5 Click **OK**.
The New View (Channel Product) dialog box is displayed.

6 In the Products and Channels tables, select the required Products and Channels.

To select all Products or all Channels, click **Select All** below the relevant table.

Infor Demand Planning updates the content of the Available CPs table to show the valid Channel Products corresponding to your selections.

7 In the Available CPs table, select the Channel Products you want to include in this view.

8 Click **OK**.
The Save New View dialog box is displayed.

9 Specify this information:

**View Name**
Type a name for this view.

**View Type**
Specify whether this is a public or a private view.

**View Text**
Type a description of this view.

**10** Click **OK** to return to the View Maintenance dialog box.

## Creating a Channel Product view by filtering

You can create a view by filtering the currently-selected Channel Products.

**1** In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed.

**2** Click **New**.
The New View dialog box is displayed.

**3** Under Create View Using, click **Use Additional Filter**.

**4** Under View Type, click **Channel Products**.

**5** Click **OK**.
The New View – Filter dialog box is displayed.

**6** Build a filter based on Products and Channel Products table fields.
See "Building a filter for a view".

**7** Click **OK**.
The Save Filtered View dialog box is displayed.

**8** Specify this information:

**View Name**
Type a name for this view.

**View Type**
Specify whether this is a public or a private view.

**View Text**
Type a description of this view.

**9** Click **OK** to return to the View Maintenance dialog box.

## Creating a Channel Product view from a Product view

**1** Select the Product view.
See "Selecting views" on page 46.

**2** Select the Channels you want in the view.

See "Selecting Channels" on page 48.

3 Create a Channel Product view based on the current selection. Optionally, you can save it with the same name as the original Product view, which causes the original view to be overwritten.

See "Creating a Channel Product view by selecting" on page 98.

# Editing

## Editing a public or private Product view

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed, initially showing a table of private Product views.

2 If the view you want to edit is a public or system view, select the **Public** or **System** check box.

3 In the table, click the view you want to edit, then click **Edit**.
The Edit View (Product) dialog box is displayed.

4 To add more Products to the view, select them in the Available Products table and click **Add**. To add all available Products, click **Add All**.

5 To remove Products from the view, select them in the Products in View table and click **Remove**. To remove all Products, click **Remove**.

6 Click **OK** to return to the View Maintenance dialog box.

## Editing a public or private Channel Product view

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed, initially showing a table of private Product views.

2 Under View Type, click **Channel Products**.

3 If the view you want to rename is a public or system view, select the **Public** or **System** check box.

4 In the table, click the view you want to edit, then click **Edit**.
The Edit View (Channel Product) dialog box is displayed. The Channel Products currently in the view are preselected in the dialog box.

5 In the Products and Channels tables, select the required Products and Channels.

To select all Products or all Channels, click **Select All** below the relevant table. To deselect all Products or all Channels, click the corresponding **Deselect All** button.

Infor Demand Planning updates the content of the Available CPs table to show the valid Channel Products corresponding to your selections.

6 In the Available CPs table, select the Channel Products you want to include in this view.

7 Click **OK** to return to the View Maintenance dialog box.

## Renaming a view

When you rename a view, you can also change it from a private to a public view (and vice versa).

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed, initially showing a table of private Product views.

2 If the view you want to rename is a public or system view, select the **Public** or **System** check box. If the view is a Channel Product view, under View Type, click **Channel Products**. To see all views, select the **All Views** check box.

3 In the table, click the view you want to rename, then click **Rename**.
The Rename View dialog box is displayed.

4 Specify this information:

**View Name**
Type a new name for this view.

**View Type**
Specify whether this is a public or a private view.

**View Text**
Type a description of this view.

5 Click **OK** to return to the View Maintenance dialog box.

**Note:**

- You can rename a view only if you are a steward, or if it is a private or system view that you own.
- Renaming an exception view does not change the name that Infor Demand Planning uses when it next creates that view.

## Copying a view

When you copy a view, you can change it from a private to a public view (and vice versa).

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed, initially showing a table of private Product views.

2 If the view you want to copy is a public or system view, select the **Public** or **System** check box. If the view is a Channel Product view, under View Type, click **Channel Products**. To see all views, select the **All Views** check box.

3 In the table, click the view you want to copy, then click **Copy**.
The Copy View dialog box is displayed.

4 Specify this information:

**View Name**
Type a name for the copied view.

**View Type**
Specify whether this is a public or a private view.

**View Text**
Type a description of this view.

5 Click **OK** to return to the View Maintenance dialog box.

**Note:**

- You can copy a view if you are a steward, or if it is a private or system view that you own.
- You can also copy a public view if you have data access privileges to all of the Products or Channel Products in that view.
- The resulting new view can be saved as a public view or a private view but not an exception view.

## Splitting a view

You can split a view into new views based on the value of a Products or Channel Products table field, depending on whether the original view is a Product view or a Channel Product view. The original view is unchanged.

See "About splitting views" on page 96.

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed, initially showing a table of private Product views.
2 To see all views, select the **All Views** check box.
3 In the table, select the view you want to split, then click **Split**.
The Split View dialog box is displayed.
4 In the **Split on field** list, select the field by which you want to split the view.
5 In the **Possible Views** list, select the views you want to create. If you want to create all of the possible views, click **Select All**.
6 Click **OK**.
A series of Save Split View dialog appears, one for each of the views selected in the Split View dialog box.
7 Specify this information:

**View Name**
Type a name for the new view.

**View Type**
Specify whether this is a public or a private view.

**View Text**
Type a description of this view.

8 Click **OK**. When all views have been named and saved, the View Maintenance dialog re-appears.

**Note:**

- You can split a view if you are a steward, or if it is a private or system view that you own.

- You can also split a public view if you have data access privileges to all of the Products or Channel Products in that view.
- The resulting views can be saved as public views or private view but not as exception views.

## Combining views

You can combine two or more views to make a new view. The original views are unchanged.

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed, initially showing a table of private Product views.

2 To see all views, select the **All Views** check box.

3 In the table, select the views you want to combine, then click **Combine**.
The Combine Views dialog box is displayed, listing the selected views in alphabetical order. By default, the selected views are all linked by OR operators, producing a combined view that is union of all the selected views.

4 If you want to change the order in which the selected views are combined, click a view to select it and then click either **Up** or **Down** to move it up or down one row in the list.

5 For each view, specify how the combined view (that is, the view assembled up to and including that view) is to be combined with the next view in the list, by selecting a logical operator from the adjacent Operator list:

   - Select **OR** to add all the Products or Channel Products in the next view, without duplication.
   - Select **AND** to remove any Products or Channel Products that are not in the next view.
   - Select **NOT** to remove all the Products or Channel Products that are in the next view.

   The number of Products or Channel Products in the combined view is shown in the dialog box. See "About combining views" on page 94.

6 When you are satisfied, click **OK**.
The Save Combined View dialog box is displayed.

7 Specify this information:

   **View Name**
   Type a name for the combined view.

   **View Type**
   Specify whether this is a public or a private view.

   **View Text**
   Type a description of this view.

8 Click **OK** to return to the View Maintenance dialog box.

   **Note:**

   - You can combine views if you are a steward, or if they are private or system views that you own.
   - You can also combine public views if you have data access privileges to all of the Products or Channel Products in those views.
   - The resulting view can be saved as a public view or a private view but not as an exception view.

# Deleting

## Deleting a view

Permanent forecast group views and marketing group views can be deleted only in the Demand Forecaster module; all other views can be deleted in the Database Administration module, provided that you have the relevant access privileges.

1 In Database Administration, select **View Admin > View Maintenance**.
The View Maintenance dialog box is displayed, initially showing a table of private Product views.

2 If the view you want to delete is a public or system view, select the **Public** or **System** check box. If the view is a Channel Product view, under View Type, click **Channel Products**. To see all views, select the **All Views** check box.

3 In the table, click the view you want to delete, then click **Delete**.
The Delete View dialog box is displayed.

4 Click **Yes** to confirm the deletion and return to the View Maintenance dialog box.

**Note:** You can delete a view if you are a steward, or if it is a private or system view that you own.

## Deleting permanent forecast groups

1 In Demand Forecaster, select **Modules > Demand Forecasting > Forecast Group > Delete**.
The Delete Forecast Group dialog box is displayed.

2 Select the forecast group item of the group to delete.
The Group members will be displayed in the right-hand panel.

3 Click **OK**.
The forecast group item will not be deleted, only the group.

## Deleting marketing group views

1 In Demand Forecaster, select **Modules > Demand Forecasting > Promotions > Delete Marketing Groups**.
The MG View Delete dialog box is displayed.

2 Select the MG views to delete.
If more than one MG view is selected, and one or more has the MG view name the same as the NSP code, a message is displayed advising that the views should be deleted individually to avoid orphan market intelligence.

3 Select the **Remove All T-Type MI** check box if you want to delete the T-type market intelligence associated with the view.

4 Select the **Remove transferred history** check box if you want to remove any history stored against the NSPs.

5 Click **OK**.

# Reports

## Viewing a Detailed Report

1 In Database Administration, select **View Admin > Reports > Detailed Report**.
The Select Views dialog box is displayed.
2 Under View Types, select the types of views you want to include in the report.
3 In the table of views, select the specific views you want, then click **OK**.

**Note:**

- If the report is very long, you can search for Product codes by using the **Edit > Find** command.
- You can print the report by using the **Edit > Print** command.
- You can use the View Maintenance Reports toolbar instead of the **Edit** menu.

The View Maintenance Reports – Detail dialog box is displayed, showing the Detailed Report.

## Viewing a Cross Reference Report

1 In Database Administration, select **View Admin > Reports > Cross Reference Report**.
The Select Views dialog box is displayed.
2 Under View Types, select the types of views you want to include in the report.
3 In the table of views, select the specific views you want, then click **OK**.

**Note:**

- If the report is very long, you can search for views by using the **Edit > Find** command.
- You can print the report by using the **Edit > Print** command.
- You can use the View Maintenance Reports toolbar instead of the **Edit** menu.

The View Maintenance Reports – Cross Reference dialog box is displayed, showing the report.

# Exception views

## About exception views

There are currently 139 default exception views that are generated within Infor Demand Planning. Users may activate exceptions, categorize exceptions with a severity and assign exceptions to various user roles so the exception views can be used as a better basis for initiating a work flow.

Infor Demand Planning gives an overview of the exceptions within the system, but in a method that is applicable to the current user. It is possible to view exception detail, including applicable items affected, and directly drill down into the functionality to view or action those products.

There are currently two different ways to gain access to the Infor Demand Planning functionality:

- Standard Product and Channel select.
- A predefined selection for a particular user stored on the database.

See "Index of exception views".

## About exception view action paragraphs

Each exception view has an action paragraph, which provides detailed information on the exception conditions and an explanation of the process that should be undertaken in order to review and action items contained in the exception.

## Maintaining exception views

1. In Database Administration, select **View Admin > Exception View Maintenance**.
2. In the Exception View Maintenance dialog box, clear the **Active** check box for the selected exception view.
   - Previously created exception views that are not active are listed in this dialog box.
   - If you clear the **Active** check box of an exception view that has not previously been created, the exception view is not created.
3. Edit the **List Text** field as required.
4. Click **OK**.

## Editing exception view action paragraphs

1. In Database Administration, select **View Admin > Exception View Maintenance**.
2. In the Exception View Maintenance dialog box, select the required exception view.
3. In the toolbar that is on the right-hand side, click this option: **Open the text editor to edit notes for this CP**.
4. In the Exception View Action Paragraph dialog box, edit the text in the **Action Paragraph** field as required.
5. Click **OK**.

## Creating exception view and user role links

1. In Database Administration, select **View Admin > Exception / Role Maintenance**.
2. In the Exception/Role Maintenance dialog box, specify this information:

   **User Role**
   Select the required role.

**Assign To**
Select the check box in the column of the desired exception view.

**Severity**
Select the required severity.

**Goto**
Select the default destination function.

3 Click **OK**.

# Static Weightings

## About static weightings

It is often useful to view, export or print historical and forecast data about Products or Channel Products in quantities other than their basic unit of measurement.

For example, when considering quantities for shipping in a cargo container, you might want to multiply the number of units by their cubic volume. For financial control, you may want to multiply the number of units by the gross margin.

A static weightingis a named relationship of this type. Each weighting simply multiplies the number of units by the value of a specified Products, Channels or Channel Products table field.

Infor Demand Planning has several predefined static weightings, but you can add more of your own. These can be based on standard fields, or on user-defined fields, provided that the fields are numeric. As soon as you add a new weighting, it becomes available for selection within Infor Demand Planning.

See "About user-defined fields" on page 88.

## Adding a static weighting

1 In Database Administration, select **DB Admin > System > User Fields**, then select **Products**, **Channels**, **Channel Products**, **Orders**, **Addresses**, or **Supplier Assortments**.
2 Click **Adjust Weightings**.
The Edit Weightings dialog box is displayed, showing a table of the existing static weightings.
3 Click **Add**.
A blank row is added to the end of the table.
4 In the **Weighting Refcell** of the new row, type the internal reference name of the new weighting.
5 In the **Operator** cell, select **"*"** (multiplication).
This is the only choice currently available.

6 In the **Decimal Places** cell, type the number of decimal places to be used in the weighted value.

7 In the **Table** cell, select the table that contains the field on which the weighting is to be based.

8 In the **Column** cell, select the numeric field on which the weighting is based.
Do not select a user-defined field unless it is active.

## Editing a static weighting

1 In Database Administration, select **DB Admin > System > User Fields**, then select **Products**, **Channels**, **Channel Products**, **Orders**, **Addresses**, or **Supplier Assortments**.

2 Click **Adjust Weightings**.
The Edit Weightings dialog box is displayed, showing a table of the existing static weightings.

3 You can edit any cell by clicking it and either typing a new value or selecting an option from a list.

## Deleting a static weighting

1 In Database Administration, select **DB Admin > System > User Fields**, then select **Products**, **Channels**, **Channel Products**, **Orders**, **Addresses**, or **Supplier Assortments**.

2 Click **Adjust Weightings**.
The Edit Weightings dialog box is displayed, showing a table of the existing static weightings.

3 Click the name of the weighting you want to delete, then click **Remove**.

# Time-Phased Weightings

## About time-phased weightings

In Infor Demand Planning, named static weightings enable you to view, export or print data by selling price, standard cost, gross margin, and so on. Time-phased weightings are a refinement that allows greater flexibility.

Time-phased weightings allow you to define a weighting factor that varies by time period, both historical and forecast. It follows that TPWs are only ever applied to period-based data such as sales, demand, forecasts, plans and budgets.

There are three types of time-phased weightings (TPWs):

- Product TPWs

TPWs that relate to Products regardless of Channel, for example, standard cost.

- Channel Product TPWs

TPWs that relate to Products at their Channels, for example, average selling price. (Channel Product TPWs can be copied from a base Product to its Scenario Products.)

- System TPWs

TPWs that relate to the whole database regardless of Product or Channel, such as a currency conversion weighting.

The TPW values of a newly-created TPW are all 1.0, which is effectively no weighting. The TPW becomes effective when you edit TPW values to be something other than 1.0. By editing particular Product or Channel Product TPW values, you are effectively applying the TPWs to those Products and Channel Products.

Historical and forecast TPWs are held in separate database tables. At period end, when the database is rolled forward, the forecast TPWs for the period just passed automatically become the most recent historical TPWs.

## Adding a time-phased weighting

1. In Database Administration, select **DB Admin > System > Set Up TPWs**.
   The Set Up TPWs dialog box is displayed, showing a table of the existing TPWs.
2. Select **Edit > Add TPW**.

   You can use the Set Up TPW toolbar instead of the **Edit** menu.

   A blank row is added to the end of the table.
3. In the **Description** cell of the new row, type the name of the new TPW.
4. In the **TPW Type** cell, select the type of this TPW: **Product TPW**, **Channel Product TPW**, or **System TPW**.

## Renaming a time-phased weighting

1. In Database Administration, select **DB Admin > System > Set Up TPWs**.
   The Set Up TPWs dialog box is displayed, showing a table of the existing TPWs.
2. Click the **Description** cell of the TPW you want to rename, type a new name and then click outside the cell.

   You cannot change the type of an existing TPW.

## Deleting a time-phased weighting

1. In Database Administration, select **DB Admin > System > Set Up TPWs**.
   The Set Up TPWs dialog box is displayed, showing a table of the existing TPWs.

2 Click the name of the TPW you want to delete.

3 Select **Edit > Remove TPW**.

You can use the Set Up TPW toolbar instead of the **Edit** menu.

## Editing time-phased weighting values

1 In Database Administration, select **Product Admin > Time-Phased Weightings**.
The Time-Phased Weightings dialog box is displayed. Once you have selected a particular TPW, the central panel of this dialog shows an editable table of historical and forecast TPW values for each period. Historical and forecast TPW values are separated by a break in the table.

2 Select the TPW you want to edit.

3 For a Product or Channel Product TPW, select the Product code of the required Product.

4 For a Channel Product TPW only, select the Channel code of the required Channel.

5 To edit an individual TPW value, click its cell, type the new value, then click outside the cell.

6 To edit a range of consecutive TPW values, double-click the first cell in the range, hold SHIFT, then double-click the last cell in the range. Then do either of the following:

- Select **Edit > Repeat TPW value across cells**. In the Repeat Value dialog, type a value to be repeated across the selected cells, then click **OK**.
- Select **Edit > Edit TPW Function**. In the Adjust TPW dialog, specify an operation (add, subtract, multiply or divide) and a constant to be applied to the selected cells, then click **OK**.

You can use the Time-Phased Weightings toolbar instead of the **Edit** menu.

7 Click **Apply.**

8 To select the next or previous Product/Channel Product when editing a Product/Channel Product TPW, select **Edit > Scroll TPW Product/CP**, then select **Scroll to Next Product/CP** or **Scroll to Previous Product/CP**.

9 When you have finished editing, click **OK.**

## Copying time-phased weighting values

You can copy the TPW values of a Product or Channel Product TPW from one Product or Channel Product (the source) to another (the target).

1 In Database Administration, select **Product Admin > Time-Phased Weightings**.
The Time-Phased Weightings dialog box is displayed.

2 Select the TPW you want to copy.

3 Select the Product code of the target Product.

4 For a Channel Product TPW, select the Channel code of the target Channel.

5 Select **Edit > Copy TPW**.

You can use the Time-Phased Weightings toolbar instead of the **Edit** menu.

The Replace TPW for Product/Channel Product dialog appears.

6 Select the source Product or Channel Product, and click **OK.**

7 Click **Apply**.

## Removing time-phased weighting values

You can reinitialize the TPW values of a Product or Channel Product TPW to 1.0, thereby removing that TPW from that item (when all weighting values are 1.0, there is effectively no weighting).

1 In Database Administration, select **Product Admin > Time-Phased Weightings**.
The Time-Phased Weightings dialog box is displayed.

2 Select the TPW you want to copy.

3 Select the Product code of the target Product.

4 For a Channel Product TPW, select the Channel code of the target Channel.

5 Select **Edit > Remove Current TPW**. Click **Yes** to confirm.
You can use the Time-Phased Weightings toolbar instead of the **Edit** menu.

6 Click **Apply.**

## About importing TPWs

Once a TPW has been created, you can import TPW values into that TPW. The database table you need to use depends on the type of TPW and whether you are importing historical or forecast TPW values:

| Type | Table for importing historical TPW values | Table for importing forecast TPW values |
|---|---|---|
| Product | Product History TPW (HIST_TPW_PROD) | Product Forecast TPW (FCAST_TPW_PROD) |
| Channel Product | Channel Product History TPW (HIST_TPW_CP) | Channel Product Forecast TPW (FCAST_TPW_CP) |
| System | System History TPW (HIST_TPW_SYS) | System Forecast TPW (FCAST_TPW_SYS) |

### Import file format

The format of the target database table, and hence the import file, is similar in each case.

For historical TPWs, it looks like this:

| Column | Format | Usage |
|---|---|---|
| PROD_CD* | A30 | Product code. |

| | | |
|---|---|---|
| CP_REF* | I10 | Channel Product Reference. |
| REF* | I6 | System TPW Reference. |
| WEIGHTING_REF | I3 | Unique reference number assigned by Infor Demand Planning when the TPW was created. |
| STARTDATE | Date | Date of the first period of history. |
| HIST_LENGTH | I2 | The number of periods in the file (up to 65). |
| PERIOD_1 … | F14.4 | TPW value for the 1st month. |
| PERIOD_65 | F14.4 | TPW value for the 65th month. |

For forecast TPWs, it looks like this:

| Column | Format | Usage |
|---|---|---|
| PROD_CD* | A30 | Product code. |
| CP_REF* | I10 | Channel Product Reference. |
| REF* | I6 | System TPW Reference. |
| WEIGHTING_REF | I3 | Unique reference number assigned by Infor Demand Planning when the TPW was created. |
| PERIOD_1 … | F14.4 | TPW value for the 1st month. |
| PERIOD_78 | F14.4 | TPW value for the 78th month. |

See "More about importing" on page 130.

**Note:**

- In the import files described above, only one of the asterisked * fields is needed, depending on the type of TPW. Thus a Product TPW needs a Product code, a Channel Product TPW needs a Channel Product Reference, and a System TPW needs a System TPW reference.
- Any TPW vectors that are too long are truncated, and any that are too short are regarded as exceptions; (a) the number of historical or forecast TPW values for a Channel Product TPW must always match the number of periods of history or forecast held for that Channel Product, (b) for a Product TPW, there must be as many TPW values as the longest history or forecast of all the Channel Products defined for that Product, (c) system TPWs always have the maximum allowable history and forecast. Any TPW vectors that are too long are truncated, and any that are too short are regarded as exceptions.

# Table Editing

## About table editing

Infor Demand Planning exposes four main database tables for editing:

- System table (St), which holds information that controls the behavior of the entire database.
- Products table (Pt), which holds information that defines each Product.
- Channels table (Ct), which holds information that defines each Channel.
- Channel Products table (CPt), which holds information that defines a Product at a particular Channel.

The System table fields are edited by using a tabbed dialog box.

Channels, Products and Channel Products table fields can be edited directly. Often, only a subset of fields need to be edited at any one time. Infor Demand Planning therefore includes, for each of these three tables, some predefined collections of fields called "reports". You can also define your own reports. (Remember that a report is a collection of fields, not records.)

Only fields that are specified as "editable" in the application defaults can be edited manually.

See "About application defaults" on page 70.

### Table editing techniques

When editing the Channels, Products or Channel Products table you can:

- Sort the selected records by any one column.
- Sort the selected records by more than one column (expert sort).
- Filter the selected records by one or more columns (expert filter).
- Edit individual fields of a record.
- Edit a field in one record and all subsequent records at the same time (vertical edit).
- Copy data from one record to any other records in the current table report (copy rows).
- Copy data from one column to any other columns in the current table report (copy columns).
- Calculate data in one column using data from one or two other columns in the current table report (calculate columns).

**Note:**

- The terms record/row, and field/column, are used interchangeably.

# Editing the System table

1 In Database Administration, select **DB Admin > System > System Data**.
The System Data dialog box is displayed.

2 On the **General Settings** tab, specify various parameters such as:

- The company name.
- Whether the monthly forecast is to be interpolated into weeks.
- The base currency.
- The scope of Sales & Operations Planner (S&OP) and Sales Budgeting & Tracking (SBT).
- The forecast horizon (in various granularities).
- How market intelligence is processed at period end.
- The amount of historical data to store (in various granularities) and when it is to be deleted.
- Whether data is displayed in integer or decimal format.

See "System Data dialog [General Settings 2 tab]".

3 On the **Forecasting Settings** tab, specify various forecasting parameters.
See "System Data dialog [General Settings tab]".

- You should be cautious about editing the System table. Inappropriate values may cause Infor Demand Planning to stop working properly.
- You can specify which fields of the System table are editable by setting the application defaults.

# Editing the Products table

1 In Database Administration, select the Products you want to edit.
See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Products**.
The Products dialog box is displayed, showing an editable grid of Product fields.

3 Select a report (the default report is **All Data**).
See "Selecting a report" on page 117.

4 You can search the report to find the rows you want to edit.
See "Finding data in a report" on page 118.

5 You can edit any blue value directly, by clicking its cell and either typing or selecting a new value. Additionally, you can use any of the following editing techniques:

- "Editing a row" on page 120
- "Editing a column" on page 121 (vertical editing)
- "Copying a row (table editing)" on page 121

- "Copying a column (table editing)" on page 122
- "Calculating columns (table editing)" on page 122

6 You can filter the report to review any unsaved changes.
See "Filtering the unsaved changes in a report" on page 118.

7 When you are satisfied, you can save the changes you have made.
See "Saving changes" on page 116.

**Note:**

- In most cases, you can use the Products toolbar instead of menu commands.
- You can specify which fields of a table are editable by setting the application defaults.

## Editing the Channels table

1 In Database Administration, select the Channels you want to edit.
See "Selecting Channels" on page 48.

2 Select **DB Admin > System > Edit Channel Data**.
The Channels dialog box is displayed, showing an editable grid of Channel fields.

3 Select a report (the default report is All Data).
See "Selecting a report" on page 117.

4 You can search the report to find the rows you want to edit.
See "Finding data in a report" on page 118.

5 You can edit any blue value directly, by clicking its cell and either typing or selecting a new value. Additionally, you can use any of the following editing techniques:

- "Editing a row" on page 120
- "Editing a column" on page 121 (vertical editing)
- "Copying a row (table editing)" on page 121
- "Copying a column (table editing)" on page 122
- "Calculating columns (table editing)" on page 122

6 You can filter the report to review any unsaved changes.
See "Filtering the unsaved changes in a report" on page 118.

7 When you are satisfied, you can save the changes you have made.
See "Saving changes" on page 116.

**Note:**

- In most cases, you can use the Channels toolbar instead of menu commands.
- You can specify which fields of a table are editable by setting the application defaults.

# Editing the Channel Products table

1 In Database Administration, select the Products and Channels you want to edit.
See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Channel Products**.
The Channel Products dialog box is displayed, showing an editable grid of Channel Product fields.

3 Select a report (the default report is Basic Report).
See "Selecting a report" on page 117.

4 You can search the report to find the rows you want to edit.
See "Finding data in a report" on page 118.

5 You can edit any blue value directly, by clicking its cell and either typing or selecting a new value. Additionally, you can use any of the following editing techniques:

- "Editing a row" on page 120
- "Editing a column" on page 121
- "Copying a row (table editing)" on page 121
- "Copying a column (table editing)" on page 122
- "Calculating columns (table editing)" on page 122

6 You can filter the report to review any unsaved changes.
See "Filtering the unsaved changes in a report" on page 118.

7 When you are satisfied, you can save the changes you have made.
See "Saving changes" on page 116.

**Note:**

- In most cases, you can use the Channel Products toolbar instead of menu commands.
- You can specify which fields of a table are editable by setting the application defaults.

# Saving changes

When editing a database table, you can save the changes you have made so far.

1 Select **Edit > Save Changes**.
The report changes to show only the updated rows.

Infor Demand Planning tells you how many rows it has updated.

2 Click **OK** to acknowledge.
The report reverts to showing all rows, but with the updated rows at the top of the report.

# Reports

## Selecting a report

When editing the Products, Channels or Channel Products table, you can at any time select a different report to view.

In the **Report Type** box, do one of the following:

- Select a predefined report.
- Select **User-Defined Report** if you want to create a new report. See "Creating a report" on page 117.
- Select **Saved Report** if you want to load a previously-saved report. See "Loading a report" on page 118.

If there are any unsaved changes, Infor Demand Planning warns you that they are lost if you load a new report, and asks if you want to continue.

## Creating a report

When editing the Products, Channels or Channel Products table, you can create a report containing any combination of columns. Each column in the report corresponds to a field in the table.

1. In the **Report Type** box, select **User-Defined Report**.

   At step 1, be careful not to select the predefined User-Defined Fields report by mistake.

   The Column Selection dialog is displayed.
2. On the **Table and Column Selection** tab, in the Column Description list, select the columns you want to include in your report. To include all columns, click **Select All**.
3. If you want to arrange the selected columns in a particular order, click **Arrange** to view the **Arrange Columns** tab; if not, click **OK**.

   The **Arrange Columns** tab shows a list of the selected columns. The top-to-bottom order of the list represents the left-to-right order of the columns in your report.
4. On the **Arrange Columns** tab, click the column you want to move, then do one of the following:
   - Click **To Top** to move the selected column to the top of the list.
   - Click **Up** to move the selected column up one place in the list.
   - Click **Down** to move the selected column down one place in the list.
   - Click **To Bottom** to move the selected column to the bottom of the list.

   Repeat as required.
5. Click **Back** to return to the **Table and Column Selection** tab.

## Loading a report

When editing the Products, Channels or Channel Products table, you can load a previously-saved report.

1. In the **Report Type** box, select **Saved Report**.
   The Select File dialog is displayed.
2. Select the required Product (.DBP), Channel (.DBH) or Channel Product (.DBC) report file, and then click **Open**.

## Finding data in a report

When editing a database table, you can find data by searching any column of the current report. Each column in the report corresponds to a field in the table.

1. Select **Edit > Find**.

   You can use the dialog's toolbar instead of the **Edit** menu.

   The Find dialog is displayed.
2. In the **Column Description** list, click the column you want to search.
3. Under Options, click the operator that defines the relationship between the value of the field and the search pattern. The choice of operators depends on the type of field; there are different operators for numeric, date and alphanumeric fields.
4. In the **Search pattern** box, type the value to which the field is to be compared.
5. For an alphanumeric field, select the **Case sensitive** check box if you want the search to differentiate between uppercase and lowercase characters.
6. Click **Find First** to highlight the first row in the report (starting from the top) that matches the search pattern.
7. Click **Find Next** to highlight the next row that matches the search pattern. Repeat as required. Infor Demand Planning tells you when there are no more matching rows; click **OK** to acknowledge.
8. Click **Close**.

## Filtering the unsaved changes in a report

When editing a database table, you can filter the current report to view only the rows with unsaved changes.

1. Select **Edit > Apply/Remove Filter**.
   The report changes to show only the rows with unsaved changes. If there are no such rows, the report is empty.
2. Select **Edit > Apply/Remove Filter again**.
   The report reverts to showing all rows, but any rows with unsaved changes are now at the top of the report.

## Refreshing the current report

When editing a database table, you can refresh the current report with data from the database, effectively undoing any unsaved changes.

1 Select **Edit > Re-retrieve Data**.
Infor Demand Planning asks whether you want to save any unsaved changes before proceeding.
2 Click **Yes** to save these changes or **No** to overwrite them.

**Note:** Refreshing the report also undoes any sorting or filtering you may have applied.

## Exporting a report

When editing a database table, you can export all of the current report to a file outside Infor Demand Planning.

1 Select **Edit > Export**.
The Save As dialog box is displayed.
2 In the **File name** box, type a name for the exported file.
3 In the **Save as type** box, select the data format to be used.
See "About export file types" on page 156.
4 Click **Save**.

**Note:**

- The exported data reproduces how the report is currently sorted and filtered.
- If you don’t want to export all of the columns of the report, use the **Edit > Print** function, but export rather than print.

## Printing a report

When editing a database table, you can print all or part of the current report.

1 Select **Edit > Print**.
The Print Data window Report dialog box is displayed.
2 In the **Column Description** list, select the columns you want to include.
By default, all columns are selected.
3 In the **Title** box, edit or replace the default title of this report.
4 If you want to use a printer other than your default printer, click **Setup**. In the Printer Setup dialog, select the printer you want to use and click **OK**.
You can also configure the printer if you need to.
5 Specify whether you want to use portrait or landscape orientation, and how many copies you want to print.
6 Click **Print** to print the report, then click **Close**.

**Note:**

- The printed report reproduces how the report is currently sorted and filtered.
- You can also use the **Edit > Print** function to export some or all of the current report to a file outside Infor Demand Planning.

## Saving the current report

When editing the Products, Channels or Channel Products table, you can save the current report for future reuse.

1. In the **Report Type** box, select **Save Current Report**.
   The Select File dialog box is displayed.
2. In the **File name** box, type a name for the file.
   You do not need to type the file name extension; Infor Demand Planning adds this automatically depending on which table you are editing: Product (.DBP), Channel (.DBH) or Channel Product (.DBC).
3. Click **Save**.

   **Note:** The saved report does not reproduce how the report is currently sorted or filtered. This is because the report is a collection of columns/fields, not a collection of rows/records.

# Editing Techniques

## Editing a row

When editing the Products, Channels or Channel Products table, you can edit a particular row of the table by using a dialog, rather than editing the values directly in the table.

1. Click the row you want to edit.
2. Select **Edit > Detail**.
   Another way of opening the Detail dialog is to double-click the row you want to edit.
   A dialog box is displayed, showing the data from the selected row. You can edit only the values shown in blue. Depending on the table you are editing and the current report, the dialog may have tabs.
3. To select the next or previous row, select **Edit > Scroll to Row > Scroll to Next Row** or **Scroll to Previous Row**.
4. When you have finished editing, click **Close**.

## Editing a column

When editing a database table, you can specify a value for the currently-selected cell and all subsequent cells in the same column. This is known as vertical editing.

1 If necessary, sort the table so that the rows are in the required order.
2 Click the cell at which you want to start the vertical edit. The cell must correspond to an editable field.
3 Select **Edit > Vertical Edit.**.
The Vertical Edit dialog box is displayed.
4 Type or select the required value, click **OK**, then click **Yes** to confirm.

**Note:**

- Infor Demand Planning validates the specified value, and does not update the table if it is invalid.
- You can specify which fields of a table are editable by setting the application defaults.

## Filtering a table

1 Right-click any column heading.
2 On the shortcut menu, click **Expert Filter**.
The Specify Filter dialog box is displayed.
3 Assemble the filter in the upper panel of the dialog by combining the following elements, either by selecting them or by typing them directly into the panel.

- relational operators
- parentheses (for expressing operator precedence)
- mathematical functions
- table columns (identified by their Oracle names)
- constants

4 Click **Verify** to test the filter.
5 Click **OK** to apply the filter.

**Note:** If you re-open the Specify Filter dialog, the upper panel shows the filter you have just applied. You can edit this filter and re-apply it. The filter is always applied to the original unfiltered table; you cannot further filter a table that is already filtered.

## Copying a row (table editing)

When editing the Products, Channels or Channel Products table, you can copy some or all of the data in one row to one or more other rows.

1 Select **Edit > Edit Function**.

The Edit Database Fields dialog box is displayed.

2 Click **Copy Row Data**.
The Copy Row Data dialog box is displayed.

3 In the Copy from row: panel, select the row from which you want to copy data.

4 In the Copy the highlighted items below: panel, select the fields you want to copy. To select all fields, click **Select All** below the panel.

Infor Demand Planning ensures that you can select only editable fields.

5 In the Copy to row: panel, select the rows to which you want to copy the selected data. To select all rows, click **Select All** below the panel.

**Note:** You can specify which fields of a table are editable by setting the application defaults.

## Copying a column (table editing)

When editing the Products, Channels or Channel Products table, you can copy data in one column to one or more other columns. Each column corresponds to a field in the table.

1 Select **Edit > Edit Function**.
The Edit Database Fields dialog box is displayed.

2 Click **Copy Column Data**.
The Copy Column Data dialog box is displayed.

3 In the Copy data in column: panel, select the single column you want to copy (the source column).

4 In the Copy to columns: panel, select the columns to which you want to copy the source column. To select all columns, click **Select All**.

Infor Demand Planning ensures that you can select only editable columns with compatible data formats.

See "Restrictions on copying columns".

**Note:**

- You cannot use this function if there are no editable fields in the current report.
- You can specify which fields of a table are editable by setting the application defaults.

## Calculating columns (table editing)

When editing the Products, Channels or Channel Products table, you can use the data values in one or two columns to calculate the data values in one or more other columns. Each column corresponds to a field in the table. The calculation is applied to all the Products, Channels or Channel Products in the current report.

1 Select **Edit > Edit Function**.
The Edit Database Fields dialog box is displayed.

2 Click **Calculate**.
The Enter Criteria For Column Calculation dialog box is displayed.

3 In the Take data in column: panel, select the column which is to provide the first operand in the calculation.
4 Select the operator: add, subtract, multiply, divide, square root or power.
5 Do one of the following:
   - To use a constant value as the second operand, select **Constant** and type the value of the operand in the adjacent box.
   - To use another column as the second operand, select **Column** and select the required column in the central panel of the dialog box.

   The square root operator does not require a second operand.
6 In the To column(s): panel, select the columns you want to receive the result of the calculation.

   **Note:** You cannot use this function if there are no numeric fields in the current report.

## Sorting a table by a column

1 Right-click the column heading of the column you want to sort by.
2 On the context menu, click either **Sort Ascending** or **Sort Descending**, as required.

## Sorting a table by more than one column

1 Right-click any column heading.
2 On the shortcut menu, click **Expert Sort**.
The Specify Sort Columns dialog box is displayed.
3 Drag the columns by which you want to sort the table from the **Source Data** list to the **Columns** list.
4 Drag the columns within the **Columns** list into the required sequence. Select or clear the **Ascending** check box next to each column according to whether you want to sort that column in ascending or descending order.
5 Click **OK** to sort the table.

   **Note:**

   - If you re-open the Specify Sort Columns dialog, it shows the sort you have just applied. You can edit this sort and re-apply it. The sort is always applied to the original unsorted table.
   - You can specify more a complex sort by combining columns in a mathematical expression, and sorting the table according to the result. To specify such an expression, double-click any column in the **Columns** list. The Modify Expression dialog box is displayed.

## Setting a column width

1 Adjust the width of the column heading by dragging its right-hand column divider.
2 Right-click the column heading.

3 On the context menu, click **Set Column Width**.

- Changing the column width changes the way the column is displayed throughout Database Administration.
- Changing a column that corresponds to a database field has the same effect as editing the field's Column Width attribute within the application defaults.

## Editing a column heading

1 Right-click the column heading you want edit.

2 On the shortcut menu, click **Edit Column Heading**.
The Change The Column Heading dialog box is displayed, showing the column's Oracle name and the current heading.

3 In the **New Heading** box, type a new heading for this column.

**Note:**

- Changing the column heading changes the way the column is labeled throughout Database Administration.
- Changing the heading of a column that corresponds to a database field has the same effect as editing the field's Header Text attribute within the application defaults.

# Batch Editing

## About batch editing

Batch editing is a way of editing the Products and Channel Products tables without having to load either of them into Infor Demand Planning (it works by accessing the Oracle tables directly). The batch edits apply to all the currently-selected Products and Channel Products.

This is a powerful feature that must be used with caution.

### Batch editing techniques

There are three batch editing techniques:

- Editing columns (vertical editing): enables you to specify a value for any editable column/field in the Products and Channel Products tables. You can edit any number of columns at the same time.
- Copying columns: enables you to copy data in one column/field of the Products or Channel Products table to one or more other columns/fields. You can also copy from the Products table to the Channel Products table (but not vice versa).

- Calculating columns: enables you to calculate the value in one or more columns/fields of the Products or Channel Products table from one or two other columns/fields.

**Note:**

- These techniques are very similar to their table editing counterparts.

## Editing columns (batch editing)

Batch editing enables you to specify a value for any editable column/field in the Products and Channel Products tables. You can edit any number of columns at the same time.

1. In Database Administration, select the Products or Channel Products you want to edit.
   See "About selecting Products and Channels" on page 35.
2. Select **Product Admin > Batch Editing**.
   The Batch Editing dialog box is displayed.
3. Click **Vertical Edit**.
   The Batch Editing – Vertical Edit dialog box is displayed. The **Column Selection** tab shows a combined list of editable Products and Channel Products table fields.
4. Select the columns/fields that you want to edit. To select all fields, click **Select All**. Click **OK**.
   The **Vertical Edit** tab shows two editable tables, one for Products and one for Channel Products, containing the columns/fields selected on the **Column Selection** tab.
5. Specify the values that you want to apply to each column.

   **Note:**

   - Be careful to select only the fields you want to edit, because selected fields that you don't edit may be reset to their default values.
   - On the **Vertical Edit** tab, you can undo any unsaved changes by clicking **Re-retrieve Data** on the Batch Editing toolbar.
   - You can specify which fields of a table are editable by setting the application defaults.

## Copying columns (batch editing)

Batch editing enables you to copy data in one column of the Products or Channel Products table to one or more other columns. You can also copy from the Products table to the Channel Products table (but not vice versa).

1. In Database Administration, select the Products or Channel Products you want to edit.
   See "About selecting Products and Channels" on page 35.
2. Select **Product Admin > Batch Editing**.
   The Batch Editing dialog box is displayed.
3. Click **Copy Column Data**.

The Batch Editing - Copy Column Data dialog box is displayed.

4 In the Copy data in column: panel, select the single column you want to copy (the source column).

5 In the Copy to columns: panel, select the columns to which you want to copy the source column.

Infor Demand Planning ensures that you can select only editable columns with compatible data formats.

See "Restrictions on copying columns".

6 If you intend to copy another column, click **Save** to update the database but leave the Batch Editing - Copy Column Data dialog open. Otherwise, click **OK**.

**Note:** You can specify which fields of a table are editable by setting the application defaults.

## Calculating columns (batch editing)

Batch editing enables you to calculate the values in one or more columns/fields of the Products or Channel Products table from one or two other columns/fields.

1 In Database Administration, select the Products or Channel Products you want to edit.

See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Batch Editing**On the .
The Batch Editing dialog box is displayed.

3 Click **Calculate**.
The Batch Editing – Calculate dialog box is displayed.

4 In the Take data in column: panel, select the column which is to provide the first operand in the calculation.

5 Select the operator: add, subtract, multiply, divide, square root, power or reciprocal.

6 Do one of the following:

- To use a constant value as the next operand, select **Constant** and type the value in the adjacent text box.
- To use another column as the next operand, select **Column** and then select the required column from the adjacent list box.

The square root and reciprocal operators do not require another operand.

7 In the To column(s): panel, select the columns you want to receive the result of the calculation.

# Importing and Exporting

## About importing and exporting

Database Administration provides the following import/export functions:

- You can import data into any database table, using delimited or fixed-length records.

See "More about importing" on page 130.

- You can export data from any database table, or any combination of database tables that have fields in common. You can export to a variety of standard file formats.

See "More about exporting" on page 155.

- To make the task of importing and exporting easier, Infor Demand Planning includes several standard import/export templates, and enables you to define your own.

See "About import/export templates" on page 127.

- Infor Demand Planning also includes an automated importing feature, where the choice of a particular import table can trigger a process that imports raw data, discards erroneous data and updates the correct database table.

See "About automated importing" on page 138.

## Templates

### About import/export templates

#### Import templates

An import template specifies:

- The database table and fields into which data is to be imported.
- The arrangement of the fields within each row of the import file.
- The import actions (that is, whether the import process can add to or update the affected table, and how each column (field) in the import file is to be processed).

#### Export templates

An export template specifies:

- The database tables and fields from which data is to be exported.

- If data is to be exported from more than one table, how those tables are to be joined together in the export file.
- Optionally, the arrangement of the fields within each row of the export file. If no particular arrangement is specified, the order of the columns in the database tables is assumed.
- Optionally, whether and how the exported data is sorted or filtered.

**Note:**

- You can export data by using an import template (the import actions are simply ignored in this case), but you cannot import data by using an export template.

## Private, public and system templates

An import/export template may be defined for your own personal use (a private template), for use by all other users (a public template) or as a template owned by Infor Demand Planning itself (a system template).

## Standard templates

The following table shows some of the standard system templates that you can expect to find installed with Infor Demand Planning. Note that some of the templates are designed for automated importing.

See "About automated importing" on page 138.

| This standard template … | Is used to … |
|---|---|
| Add BOM | Auto-import new BOMs |
| Add Channels | Add new Channels |
| Add Products | Add new Products |
| Add Channel Products | Add new Channel Products |
| Add Orders | Auto-import orders |
| Update Channels | Update existing Channel information. |
| Update Products | Add or replace Product information. |
| Update Channel Products | Update existing Channel Product information. |
| Update Monthly Sales History | Add or replace monthly sales history. |
| Update Monthly Demand History | Add or replace monthly demand history. |
| Update Monthly Adj. Demand History | Add or replace adjusted demand history. |
| Update Weekly Sales History | Add or replace weekly sales history. |
| Update Weekly Demand History | Add or replace weekly demand history. |
| Update Weekly Adj. Dem. History | Add or replace weekly adjusted demand history. |
| Net Forecast Import | Import a new net forecast. |
| Net Forecast Table - Monthly | Export the last calculated monthly net forecast. |

| | |
|---|---|
| Net Forecast Table - Weekly | Export the last calculated weekly net forecast. |

**Note:**

- When a new Channel Product is created, a row is created for it in all the relevant history tables. As its history length, at this point, is zero, the new Channel Product appears to have no history. However, its history must be updated rather than added because some data (zero) already exists.

## Creating a template

1 In Database Administration, select **Product Admin > Export / Template maintenance**.
The Export / Template Maintenance dialog box is displayed.

2 On the **Table and Column Selection** tab, select the tables and columns that you want in the template. If this is an import template, there are restrictions on the tables and columns you can select.
See "Automatic resolution of Channel Product References" on page 131.

3 If this is an export template, and if you select more than one table, click **Join** and then specify how the tables are joined.
See "Joining tables".

4 Optionally, you can click **Arrange** and then specify the arrangement of the columns.
See "Arranging columns".

5 Optionally, if this is an export template, you can click **Sort** or **Filter** and then specify how the exported data is to be sorted or filtered.

6 Click **Verify** to test the selection, then click **Save**.

7 On the **Save Template** tab, in the **Template Name** box, type the name of the new template.

8 Under Template Owner, specify the owner of this template, and whether it is a public, private or system template.

9 If this is an import template, select the **Import Template** check box and specify the import actions.
See "About import actions" on page 134.
For each selected column:

- Under Import Instruction, specify how imported data is to be processed for this field.
- Under Default Value, specify the value to be used to populate the field if imported data is prohibited, missing or null. For certain fields, a special default value must be selected.

Under Import Action, specify whether the import process is allowed only to add new rows, modify existing rows, or both.

10 Click **Save**, then click **OK** to acknowledge.

## Editing a template

1 In Database Administration, select **Product Admin > Export / Template maintenance**.
The Export / Template Maintenance dialog box is displayed.

2 On the **Table and Column Selection** tab, click **Load**.
3 On the **Maintain Templates** tab, select the template you want to edit and click **Load**.
4 On the **Table and Column Selection** tab, make any required changes to the tables and columns in the filter.
5 Optionally, you can click **Arrange** and then change the arrangement of the columns.
   See "Arranging columns".
6 Optionally, if this is an export template, you can click **Sort** or **Filter** and then change how the exported data is to be sorted or filtered.
7 Click **Verify** to test the selection, then click **Save**.
8 On the **Save Template** tab, in the **Template Name** box, select the name of the template (if you want to overwrite it) or type a new name for the edited template. Edit the other attributes of the template as required.
9 Click **Save**, then click **OK** to acknowledge.
   You cannot overwrite a system template unless you are a steward. You cannot overwrite a private template unless you are its owner or a steward.

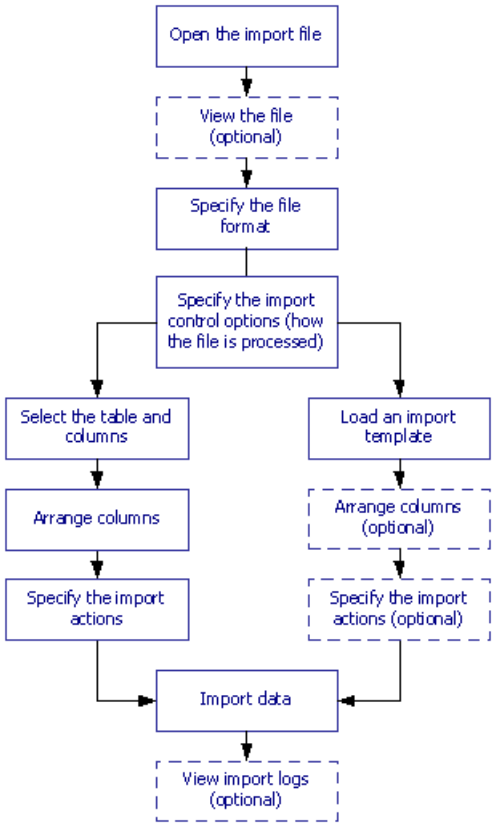
## Deleting a template

1 In Database Administration, select **Product Admin > Export / Template maintenance**.
The Export / Template Maintenance dialog box is displayed.
2 On the **Table and Column Selection** tab, click **Load**.
3 On the **Maintain Templates** tab, select the template you want to delete, click **Delete**, then click **Yes** to confirm.
   You cannot delete a system template unless you are a steward (all of the standard templates are system templates). You cannot delete a private template unless you are its owner or a steward.

# Importing

## More about importing

This diagram summarizes the import process:




There are two ways of specifying what data is imported:

- Select the table and columns you want, the arrangement of the columns in the import file, and the import actions. (In most cases, you can specify only one table. The exception to this rule is described below.)
- Load a standard or a previously-saved import template that defines the table and columns to be imported. The template may also specify the arrangement of the columns and the import actions, but you can edit these if you wish.

## Import file formats

You can import files with fixed-length or delimited records.

See "About import file types" on page 133.

## Automatic resolution of Channel Product References

Normally, you can select only one table into which to import data. However, if that target table includes a Channel Product Reference field, you are also allowed to select the Product Code and Channel ID fields of the Channel Products table.

The Channel Product Reference is a number that uniquely identifies each Channel Product. It is used internally by Infor Demand Planning.

When the file is imported, Infor Demand Planning automatically uses the Product Code and Channel ID to resolve the corresponding Channel Product Reference, which is then written into the target table. In this way, you can import data into tables that are keyed by the Channel Product Reference field without having to know the value of that field.

It follows that the import file must contain the Product Code and Channel ID fields as key fields, but it cannot include the Channel Product Reference field.

You can use this feature only when modifying existing records; when adding new records it is possible that the Channel Product may not already exist, and so the Channel Product Reference cannot be automatically resolved.

Because the relationship between Product Code, Channel ID and Channel Product Reference is resolved automatically, there is no need to specify how the target table and the Channel Products table are joined.

Important

- When modifying data in the Channel Products table, you must ensure that all the Channel Products identified in the import file already exist. Otherwise, because of the way Infor Demand Planning modifies records in batches, valid as well as invalid records may be discarded.

## Import templates

A template may be a created as a private, public or system template. You can load any public template. You can load a private template if you are its owner or a steward. You can load a system template only if you are a steward.

See "About import/export templates" on page 127.

## Import control options

When you import data, you must specify this information:

- The number of rows to skip at the start of the file. Typically, this is either 1 or 0, depending on whether or not the file has a header row.
- The number of successive rows Infor Demand Planning should read before writing the imported data to the database.
- The maximum number of rows Infor Demand Planning can reject before abandoning the import.
- Whether missing data in the import file should be replaced by default values.
- Whether extra columns in the import file should be ignored.
- Whether Infor Demand Planning should create a discard file (.DIS) containing unacceptable records.
- Whether Infor Demand Planning should display a report once the import is complete.

## Import actions

You must define whether the import process can add to or modify the affected table, and how each column (field) in the import file is to be processed. This information may be predefined in an import template.

See "About import actions" on page 134.

### Logs

Infor Demand Planning may generate up to three import logs. These logs can be viewed, printed and saved to a file (for possible correction and re-import).

- Import

The import log shows what happened during the import. This may be either a standard or a detailed log. The detailed import log includes the imported and default values of the fields in any rejected rows.

- Discard

The discard log contains rows that were unacceptable because of the import actions (see above); that is, they incorrectly attempted to add to, or to modify, the database.

- Reject

This reject log contains rows that failed to import because of errors in the data.

## About import file types

Infor Demand Planning accepts two kinds of import files:

- Delimited

The rows (records) in the import file are of variable length, with columns (fields) within a row separated by delimiting characters. Examples of possible delimiting characters are spaces, tabs and commas.

- Fixed-length

The rows (records) in the import file are of a fixed length, with columns (fields) in fixed positions in each row. The position of each column is specified in a header record, which must be the first record in the import file.

For example, if the import file consists of a 7-character Product code, 14-character Product description, 6-digit selling price and 7-digit cost price, then an example header record for could look like this:

A111111A1111111111111N11111N111111

The letters denote the field data type and the ‘1’ characters define the fixed length of the fields. (In fact, the data type of each field in the import file is not determined by the letter used in the header record; instead the data types in the file must match the data types of the database columns you specify, either manually or in a template, when you import the file. However, a header record can make the file easier to understand.)

### File name extensions

Infor Demand Planning offers you the following choices of file name extension when you attempt to import a file:

*.IMP Import files

*.EXP Export files

*.DAT Data files

*.TXT Text files

*.DIS Discard files

*.CSV Comma-separated files

In fact any type of file can be selected, provided that it is formatted correctly with either delimited or fixed-length records.

## About import actions

Import actions and instructions define whether the import process can add to or modify the affected table, and how each column (field) in the import file is to be processed.

### Table import actions

You can choose one of three import actions:

- Add rows

Allows new rows to be added to the affected table, but prevents modification of existing rows.

- Modify existing rows

Allows existing rows to be modified by imported data, but prevents new rows being added.

- Modify existing rows and add missing rows

Allows existing rows to be modified, and new rows to be added.

### Column import instructions

You can choose one of three types of import instruction for each column (field) in the import file:

- Key value

Import data to this field and use it, together with other key values in the same table, to uniquely identify the correct record to be modified. If the table import action permits rows to be modified, then at least one key value must be specified.

- Import

Import data from the file into this field; if the data is missing or null, use the default value instead.

- Use default value

Do not import data to this field; always use the default value instead.

The default value is usually the field's initial value as specified in the application defaults, but a different value can be specified if required. For certain fields, a special default value must be selected.

## Special default values

There are some default values that have a special significance.

| | |
|---|---|
| Table | Channel Products (CHAN_PRODS) |
| Column | Channel Product Reference (CP_REF) |
| Default value | SEQUENCE CP |
| Action taken | When inserting rows into the Channel Products table, the Channel Product Reference is generated automatically using an Oracle sequence. The Channel Product Reference field should not be included in the import file, so you must set the import action to use the default value of SEQUENCE CP. The Channel Product Reference need not then be specified anywhere in the import. |

| | |
|---|---|
| Table | Channels (CHANNELS) |
| Column | Channel Reference Number (CHAN_REF) |
| Default value | SEQUENCE |
| Action taken | Obtains the next Channel Reference Number from an Oracle sequence. |

| | |
|---|---|
| Table | Channel Types (CHAN_TYPES) |
| Column | Channel Type (CHAN_TYPE) |
| Default value | SEQUENCE |
| Action taken | Obtains the next Channel Type from the Channel Types table. |

| | |
|---|---|
| Table | Time-Phased Weighting Header (TPW_HD) |
| Column | Weighting Reference (WEIGHTING_REF) |
| Default value | SEQUENCE |
| Action taken | Obtains the next Weighting Reference from an Oracle sequence. |

| | |
|---|---|
| Table | Any |
| Column | Any date-format field |
| Default value | TODAY |
| Action taken | Obtains the current date. |

| | |
|---|---|
| Table | Any |
| Column | Any numeric field |
| Default value | COUNT(n) |
| Action taken | Obtains the number of columns in the import file + n.<br>This default is typically used only when importing history, in which case it is used for the History Length (HIST_LENGTH) column, and n should be –3 (because the first 3 columns are History Type (needed because it's a key), Start Date and History Length. COUNT(n) is calculated for each row in the import, so an import file containing rows with different number of columns will be dealt with correctly. |

| | |
|---|---|
| Table | Any |
| Column | Start Date (START_DATE) |
| Default value | COMPUTE DATE |
| Action taken | Obtains the start date of a sequence of period-based data.<br>This default is typically used only when importing history, in which case the import file must also include Channel Code (CHAN_ID) column and a History Length (HIST_LENGTH) column. Infor Demand Planning obtains the "Date Demand Last Updated (Ct)" for the relevant Channel, then counts back the number of periods specified by the History Length. |

## Importing data by selecting tables and columns

You can import data into only one table at a time (the target table).

1. In Database Administration, select **Product Admin > Import**.
   The Import and Database Import Utility dialog box is displayed.
2. In the Database Import Utility dialog, select the file you want to import and click **Open**.
   See "About import file types" on page 133.
   At step 2, if you select the wrong import file by mistake, click the **Browse** button on the **Import Control** tab to re-open the Database Import Utility dialog box.
3. On the **Import Control** tab of the Import dialog, under Import File Format, specify whether the file contains fixed-length or delimited records (and, if the latter, specify the delimiting character). Optionally, specify whether you want to remove quotation marks from around non-numeric fields (including date fields).
   If you are not sure of the file format, click **View** to view the file.
4. Under Import Control Options, specify how the file is to be processed.
   See "Specifying import options".
5. Under Specify Columns, click **Manual Selection**, then click **Select**.

6 On the **Table and Column Selection** tab, select the tables and columns that correspond to the data in the file.

Normally, you must select columns from only the target table. However, if that table includes a **Channel Product Reference** field, you are also allowed to select the Product Code and Channel Code fields of the Channel Products table, in order to resolve these into the Channel Product Reference.

See "Automatic resolution of Channel Product References" on page 131.

The **Join** button on the **Table and Column Selection** tab is redundant when importing data.

7 Click **Arrange** and then specify the arrangement of the columns in the file.
See "Arranging columns".

8 Click **Back** to return to the **Import Control** tab.

9 Under Import Action, and on the **Import Column Actions** tab, specify the import actions.

See "Specifying import actions".

10 Click **Import**.
The **Import Log** tab appears, reporting the result of the import. You can print and save the import log. If rows are discarded or rejected by the import process, you can click Discarded or Rejected to view, print and save them.

11 If you have more files to import, click **Back** to return to the **Import Control** tab; otherwise, click **Close** to close the dialog box.

## Importing data by loading a template

You can import data into only one table at a time (the target table).

1 In Database Administration, select **Product Admin > Import**.
The Import and Database Import Utility dialog appear.

2 In the Database Import Utility dialog, select the file you want to import and click **Open**.

See "About import file types" on page 133.

At step 2, if you select the wrong import file by mistake, click the **Browse** button on the **Import Control** tab to re-open the Database Import Utility dialog box.

3 On the **Import Control** tab of the Import dialog, under Import File Format, specify whether the file contains fixed-length or delimited records (and, if the latter, specify the delimiting character). Optionally, specify whether you want to remove quotation marks from around non-numeric fields (including date fields).

If you are not sure of the file format, click **View** to view the file.

4 Under Import Control Options, specify how the file is to be processed.

See "Specifying import options".

5 Under Specify Columns, click **Use Template**, then click **Load**.

6 On the **Load Template** tab, select the required template and click **Load**.

7 Under Import Action, and on the **Import Column Actions** tab, specify the import actions. (Import actions are usually specified as part of the template, but you can edit them if you wish.)

See "Specifying import actions".

8 Click **Import**.
The **Import Log** tab appears, reporting the result of the import. You can print and save the import log. If rows are discarded or rejected by the import process, you can click **Discarded** or **Rejected** to view, print and save them.

9 If you have more files to import, click **Back** to return to the **Import Control** tab; otherwise, click **Close** to close the dialog box.

# Automated Importing

## About automated importing

Some imports follow an automated process once you have selected the correct template or the appropriate "raw" import table, provided that "Automatically Trigger Imports (St)" is true.

| Automated import | Raw import table |
|---|---|
| "About importing open history" on page 147 Importing open history | Raw Sales Import Data (IMP_RAW_SALES) |
| "About importing customer forecasts" on page 142 Importing customer forecasts | Import Customer Forecast (IMP_RAW_C_FCAST) |
| "About importing net forecasts" on page 145 Importing net forecasts | Import Net Forecast (IMP_RAW_NET) |
| "About importing orders" on page 148 Importing orders | Raw Orders Import Data (IMP_RAW_ORDERS) |
| "About importing stock quantities" on page 152 Importing stock quantities | Import SOH Data (IMP_RAW_STOCK) |
| "About importing BOMs" on page 139 Importing BOMs | Import Of Bill Of Materials (IMP_RAW_BOM) |
| "About importing SBT budgets" on page 152 Importing SBT budgets | Import Of Budgets (IMP_RAW_BUDGETS) |
| "About importing S&&OP budgets" on page 151 Importing S&OP budgets | Import SOP Budget Data (IMP_RAW_SOP_BUDGET) |
| "About importing customers" on page 144 Importing customers | Import Customer Data (IMP_RAW_CUSTOMERS) |
| "About importing customer orders" on page 143 Importing customer orders | Import Order Book Data (IMP_RAW_ORDERBOOK) |
| "About importing Channels" on page 141 Importing Channels | Import Channels (IMP_RAW_CHAN) |
| "About importing Products" on page 150 Importing Products | Import Products (IMP_RAW_PROD) |

| | |
|---|---|
| "About importing Channel Products" on page 140 Importing Channel Products | Import Channel Products (IMP_RAW_CPS) |
| "About importing alternative supplier details" on page 153 Importing alternative suppliers | Import Alternative Supplier Data (IMP_RAW_ALT_SUPPLIER) |

In each case, the data from the import file is initially read into the raw table. Infor Demand Planning then automatically transfers the data into the appropriate "final" table. Rows within these tables are updated or added as appropriate. The raw import table is then cleared. Invalid rows are placed in a corresponding "discard" table, together with an indication of the problem and a timestamp.

Therefore the raw import table always accepts new data, regardless of the required action on the final table.

### Correcting erroneous data

If incorrect data is imported, take care when correcting the error. In some cases you can simply repeat the process using the correct data. This will then overwrite the existing (erroneous) data in the final table. However, the automated import process may be designed to discard duplicate data, in which case the system rejects the second (corrected) import when trying to update the final table, because the affected rows are already populated. In these situations, the final table must be populated directly through by an import that modifies existing rows or, alternatively, all the data in the tables must be cleared and the original process repeated.

Example

As an example, consider the period end procedure where sales data for the month just ended is imported. In this case the data must first be imported into the Raw Sales Import Data table (IMP_RAW_SALES) and then, provided that "Automatically Trigger Imports (St)" is true, automatically transferred and stored in one of three tables:

- Open Monthly History table (OPEN_MONTHLY)
- Open Weekly History table (OPEN_WEEKLY)
- Open Daily History table (OPEN_DAILY)

If the data used is subsequently found to be incorrect then the appropriate table must first be cleared by deleting open history before the correct data can be imported.

See "Deleting open history" on page 169.

## About importing BOMs

### Standard template used

Add BOM

### Tables used

- Import Of Bill Of Materials (IMP_RAW_BOM)
- Discarded Import BOM (DISC_RAW_BOM)
- Bill Of Materials Detail (BOM)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Of Bill Of Materials table automatically updates the Bill Of Materials Detail table. As usual, invalid records are written to the discard table.

New BOMs are listed in the "NEW BOM" exception view. Updated BOMs are listed in the "UPDATED BOM" exception view.

### To correct errors

Re-import data to the Import Of Bill Of Materials table. This overwrites the data in the Bill Of Materials Detail table. However, a parent can have at most one BOM defined for it at the same Channel. If the amended import has the effect of attempting to create a second BOM with the same parent this is rejected by Infor Demand Planning. In this case the original imported BOM would need to be deleted before re-importing. BOMs can be deleted in Replenishment Planner.

### Import file format

| Column | Format | Usage |
|---|---|---|
| CHAN_ID | A20 | Channel ID of the Channel where this BOM is assembled. |
| PARENT_PROD_CD | A30 | Product code of the parent Product. |
| SUB_PROD_CD | A30 | Product code of the subordinate Product. |
| DRAW_QTY | F14.4 | The quantity of the subordinate needed to make one unit of the parent. |
| OFFSET_DAYS | I3 | The (average) number of days needed to assemble the sub-ordinate into the parent. |
| DESCRIPTION | A50 | Description of the BOM. |

The file should be sorted by Channel ID and parental Product code so that all the entries relating to the same BOM are contiguous.

## About importing Channel Products

### Tables used

- Import Channel Products (IMP_RAW_CPS)

- Discarded Imported Channel Products (DISC_RAW_CPS)
- Channel Products (CHAN_PRODS)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Channel Products table automatically populates the Channel Products table.

For a new Channel Product, the remaining fields of the record are populated by default values.

If "Automatically Create Aggregates (St)" is true, Infor Demand Planning also automatically creates corresponding Channel Products at all "higher" Channels in the matrix that is applied to the Product.

As usual, invalid records are written to the discard table. All new records are discarded if "Automatically Create Channel Product (St)" is false. Records are also discarded if the Product does not exist, the Channel does not exist, or the Channel is not part of the Product's matrix.

### To correct errors

Delete data from the raw and discard import tables, then import correct data.

See "Deleting data from the automated import tables" on page 154.

### Import file format

The format of the import file must match the format of the Import Channel Products table:

| Column | Format | Usage |
|---|---|---|
| PROD_CD | A30 | Product code. |
| CHAN_ID | A20 | Channel ID. |
| LOCAL_CD | A30 | Channel-specific Product code. |
| LOCAL_DESCRP | A40 | Channel-specific Product description. |
| C_PRICE | F14.4 | Cost price. |
| INV_CLASS | A3 | Channel-specific ABC class. |
| OPN_STK | F14.4 | Opening stock. |
| DUE_IN_STK | F14.4 | Due-in stock. |
| LD_TIME | I3 | Lead time. |
| PREF_LOT_QTY | F14.4 | Preferred lot quantity. |

## About importing Channels

### Tables used

- Import Channels (IMP_RAW_CHAN)

- Discarded Imported Channels (DISC_RAW_CHAN)
- Channels (CHANNELS)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Channels table automatically populates the Channels table.

For a new Channel, the remaining fields of the record are populated by default values, except for the "Demand Calendar Code (Ct)", "Date Demand Last Updated (Ct)", "Current Period Fiscal (Ct)" and "End Of Current Financial Year (Ct)" fields, which are populated from the record of the Channel identified by the "Control Channel For Stock Posting Date (St)" field.

As usual, invalid records are written to the discard table. All records are discarded if the "Control Channel For Stock Posting Date (St)" field is null.

### To correct errors

Delete data from the raw and discard import tables, then import correct data.

See "Deleting data from the automated import tables" on page 154.

### Import file format

The format of the import file must match the format of the Import Channels table:

| Column | Format | Usage |
|---|---|---|
| CHAN_ID | A20 | Channel ID. |
| CHAN_NAME | A30 | Channel name or description. |

## About importing customer forecasts

### Tables used

- Import Customer Forecast (IMP_RAW_C_FCAST)
- Discard Customer Forecast (DISC_RAW_C_FCST)
- Customer Forecast (CUST_FCST)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Customer Forecast table automatically populates the Customer Forecast table.

As usual, invalid records are written to the discard table.

### To correct errors

Re-import data to the Import Customer Forecast table; this overwrites the Customer Forecast table.

## About importing customer orders

### Tables used

- Import Order Book Data (IMP_RAW_ORDERBOOK)
- Discarded Order Book Entries (DISC_RAW_ORDERBOOK)
- Order Book (ORDER_BOOK)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Order Book Data table automatically populates the Order Book table. As usual, invalid records are written to the discard table.

### To correct errors

Delete data from the raw and discard import tables, then import correct data.

See "Deleting data from the automated import tables" on page 154.

### Import file format

The format of the import file must match the format of the Import Order Book Data table:

| Column | Format | Usage |
|---|---|---|
| ORDERBOOK_REF | I19 | Reference number for this Order Book entry. If a reference is supplied and is already present in the Order Book table, the existing entry is updated. If the reference is not already present, Infor Demand Planning adds a new entry. If this field is blank, Infor Demand Planning generates a new reference and adds a new entry in the Order Book. |
| PROD_CD | A30 | Product code. |
| CHAN_ID | A20 | Channel ID. |
| CUST_CD | A20 | Customer code, identifying the customer. Infor Demand Planning generates these codes when customers are added to |

| | | |
|---|---|---|
| | | the system manually, but they can also be defined by importing customer data.<br>See "About importing customers" on page 144. |
| GOOD_QTY | F14.4 | The original quantity on the order. |
| SHIP_DATE | Date | Projected date that the order should be shipped to the customer. |
| CUST_DUE_DT | Date | Date that the customer requires delivery. |
| PO_NUM | A50 | User-defined purchase order number. |
| USER_ID | A30 | The Infor Demand Planning user ID of the current user. |
| USERSTRING_0 | A250 | User-defined string field #0 |
| USERSTRING_1 | A250 | User-defined string field #1 |
| USERSTRING_2 | A250 | User-defined string field #2 |
| USERSTRING_3 | A250 | User-defined string field #3 |
| USERSTRING_4 | A250 | User-defined string field #4 |

## About importing customers

### Tables used

- Import Customer Data (IMP_RAW_CUSTOMERS)
- Discarded Customers (DISC_RAW_CUSTOMERS)
- Customer (CUSTOMERS)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Customer Data table automatically populates the Customer table. As usual, invalid records are written to the discard table.

### To correct errors

Delete data from the raw and discard import tables, then import correct data.

See "Deleting data from the automated import tables" on page 154.

### Import file format

The format of the import file must match the format of the Import Customer Data table:

| Column | Format | Usage |
|---|---|---|
| CUST_CD | A20 | Customer code. It must be unique, but need not necessarily be in the format used by Infor Demand Planning to generate codes when customers are added manually. |
| CUST_DESC | A40 | Customer description. |
| CHAN_ID | A20 | Channel ID. |
| USER_ID | A30 | The Infor Demand Planning user ID of the current user. |
| USERSTRING_0 | A250 | User-defined string field #0 |
| USERSTRING_1 | A250 | User-defined string field #1 |
| USERSTRING_2 | A250 | User-defined string field #2 |
| USERSTRING_3 | A250 | User-defined string field #3 |
| USERSTRING_4 | A250 | User-defined string field #4 |

## About importing net forecasts

### Standard templates used

Net Forecast Import

### Tables used

- Import Net Forecast (IMP_RAW_NET)
- Discard Net Forecast (DISC_RAW_NET)
- Market Intelligence (MARKET_INTEL) and Market Intelligence Header (MARKET_INTEL_HD)

### Effect of import

Adds new, or adjusts existing, E-type market intelligence to make the net forecast match the imported values. Existing E-type MI before or after the imported data may be deleted according to whether you specify start and end dates, and depending on whether the "Remove MI On Import (Ct)" field is true or false.

See "Examples of importing net forecasts".

As usual, invalid records are written to the discard table.

### To correct errors

Re-import data to the Import Net Forecast table; this adds additional E-type MI to re-adjust the values in the Market Intelligence and Market Intelligence Header tables.

### Import file format

The format of the import file must match the format of the Import Raw Net Forecast table:

| Column | Format | Usage |
|---|---|---|
| PROD_CD | A30 | Product code. |
| CHAN_ID | A20 | Channel ID. |
| PERIODICITY | A1 | Y = Yearly data M = Monthly data W = Weekly data (only for weekly-controlled databases) |
| STARTDATE | Date | Period end date of the first period's data. If specified, Infor Demand Planning deletes or retains existing E-type MI before this date depending on whether the "Remove MI On Import (Ct)" field is true or false. If omitted, Infor Demand Planning uses the period end date of the first forecast period and so does not delete any MI. |
| ENDDATE | Date | Period end date of the last period's data. If specified, Infor Demand Planning deletes all existing E-type MI after this date. If omitted, Infor Demand Planning uses the period end date of the last forecast period and so does not delete any MI. |
| PERIOD_1 | F14.4 | Net forecast for period 1. |
| PERIOD_2 | F14.4 | Net forecast for period 2. |
| … | … | … |
| PERIOD_212 | F14.4 | Net forecast for period 212. Infor Demand Planning ignores yearly or monthly data beyond the "Monthly Forecast Horizon (St)". |
| DESCRP | A40 | Description of the market intelligence. If omitted, Infor Demand Planning uses "MI generated from Net Forecast". |

**Note:**

- Importing a zero net forecast for any period means that the existing net forecast for that period is to be kept unchanged.
- Weekly period end dates must be a multiple of 7 days starting from the monthly period end date.
- When importing yearly data, the imported annual net forecast for the first year is split amongst the remaining number of monthly periods up to the end of the current fiscal year, in proportion to their net forecast before the import. The subsequent annual net forecast values are spread across the number of forecast periods in the fiscal year (either 12 or 13, as defined by "Forecast Periods Per Year (St)") in proportion to their net forecast before the import.
- When importing monthly data into a weekly-controlled database, the monthly net forecast is split into weekly amounts according to each Channel Product’s month-to-weeks interpolation vector ("Month To Week Interpolation Code (CPt)").

- This import function does not balance the changed net forecasts throughout the affected matrices.

## About importing open history

Open history is sales or demand data imported into Infor Demand Planning during the current period. This data does not become committed as actual history until the database is rolled forward. If necessary, you can import open history more than once during the current period; in this case, the history you import is assumed to be cumulative (that is, it overwrites the existing open history).

### Standard templates used

- Add Monthly Sales History
- Add Monthly Demand History
- Add Monthly Adj Demand History
- Add Weekly Sales History
- Add Weekly Demand History
- Add Weekly Adj Demand History
- Add Daily Sales History
- Add Daily Demand History
- Add Daily Adj Demand History

### Tables used

- Raw Sales Import Data (IMP_RAW_SALES)
- Raw Sales Discard Data (DISC_RAW_SALES)
- Open Monthly History (OPEN_MONTHLY)
- Open Weekly History (OPEN_WEEKLY)
- Open Daily History (OPEN_DAILY)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Raw Sales Import Data table automatically populates either the Open Monthly History, Open Weekly History or Open Daily History table.

As usual, invalid records are written to the discard table. Records that attempt to import open history for a Channel which does not have the Store History behavior are written to the discard table.

See "About Channel behaviors" on page 72.

Records relating to a Channel Product are also discarded if:

- Weekly data is being imported, and "Accumulate Daily History To Weeks (Ct)" is true.

- Monthly data is being imported, and either "Accumulate Daily History To Months (Ct)" or "Accumulate Daily History To Weeks (Ct)" is true.

### To correct errors

Delete the open history. Re-import the data to the Raw Sales Import Data table.

See "Deleting open history" on page 169.

### Import file format

The format of the import file must be as follows:

| Column | Format | Usage |
|---|---|---|
| PROD_CD | A30 | Product code. |
| CHAN_ID | A20 | Channel ID. |
| DATESTAMP | Date | Datestamp for this data |
| HIST_TYPE | I1 | 1 = Sales 2 = Demand 3 = Adjusted Demand |
| PERIOD_TYPE | I1 | 0 = Monthly data 1 = Weekly data (only for weekly-controlled databases) 2 = Daily data |
| VALUE | | The monthly, weekly or daily data point |

**Note:**

- When importing open history for a predecessor CP in a predecessor/successor relationship, make sure that the correct history types are available for eventual transfer to the successor CP.

## About importing orders

### Standard template used

Add Orders

### Tables used

- Raw Orders Import Data (IMP_RAW_ORDERS)
- Raw Orders Discard Data (DISC_RAW_ORDERS)
- Order (ORDERS)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Raw Orders Import Data table automatically populates the Orders table with a mixture of the imported data and additional values derived from that data. As usual, invalid records are written to the discard table.

### To correct errors

Re-import data to the raw table. This adds additional orders, or changes existing ones, in the Orders table. Any redundant orders from the erroneous import must be deleted in Replenishment Planner.

See "Deleting orders" on page 413.

### Import file format

The format of the import file should match the format of the Add Orders template:

| Column | Format | Usage |
|---|---|---|
| PROD_CD* | A30 | Product code. |
| CHAN_ID* | A20 | Channel ID. |
| GOOD_QTY* | F14.4 | The quantity on the order. |
| DUE_DATE* | Date | The date that the order is expected to arrive at this Channel. |
| ORDER_REF | I10 | A unique number allocated automatically by Infor Demand Planning to each order. It is required only when updating an existing order, or deleting an order with a null Good Quantity. |
| TYPE | I1 | 0 = Recommended order 1 = Open order 2 = Closed (archived) order 3 = Independent order |
| ORIG_QTY | F14.4 | If this is null, and there is no Order Reference, it is set to equal the Good Quantity. |
| RECEIVED_DATE | Date | To be completed when the order is received at this Channel. |
| PO_NUM | A50 | Optional order reference number used by systems outside Infor Demand Planning. |
| SOURCE_CD | A20 | Supplier code if the item is sourced externally. |
| SOURCE_CHAN | A20 | The source Channel ID if the item is sourced internally.<br>This is combined with the Product Code to get the source's Channel Product Reference for use in the Orders table. |
| STATUS | I1 | 0 = Normal order 1 = Held order |
| USER_ID | A30 | The Infor Demand Planning user ID of the current user. |
| USERSTRING_0 | A250 | User-defined string field #0 |
| USERSTRING_1 | A250 | User-defined string field #1 |
| USERSTRING_2 | A250 | User-defined string field #2 |
| USERSTRING_3 | A250 | User-defined string field #3 |
| USERSTRING_4 | A250 | User-defined string field #4 |
| SCHED_DATE | Date | Schedule date |
| USED_CAP | I1 | Whether this order is used in capacity calculations:<br>0 = False 1 = True |

**Note:**

- Fields marked with an asterisk * are required fields.
- The Orders table has space for up to five optional user-defined alphanumeric fields. These fields can be specified in any order.

### Orders table fields that are not usually imported

The automated import process calculates or otherwise derives the values of the following Orders table fields using the data in the import file.

- "Channel Product Reference (Ot)"
- "Release Date (Ot)"
- "Estimated Need Date (Ot)"
- "Creation Date (Ot)"
- "Ship Date (Ot)"
- "Schedule Date (Ot)"
- "Safety Stock Target (Ot)"
- "Critical Flag (Ot)"
- "Days Cover (Ot)"

## About importing Products

### Tables used

- Import Products (IMP_RAW_PROD)
- Discarded Imported Products (DISC_RAW_PROD)
- Products (PRODUCTS)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Products table automatically populates the Products table. For a new Product, the remaining fields of the record are populated by default values.

As usual, invalid records are written to the discard table.

### To correct errors

Delete data from the raw and discard import tables, then import correct data.

See "Deleting data from the automated import tables" on page 154.

### Import file format

The format of the import file must match the format of the Import Products table:

| Column | Format | Usage |
|---|---|---|
| PROD_CD | A30 | Product code. |
| PROD_DESCRP | A40 | Product description. |
| STD_COST | F14.4 | Budgeted standard cost. |
| SELL_PRICE | F14.4 | Budgeted selling price. |
| CLASS | A3 | ABC class. |

## About importing S&&OP budgets

### Tables used

- Import SOP Budget Data (IMP_RAW_SOP_BUDGET)
- Discard SOP Budget Data (DISC_RAW_SOP_BUDGET)
- S&OP Sales Budgets/Actuals(SOP_SALES_BDATS)
- S&OP Requirements Budgets/Actuals(SOP_REQS_BDATS)
- S&OP Inventory Budgets/Actuals(SOP_INV_BDATS)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the raw table automatically updates the relevant SOP Budgets/Actuals table. As usual, invalid records are written to the discard table.

### To correct errors

Re-import data to the raw table; this overwrites the relevant S&OP Budgets/Actuals table.

### Import file format

The format of the import file must match the format of the raw table:

| Column | Format | Usage |
|---|---|---|
| PROD_CD | A30 | Product code. |
| CHAN_ID | A20 | Channel ID. |
| BUDGET_TYPE | A1 | S = Sales (for the SOP_SALES_BDATS table) R = Requirements (for the SOP_REQS_BDATS table) I = Inventory (for the SOP_INV_BDATS table) |
| BUDGET_CLASS | N1 | 1 = Budget 1 2 = Budget 2 3 = Budget 3 4 = Budget 4 |
| BUD_1ST_PD | Date | Period end date of the first period's data. This enables a budget to be imported part way through a year. |

| | | |
|---|---|---|
| PERIOD_1 | F14.4 | Budget data for period 1. |
| PERIOD_2 | F14.4 | Budget data for period 2. |
| … | … | … |
| PERIOD_24 | F14.4 | Budget data for period 24. |

**Note:**

- A zero budget value for any period means that the existing value for that period is to be kept unchanged.

## About importing SBT budgets

### Tables used

- Import Of Budgets (IMP_RAW_BUDGETS)
- Discarded Import Budgets (DISC_RAW_BUDGETS)
- SOP Plans (SOP_PLANS)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Of Budgets table automatically updates the SOP Plans table. As usual, invalid records are written to the discard table.

### To correct errors

Re-import data to the raw table; this overwrites the SOP Plans table.

## About importing stock quantities

### Tables used

- Import SOH Data (IMP_RAW_STOCK)
- Discarded SOH Data (DISC_RAW_STOCK)
- Channel Product (CHAN_PRODS)

### Effect of import

Provided that Automatically Trigger Imports (St) is true, importing data into the Import SOH Data table automatically updates the "Date Stock Last Updated (Ct)", "Opening Stock (CPt)" and "Due In Stock (CPt)" fields. As usual, invalid records are written to the discard table.

### To correct errors

Re-import data to the Import SOH Data table; this overwrites the data in the Channels and Channel Products tables.

### Import file format

| Column | Format | Usage |
|---|---|---|
| CHAN_ID | A20 | Channel ID. |
| DATESTAMP | Date | Datestamp for this data; that is, the date that stock was last updated for this Channel. |
| PROD_CD | A30 | Product code. |
| STOCK_ON_HAND | F14.4 | The latest stock quantity. At period end, this represents the opening stock for the following period. |
| STOCK_DUE_IN | F14.4 | The total quantity of stock on currently outstanding incoming orders. (This value is often zero, because it is usually possible to calculate it from the good quantities of all incoming open orders.) |

## About importing alternative supplier details

### Tables used

- Import Alternative Supplier Data (IMP_RAW_ ALT_SUPPLIER)
- Discarded Alternative Supplier Data (DISC_RAW_ ALT_SUPPLIER)
- Alternative Supplier (ALT_SUP_TRANS)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Import Alternative Supplier Data table automatically populates the Alternative Supplier table. As usual, invalid records are written to the discard table.

### To correct errors

Delete data from the raw and discard import tables, then import correct data.

See "Deleting data from the automated import tables" on page 154.

### Import file format

The format of the import file must match the format of the Import Alternative Supplier Data table:

| Column | Format | Usage |
|---|---|---|

| | | |
|---|---|---|
| LOADER_REF | I10 | Unique loader reference number for import. |
| USER_ID | A30 | The Infor Demand Planning user ID of the current user. |
| PROD_CD | A30 | Product in which to define the supplier. |
| CHAN_ID | A20 | Channel in which to define the supplier. |
| SUP_CD | A20 | Valid supplier. |
| OFFSET | F14.4 | Supplier lead time in days for this transport type and preference index. |
| PREF_INDEX | I3 | Preference or priority index that specifies the order of preference when choosing a supplier (1 being the highest preference). |
| MIN_BUY QTY | F14.4 | Minimum order quantity for this supplier link. |
| INC_VALUE | F14.4 | Incremental quantity for this supplier link. |
| TRANS_TYPE | A3 | Valid value in the TRANS_TYPES table. |

## Deleting data from the automated import tables

Infor Demand Planning's automated import feature works by importing records into "raw" tables, then moving any invalid records to "discard" tables before adding or updating the valid records in the target database tables. From time to time, you may need to clear these raw and discard tables.

1 In Database Administration, select **Product Admin > Delete Import/Discard Raw Tables**.
The Delete Data from Discard and Import Raw Data Tables dialog box is displayed.

2 On the **Select Data to View or Delete Data** tab, select the required table.

3 To view the selected table, click **View**.

4 To delete the selected table, click **Delete**, and then click **Yes** to confirm.
Repeat as required.

5 When you are finished, click **Close**.

# Exporting

## More about exporting

There are three ways of specifying the data to be exported:

- Select the tables and columns you want, including how multiple tables are joined. Optionally, you can also specify how the data is to be sorted and filtered, and the arrangement of the columns in the export file.
- Load a standard or a previously-saved export template. A template can specify the tables, columns, table joins, sorting, filtering and column arrangements.
- Type, or load from a file, the necessary SQL expression.

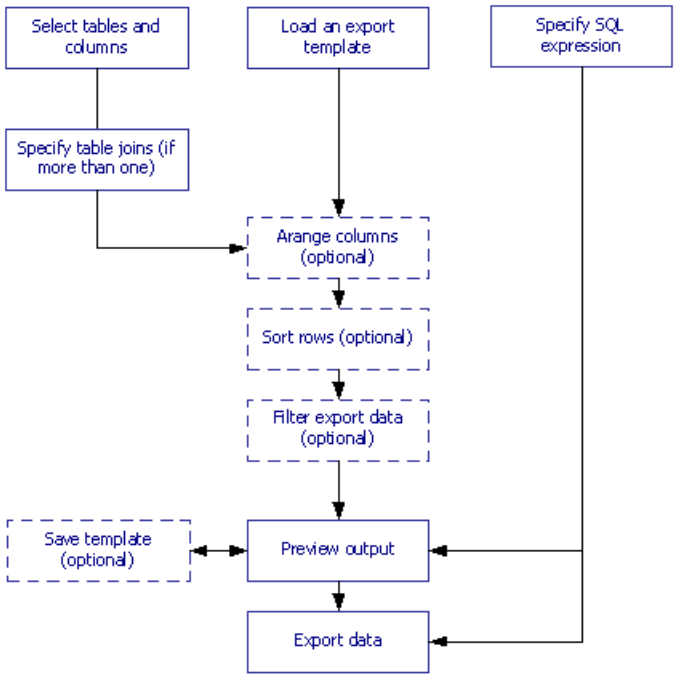
These three methods can be mixed. For example, you can load a template, change how the data is sorted, then edit the resulting SQL expression.

In all cases you can restrict the data to only the currently-selected Products and Channel Products, rather than all the data in the database.

### Export templates

A template may be a created as a private, public or system template. You can load any public template. You can load a private template if you are its owner or a steward. You can load a system template only if you are a steward.

See "About import/export templates" on page 127.



## About export file types

Infor Demand Planning supports the following file types for data exported from database tables. Some file types include headers; in these cases, the first line of the file contains the Oracle names of the exported table columns/fields.

| File type | Can be opened with … | Notes |
|---|---|---|
| CSV | MS Excel | Comma-separated values. |
| CSV with headers | MS Excel | Comma-separated values. |
| Dbase 2 | dBase, MS Excel | |
| Dbase 3 | dBase, MS Excel | |
| DIF | MS Excel | Data interchange format. An ASCII file containing only integer values. |
| DIS | Infor Demand Planning | Comma-separated values. |
| Excel | MS Excel | |
| Excel with headers | MS Excel | |
| Excel 5 | MS Excel | |
| Excel 5 with headers | MS Excel | |
| EXP | Infor Demand Planning | Comma-separated values. |
| HTML Table | Any HTML editor. | |
| IMP | Infor Demand Planning | Comma-separated values. |
| Powersoft Report | Sybase Powersoft | .PSR file name extension. |
| SQL | TOAD, Sybase InfoMaker, SQL, MS Excel | |
| SYLK | MS Excel, MS Graph | Symbolic Link format. |
| SYLK with headers | MS Excel, MS Graph | Symbolic Link format. |
| Text | Any text editor | Tab-separated. |
| Text with headers | Any text editor | Tab-separated. |
| WKS | Lotus, MS Excel, MS Graph | Lotus 1-2-3 format. |
| WKS with headers | Lotus, MS Excel, MS Graph | Lotus 1-2-3 format. |
| WK1 | Lotus, MS Excel, MS Graph | Lotus 1-2-3 format. |
| WK1 with headers | Lotus, MS Excel, MS Graph | Lotus 1-2-3 format. |
| WMF | Most graphics programs | Windows metafile. |

## Exporting data by selecting tables and columns

1. In Database Administration, select **Product Admin > Export / Template maintenance**.
   The Export / Template Maintenance dialog box is displayed.
2. On the **Table and Column Selection** tab, select the **Preselected Data** check box if you want to export only data relating to the currently-selected Products and Channel Products. Otherwise, all data is eligible for export.

   The **Preselected Data** check box is only available if you have the necessary access privilege.
3. Select the tables and columns that you want to export.
4. If you select more than one table, click **Join** and then specify how the tables are joined.

   See "Joining tables".
5. Optionally, you can click **Arrange** and then specify the arrangement of the columns.

   See "Arranging columns".
6. Optionally, you can click **Sort** or **Filter** and then specify how the exported data is to be sorted or filtered.
7. Click **Verify** to test the selection, then click **Preview**.
8. On the **Preview** tab, click **Export**. The Save As dialog box is displayed.

   On the **Preview** tab, you can print the data as well as export it.
9. In the **File name** box, type a name for the exported file.
10. In the **Save as type** box, select the data format to be used.

    See "About export file types" on page 156.
11. Click **Save**, then click **OK** to acknowledge.

## Exporting data by loading a template

1. In Database Administration, select **Product Admin > Export / Template maintenance**.
   The Export / Template Maintenance dialog box is displayed.
2. On the **Table and Column Selection** tab, select the **Preselected Data** check box if you want to export only data relating to the currently-selected Products and Channel Products. Otherwise, all data is eligible for export, depending on the template.

   The **Preselected Data** check box is only available if you have the necessary access privilege.
3. Click **Load**.
4. On the **Maintain Templates** tab, select the template you want and click **Load**.
   Once you have loaded a template, you can edit it as necessary.
5. On the **Table and Column Selection** tab, click **Verify** to test the selection, then click **Preview**.
6. On the **Preview** tab, click **Export**. The Save As dialog box is displayed.

   On the **Preview** tab, you can print the data as well as export it.
7. In the **File name** box, type a name for the exported file.
8. In the **Save as type** box, select the data format to be used.

   See "About export file types" on page 156.

9 Click **Save**, then click **OK** to acknowledge.

## Exporting data by using an SQL expression

1 In Database Administration, select **Product Admin > Export / Template maintenance**.
The Export / Template Maintenance dialog box is displayed.

2 On the **Table and Column Selection** tab, select the **Preselected Data** check box if you want to export only data relating to the currently-selected Products and Channel Products. Otherwise, all data is eligible for export.

The **Preselected Data** check box is only available if you have the necessary access privilege.

3 Click **SQL**.

4 On the **SQL Control** tab, do one of the following:

- Edit the SQL expression directly in the **Export data SQL** syntax box.
- Click **Open** to select and load a previously-saved SQL file.

Click **Save** if you want to save the contents of the **Export data SQL** syntax box to an external file.

5 Click **Execute**.

6 On the **Preview** tab, click **Export**. The Save As dialog box is displayed.

On the **Preview** tab, you can print the data as well as export it.

7 In the **File name** box, type a name for the exported file.

8 In the **Save as type** box, select the data format to be used.

See "About export file types" on page 156.

9 Click **Save**, then click **OK** to acknowledge.

# Discount Factors

## About discount factors

Discount factors, also known as smoothing rates, are parameters that are used in the BATS forecasting calculations. They determine how much weight or emphasis the calculations put on recent data.

See "About Bayesian theory and the Dynamic Linear Model" on page 209.

Each discount factor can have a value of between 0 and 1. A value of 1 represents a static model in which all data points are given equal weight; a value closer to 0 gives more weight to recent data.

In order to consistently apply these discount factors to a range of Channel Products, you can define sets of factors in the Database Administration module. You can then apply a particular set to selected Channel Products by editing the "Discount Factor Code (CPt)" field.

Each set comprises eight discount factors; four standard factors and four matching intervention factors:

| Standard factors | Intervention factors |
|---|---|
| Trend Discount factor to be applied to the trend elements of the forecast (level and growth) when the forecast is created, or revised at period end. The default value of 1 represents a static model. | Intervention Trend Rapid discount factor which will be applied to revise the trend elements of the forecast (level and growth). It should typically be set lower than the standard discount factor. |
| Seasonal Discount factor to be applied to the seasonal model coefficients when the forecast is created, or revised at period end. The default value of 1 represents a static model. | Intervention Seasonal Rapid discount factor to be applied to revise the seasonal coefficients of the forecast. It should typically be set lower than the standard discount factor. |
| Variance Discount factor to be applied to the variance when the forecast is created, or revised at period end. The default value of 1 represents a static model. | Intervention Variance Rapid discount factor which will be applied to revise the variance estimate of the forecast. It should typically be set lower than the standard discount factor. |
| Regression Discount factor to be applied to the independent variables used in causal modeling during the dynamic linear modeling (DLM) process. | Intervention Regression Rapid discount factor which will be applied to independent variables used in causal modeling during the DLM process. |

Intervention factors can be applied in two circumstances:

- If the item has a tracking signal. The intervention factors are applied between the detected step change and the point at which the tracking signal is issued. The maximum number of periods used to detect tracking signals is defined by the "Run Length Limit (St)" field, and thus that field acts as a maximum limit to the number of periods to be used along with this rapid discount factor to revise the forecast.
- If the corresponding threshold is broken. "Scale Inflation Factor (St)" stores a factor, which is used to develop an alternative model to monitor the increase in the estimate of variance. This comparison of the two models provides a Bayes factor which is compared to the value held in the "Scale Inflation Threshold (St)" field, thus providing a tracking signal for items where there is believed to be a significant change in the variance over a period of months.

## Default sets of discount factors

Infor Demand Planning comes with (at least) two default sets of discount factors:

- Default static settings ("Discount Factor Code (CPt)" = 0)

These are the default factors for Normal Products.

| | | | |
|---|---|---|---|
| Trend | 1.0 | Intervention Trend | 1.0 |
| Seasonal | 1.0 | Intervention Seasonal | 1.0 |
| Variance | 1.0 | Intervention Variance | 1.0 |
| Regression | 1.0 | Intervention Regression | 1.0 |

- Default SMP settings ("Discount Factor Code (CPt)" = 1)

These are the default factors for Slow Moving Products.

| | | | |
|---|---|---|---|
| Trend | 0.6 | Intervention Trend | 1.0 |
| Seasonal | 1.0 | Intervention Seasonal | 1.0 |
| Variance | 0.6 | Intervention Variance | 1.0 |
| Regression | 1.0 | Intervention Regression | 1.0 |

These sets of discount factors can be automatically applied when a model is fitted to a Channel Product in the Demand Forecaster module, if the process detects that the status of the item has changed. If an SMP is changed to a Normal product, its "Discount Factor Code (CPt)" is set to 0; conversely, if a Normal Product is changed to an SMP, its "Discount Factor Code (CPt)" is set to 1.

## Adding a set of discount factors

1. In Database Administration, select **DB Admin > System > Discount Factors**.
2. In the Discount Factors dialog box, click **Add**.
   A second Discount Factors dialog box is displayed.
3. In the **Description** field, specify a name for this set of discount factors.
4. Specify the values for each discount factor in the set.

## Editing a set of discount factors

1. In Database Administration, select **DB Admin > System > Discount Factors**.
   The Discount Factors dialog box shows the existing sets of discount factors.
2. Click the set you want to edit, then click **Edit**.
   A second Discount Factors dialog box is displayed.
3. Edit the name of this set and the values of each discount factor in the set, as required.

## Deleting a set of discount factors

1. In Database Administration, select **DB Admin > System > Discount Factors**.
   The Discount Factors dialog box shows the existing sets of discount factors.
2. Click the set you want to delete.
3. Click **Delete**, then **Yes** to confirm.

## Applying a set of discount factors to a Channel Product

You apply a set of factors to one or more channel products by editing the Channel Products table.

1 In Database Administration, select the products and channels that you want to edit.
   See "About selecting Products and Channels" on page 35.
2 Select **Product Admin > Channel Products**.
   The Channel Products dialog box shows an editable table.
3 In the **Report Type** box, select **Forecasting**.
4 Scroll the right-hand pane until the **Discount Factor Code** column is visible.
5 In the **Discount Factor Code** cells of the channel products that you want to edit, select the required set of discount factors.
   If the Channel Products dialog box only shows the channel products that you want to edit, you can vertically edit all the cells in the **Discount Factor Code** column at once. See "Editing the Channel Products table" on page 116.

# History

## About history

To begin the forecasting process, the system requires historical data for each Channel Product. You can import history using the periodicity that is most convenient for your business. If daily or weekly data is used, Infor Demand Planning aggregates it into monthly amounts in order to calculate the statistical forecast.

Ideally, demand history should be used as this provides the most accurate record of what the customer actually wanted. However, capturing real demand data is a difficult task and consequently many businesses use invoiced sales as a second-best approximation.

Daily data may be stored for up to 159 weeks, weekly for up to 212 weeks and monthly for up to 120 months.

History may be stored in integer or decimal format. This decision affects the whole database as decimal format requires more disk space.

### History types

Three types of history are stored in the database:

- Sales history

Sales history represents what was actually sold. However, this is not always a reliable indicator of demand. For example, if stock runs out, this is likely to lower the sales figures artificially. And when stock becomes available gain, abnormally high sales may be recorded as backorders are cleared. Because this is a record of actual sales, this type of history should not normally be edited. It is used mostly for reporting purposes.

- Demand history

Demand is defined as "What the customer wanted, when the customer wanted it." Demand history is often difficult to record. It should represent what would have been sold in each period if there had been stock available. If there is no record of demand history, Infor Demand Planning allows you to copy data from the sales history.

- Adjusted demand history

Over time, it is often possible to build a record of demand stored alongside sales history. For instance, if an business has knowledge of an incident which artificially affected sales (such as the stock-out situation described above) it may be best to copy the recorded sales or demand history and make manual adjustments that reflect what happened. This history is called adjusted demand and is the only history that should be edited. Adjusted demand is used for generating the demand forecast.

Another example where demand and adjusted demand may be different would be promotional demand on a non-standard pack added to the demand of the standard item (which may or may not have been selling at the same time). Other possibilities include permanent forecast groups, where the parent item actually has no demand of its own but simply records the total demand of all members within that group.

### Masking history

You can mask individual periods of adjusted demand if you judge them to be unrepresentative and likely to falsify the statistical forecast. A forecast model is then produced from the non-masked adjusted demand. (Alternatively, the adjusted demand history may be edited to give a more "realistic" pattern of demand.)

**Note:**

- You can copy one type of history (for example, sales history) to another type of history (for example, demand history) for one or all of the currently-selected Channel Products.
- Only the most recent 65 monthly periods of history is readily accessible in Infor Demand Planning, because it is used for the forecast calculations. Any earlier periods of history are archived within the database, and can be exported if required.

## About aggregating history

To allow Infor Demand Planning to work more quickly, history is usually not recorded at aggregate Channels, unless such Channels are explicitly given the Store History behavior.

This means, for example, that it is not normally possible to export history for Channel Products at aggregate Channels.

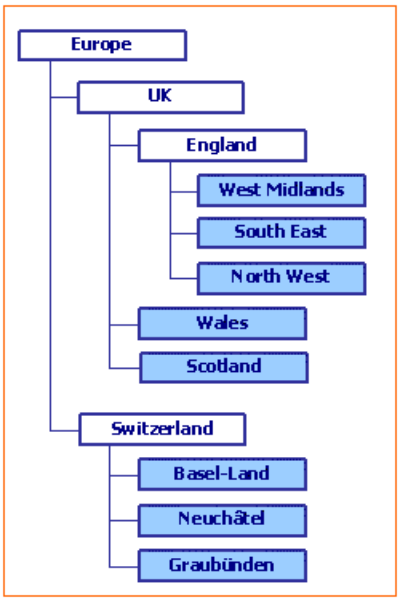
However, Infor Demand Planning does allow you to populate the Daily History, Weekly History or Monthly History table for aggregate Channel Products by aggregating the history from their subordinate Channels.

This feature enables you to aggregate sales, demand and adjusted demand history to Channels that do not have the Store History behavior, from all subordinate Channels that do not have the Exclude From History Pass Up behavior, for a given selection of Products.

See "About Channel behaviors" on page 72.

## Example 1

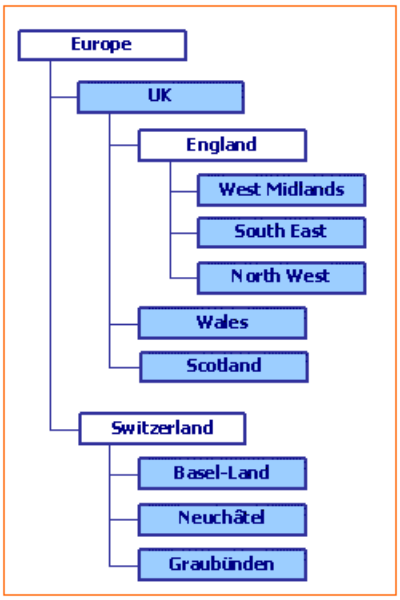
In the following example matrix, the shaded Channels have the Store History behavior; the non-shaded Channels do not. Assuming that no Channels have the Exclude From History Pass Up behavior, history can be aggregated to all the non-shaded Channels.




However, if England were given the Exclude From History Pass Up behavior, the aggregated history at UK would consist only of the aggregated history from Wales and Scotland.

## Example 2

In this slightly modified example, the UK Channel has the Store History behavior, which means that history is stored here in its own right and is not aggregated from below. In this case, the aggregated history at the Europe Channel is the stored history at UK plus the aggregated history at Switzerland.




## Renaming history types

With Infor Demand Planning, three types of history can be stored with these initial names:

- Sales
- Demand
- Adjusted Demand

Mask-to-mask unrepresentative periods of adjusted demand are also stored.

You can change these names, but not the underlying meaning of the data that they represent.

**Note:** You are unlikely to need to use this feature.

1 In Database Administration, select **DB Admin > System > History Options**.
The History Options dialog box shows the types of history.

2 To change the name of a history type, click its **Description** cell, specify a new name or description, then click outside the cell.

## Copying history types for all the selected channel products

You can copy one type of history to another type of history, for example, from sales to demand.

1 In Database Administration, select the products and channels that you want to edit.
See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Copy History**.

3 In the Copy History dialog box, specify this information:

**History Periods**
Click **Monthly** or **Weekly**. The **Weekly** option is available only if the database has a weekly periodicity. See "About monthly- and weekly-controlled databases" on page 67.

**History to Copy**
Click **All Currently Selected**.

4 In the panel at the bottom of the dialog box, click a type of history and drag it where you want to copy it.

5 Click **Yes** to confirm.

> **Caution:** This is a powerful feature. Be careful not to overwrite history by mistake.

All the periods of the selected history type are copied for all channel products.

History is copied within the channel products.

If you want to copy history between the channel products, use the Alternate History function in Demand Forecaster.

## Copying history types for one channel product

You can copy one type of history to another, for example, from sales to demand. You can also edit history before or after you copy it.

1 In Database Administration, ensure that the channel product that you want to edit is among the currently selected channel products.
See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Copy History**.

3 In the Copy History dialog box, specify this information:

**History Periods**
Click **Monthly** or **Weekly**. The **Weekly** option is available only if this is a weekly-controlled database.
See "About monthly- and weekly-controlled databases" on page 67.

**History to Copy**
Click **Individual Selection**.

**Product Code and Channel Code**
In the lists, select the channel product that you want to edit.

The panel at the bottom of the dialog box shows an editable table of historical data for each monthly or weekly period. The first period or week is the oldest historical period, the second period or week is the next oldest, and so on.

4 You can edit any of the history values that are displayed in blue:

- To edit a history value, double-click its cell, specify a new value and click outside the cell.

- To remove all history of a particular type, click its row, click **Clear**, then **Yes** to confirm.

5 Click the row that contains the type of history that you want to copy and drag it where you want to copy it.

6 Click **Yes** to confirm.

> **Caution:** This is a powerful feature. Be careful not to overwrite history by mistake.

All periods of the selected history type are copied for the selected channel product.

History is copied to another type for the same channel product.

If you want to copy history between channel products, use the Alternate History function in Demand Forecaster. When editing the forecast in Demand Forecaster, you can also edit history.

## Aggregating history

1 In Database Administration, select the products that you want to aggregate.
See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Aggregate History**.

3 In the Aggregate History dialog box, specify this information:

**History Types**
Select the types of history that you want to aggregate.

**Periodicity**
Specify whether you want to aggregate history in daily, weekly or monthly amounts. The periodicity of the database determines which of these options are available.

4 To start the process, click **OK**.

5 When the process is complete, click **Close**.

# Open History

## About open history

Open history is sales or demand data imported into Infor Demand Planning during the current period. This data does not become committed as actual history until the database is rolled forward at period end.

Infor Demand Planning's automated importing feature is used to import data into the Raw Sales Import Data table and then, provided that "Automatically Trigger Imports (St)" is set, automatically transfer it to the appropriate database table:

- Open Monthly History table
- Open Weekly History table
- Open Daily History table

While data is stored in these tables – that is, after being imported but before rolling the database forward – you can edit it or, if necessary, delete it.

See "About automated importing" on page 138.

When the database is rolled forward, data in these tables is transferred to the corresponding history table:

- Monthly History table
- Weekly History table
- Daily History table

For items in a predecessor/successor relationship, the predecessor's open history is also copied to the successor's history at period end. When you set up the relationship, you specify what types of history to transfer (typically, only demand). You must therefore ensure that you have imported this type of open history for the predecessor before period end.

See "About predecessors/successors" on page 283.

**Note:**

- Open history is sometimes referred to as "current demand".
- If you put a value in an item's "Adjusted Monthly Demand (CPt)" field, this overrides the open monthly adjusted demand at period end.

# About importing open history

Open history is sales or demand data imported into Infor Demand Planning during the current period. This data does not become committed as actual history until the database is rolled forward. If necessary, you can import open history more than once during the current period; in this case, the history you import is assumed to be cumulative (that is, it overwrites the existing open history).

### Standard templates used

- Add Monthly Sales History
- Add Monthly Demand History
- Add Monthly Adj Demand History
- Add Weekly Sales History

- Add Weekly Demand History
- Add Weekly Adj Demand History
- Add Daily Sales History
- Add Daily Demand History
- Add Daily Adj Demand History

### Tables used

- Raw Sales Import Data (IMP_RAW_SALES)
- Raw Sales Discard Data (DISC_RAW_SALES)
- Open Monthly History (OPEN_MONTHLY)
- Open Weekly History (OPEN_WEEKLY)
- Open Daily History (OPEN_DAILY)

### Effect of import

Provided that "Automatically Trigger Imports (St)" is true, importing data into the Raw Sales Import Data table automatically populates either the Open Monthly History, Open Weekly History or Open Daily History table.

As usual, invalid records are written to the discard table. Records that attempt to import open history for a Channel which does not have the Store History behavior are written to the discard table.

See "About Channel behaviors" on page 72.

Records relating to a Channel Product are also discarded if:

- Weekly data is being imported, and "Accumulate Daily History To Weeks (Ct)" is true.
- Monthly data is being imported, and either "Accumulate Daily History To Months (Ct)" or "Accumulate Daily History To Weeks (Ct)" is true.

### To correct errors

Delete the open history. Re-import the data to the Raw Sales Import Data table.

See "Deleting open history" on page 169.

### Import file format

The format of the import file must be as follows:

| Column | Format | Usage |
|---|---|---|
| PROD_CD | A30 | Product code. |
| CHAN_ID | A20 | Channel ID. |
| DATESTAMP | Date | Datestamp for this data |

| | | |
|---|---|---|
| HIST_TYPE | I1 | 1 = Sales 2 = Demand 3 = Adjusted Demand |
| PERIOD_TYPE | I1 | 0 = Monthly data 1 = Weekly data (only for weekly-controlled databases) 2 = Daily data |
| VALUE | | The monthly, weekly or daily data point |

**Note:**

- When importing open history for a predecessor CP in a predecessor/successor relationship, make sure that the correct history types are available for eventual transfer to the successor CP.

## Editing open history

1 In Database Administration, select the products and channels that you want to edit.
See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Current Demand** and select one of these options:

- **Monthly**
- **Weekly**
- **Daily**

When editing open monthly adjusted demand, you can also edit the Adjusted Monthly Demand (CPt). See "Adjusted Monthly Demand (CPt)".

The Monthly, Weekly, or Daily Current Demand dialog box is displayed.

3 In the upper panel of the dialog, select the type of history you want to edit.
The lower panel in the dialog box shows an editable table of the open history of the selected type for each of the currently selected channel products. If the channel products have no open history of the selected type, the panel is empty. You can edit any of the values that are displayed in blue.

4 To edit a value, click its cell, specify a new value, then click outside the cell.

5 To save changes, select **Edit > Save Changes**. To discard unsaved changes, select **Edit > Re-retrieve Data**.

You can use the dialog box's toolbar instead of the **Edit** menu.

When you select a different type of history, you are prompted to save unsaved changes.

## Deleting open history

1 In Database Administration, select **Product Admin > Current Demand > Remove Open History**.

2 In the Remove Open History dialog box, select the tables from which you want to remove open history:

- Open Monthly History table
- Open Weekly History table

- Open Daily History table

3 Specify the data that you want to remove:

- All the data in the selected tables
- Only the data that is relating to the current selection of channel products

4 If you want to remove only certain types of history, or only history prior to a specified date, click **More**, then select the types of history or specify the date.

You cannot delete particular weeks or days.

5 Click **OK**, then **Yes** to confirm.

# Demand Calendars

## About demand calendars

Demand calendars are one of the two kinds of calendars used by Infor Demand Planning (the other kind is receiving calendar).

Demand calendars are used for two main purposes:

- To normalize history and forecast data to account for forecast periods of varying lengths (for example, calendar months).
- To produce reports of historical and forecast demand in any specified period.

A demand calendar contains, for each period, the period end date and a weighting that represents that period's relative contribution to the total number of periods in the year.

Demand calendars are applied to Channels. You can create as many demand calendars as you need.

### Types of demand calendar

Infor Demand Planning supports four types of demand calendar, characterized by their periodicities:

- Last day of calendar month

In this type of calendar, the periods are the twelve months of the year. The period end date is simply the last day of the corresponding month.

- 12 equal periods

In this type of calendar, each year consists of twelve ~30-day periods (actually either 30 or 31 days).

- 13 equal periods

In this type of calendar, each year consists of thirteen 4-week (28-day) periods.

- 4-4-5

In this type of calendar, each year consists of a mixture of 4-week, 5-week or 6-week periods, initially arranged in a repeating 4 4 5 pattern. (This pattern can be edited if necessary.)

For a weekly-controlled database, only the 4-4-5 type and the 13-equal-periods type can be used.

See "About monthly- and weekly-controlled databases" on page 67.

### Applying calendars to Channels

Each Channel must use one, and only one, demand calendar.

- In a weekly-controlled database, every Channel must use the same demand calendar, to ensure that the monthly statistical forecast is consistently interpolated into weekly periods. In addition, that calendar must have an integer number of weeks in every month.
- In a monthly-controlled database, however, different calendars can be assigned to different Channels. For example, the calendar at a Channel that represents an international manufacturing facility may be different from the calendars at subordinate Channels representing national distribution centers.

Changing a Channel's demand calendar could invalidate certain dates relating to the corresponding Channel Products (for example, effectivity and discontinuation dates, promotional events, and so on).

### Editing a demand calendar

If you edit a demand calendar, this change may not be immediately apparent to other Infor Demand Planning users because some data is cached locally. Users may have to log off from Infor Demand Planning and then log on again to see the changed calendar.

### Editing period labels

Infor Demand Planning assumes that any 12-period fiscal year runs from January to December. If this is not the case, you need to edit the period labels used at each Channel where the calendar is applied.

## About a demand calendar's default start date

The start date of a demand calendar is the first period end date.

When a calendar is created, Infor Demand Planning attempts to set a default start date so that the calendar can cover all possible historical periods.

For every Channel, Infor Demand Planning looks at the date that demand was last updated.

- If the dates are not all the same, Infor Demand Planning chooses the earliest one (then warns you that it has done this).
- If no Channel shows a date that demand was last updated (because, for example, the database is empty) you are prompted to supply one.

From this date, Infor Demand Planning counts back the permitted number of months of history that can be retained "Monthly History Retained (Months) (St)") and chooses a suitable start date based on the calendar's periodicity.

By default, from this start date the calendar extends forward for 10 full years.

You can edit the start date when creating a calendar, but you cannot edit it after it has been saved. However, you can add or remove periods at the start of the calendar, and this makes Infor Demand Planning recalculate the start date.

### Start period of a 4-4-5 calendar

For a 4-4-5 type calendar, you must also specify the period to which the start date corresponds.

By default, Infor Demand Planning suggests the period most appropriate to the start date. For example, if the start date is 28th March, the default start period is 3, meaning that the calendar starts in the third period of the year. This is correct if your fiscal year runs from January to December, but not if it runs from April to March. In this latter case 28th March represents, not the third period of the year, but the twelfth period.

Whichever period you choose, Infor Demand Planning applies the 4-4-5 week pattern from that period onwards.

See "About demand calendars" on page 170.

## About a demand calendar's period end dates

Infor Demand Planning calculates period end dates based on the type (periodicity) of the calendar and the calendar start date.

Both the 4-4-5 type and 13 equal periods type of demand calendar have an integer number of weeks in each period, meaning that the period end dates always fall on the same day of the week.

You can edit the period end dates of these types of calendars, provided that the dates still fall on the same day of the week and the number of weeks in a year adds up to 52 (or 53, if you also change the number of weeks in that year).

Editing the period end dates makes Infor Demand Planning recalculate the period weightings.

## About a demand calendar's weeks-per-period

Both the 4-4-5 and 13 equal periods types of demand calendar have an integer number of weeks in each period. Initially, the pattern over a year is:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-4-5 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | | 52 weeks |
| 13 equal periods | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 52 weeks |

You can edit calendars of these types so that particular periods have more or fewer than the default number of weeks, provided that the total in a year adds up to 52 (or 53, if you also change the number of weeks in that year).

Editing the number of weeks in a period makes Infor Demand Planning recalculate the period end dates and the period weightings.

## About a demand calendar's weightings

Each period has a weighting that represents that period's relative contribution to the total number of periods in the year (that is, either 12 or 13 periods). The BATS calculation uses these weightings when producing a forecast from historical data.

Initially, each period's weighting is calculated by Infor Demand Planning according to the length of that period, as determined by the period end dates.

You can edit these weightings for all types of demand calendar, except those with 12 equal periods.

When editing weightings, you must ensure that the total for each year is approximately 12 or 13 as appropriate (allowing for precision errors).

Editing the weightings does not change the period end dates, but editing the period end dates makes Infor Demand Planning recalculate the weightings (overwriting any changes you may have made).

### Example

If:

Periods per year = 12

Weeks per year = 52

then:

Weighting per week = 12/52 = 0.230769

and therefore:

Weighting for a 4-week period = 0.230769 ´ 4 = 0.9231

Weighting for a 5-week period = 0.230769 ´ 5 = 1.1538

Weighting for a 6-week period = 0.230769 ´ 6 = 1.3846

**Note:**

- You should rarely need to edit the weightings calculated by Infor Demand Planning.

## About monthly- and weekly-controlled databases

A database can be set up to be either monthly-controlled or weekly-controlled. The decision rests primarily on whether you intend to adjust the statistical forecast with market intelligence on a monthly or weekly basis.

- In a monthly-controlled database, market intelligence is stored in monthly periods, and can be specified only in monthly amounts.
- In a weekly-controlled database, market intelligence is stored in weekly periods, although you can specify it in either monthly or weekly amounts.

However, the decision to use a weekly-controlled database has some important consequences:

- The monthly forecast must be interpolated into weekly periods (you specify this in the System table).
- You have to apply the same demand calendar at all Channels, because otherwise the forecast would not be interpolated in the same way at all levels.
- The type of the demand calendar must be either 4-4-5 or 13 equal periods, because there must be an integer number of weeks in each month.
- A weekly-controlled database cannot be changed to a monthly-controlled database, orvice-versa (at least, not easily).

In a weekly-controlled database, you can decide whether you want to store history monthly, weekly or daily, and also, for each Channel, whether to accumulate daily or weekly demand into monthly demand at period end. When populating the database for the first time, monthly history must be loaded because this is required to generate the statistical model.

## Summary of demand calendar editing restrictions

The features of a demand calendar that you can edit depend on its type.

| Type of calendar | Period end dates? | Number of weeks in a period? | 52-/53-weeks in a year? | Weightings? |
|---|---|---|---|---|
| Last day of calendar month | Not editable | Not editable | Not editable | Editable |
| 12 equal periods | Not editable | Not editable | Editable | Not editable |
| 13 equal periods | Editable at weekly intervals | Editable | Editable | Editable |
| 4-4-5 | Editable at weekly intervals | Editable | Editable | Editable |

# Adding a demand calendar

1 In Database Administration, select **DB Admin > Calendars > Demand Calendars**.
The Demand Calendars dialog lists the existing calendars.

2 Click **Add**. The Demand Calendar dialog is displayed, initially showing information about the default start date.

See "About a demand calendar's default start date" on page 171.

3 In the **Name** box, type a name for this calendar.

4 In the **Periodicity** box, select the type of calendar according to its periodicity:

- Last day of calendar month
- 12 equal periods
- 13 equal periods
- 4-4-5

5 If you select **4-4-5**, the Define 445 Period End dialog is displayed. Specify the period – between 1 and 12 – to which the calendar start date relates, then click **OK**.

6 If you want to change the default start date, click the ⬇ button next to the **Start Date** box. In the calendar, select the start date you want, then click ⬇ again to close the calendar. (If you change the start date of a 4-4-5 calendar, the Define 445 Period End dialog is redisplayed.)

7 If applicable, select a predefined quarter profile from the **Quarterly Split** list box.

8 In the Demand Calendar dialog, click **OK**, then click **Yes** to save the new calendar to the database.

Infor Demand Planning assumes that any 12-period fiscal year runs from January to December. If this is not the case, you need to edit the period labels used at each Channel where the calendar is applied.

The Demand Calendars dialog is redisplayed, listing the new calendar and its demand calendar code (assigned automatically by Infor Demand Planning).

# Editing a demand calendar

1 In Database Administration, select **DB Admin > Calendars > Demand Calendars**.
The Demand Calendars dialog box is displayed.

2 Click the calendar you want to edit, then click **Edit**.
The Demand Calendar dialog box is displayed. The editable features of the calendar depend on its type. See "Summary of demand calendar editing restrictions" on page 174.

3 To change the name of the calendar, type a new name in the **Name** box.

4 To edit period end dates, select **Period end dates** in the **Display** box. To edit a date, click its cell, type a new value, then click outside the cell. If the new date does not fall on the same day of the week as the old date, or if it is later than the next period end date, Infor Demand Planning does not accept the change.

See "About a demand calendar's period end dates" on page 172.

You cannot edit a calendar’s periodicity or start date.

5 To edit the number of weeks in a particular year, or the number of weeks in a particular month, select **Weeks** in the **Display** box. To edit a number, click its cell, type a new number, then click another cell (in the same row, if you want to edit more cells in that row). If the total number of weeks in a year is not either 52 or 53, Infor Demand Planning does not accept the change.

See "About a demand calendar's weeks-per-period" on page 172.

6 To edit weightings, select **Weightings** in the **Display** box. To edit a weighting, click its cell, type a new weighting, then click another cell (in the same row, if you want to edit more cells in that row). If the total weighting for the year is not (approximately) the number of periods in the year, Infor Demand Planning does not accept the change.

See "About a demand calendar's weightings" on page 173.

7 To assign a new predefined quarter profile, select one from the **Quarterly Split** list box.

8 Click **OK**, then click **Yes** to save the changes to the database.
The Demand Calendars dialog re-appears.

## Copying a demand calendar

1 In Database Administration, select **DB Admin > Calendars > Demand Calendars**.
The Demand Calendars dialog box is displayed.

2 Click the calendar you want to copy, then click **Copy**. The Copy Demand Calendar dialog box is displayed.

3 Type a new name for the copied calendar, then click **OK**.
The Demand Calendars dialog re-appears, listing the new calendar and its demand calendar code (assigned automatically by Infor Demand Planning).

## Deleting a demand calendar

1 In Database Administration, select **DB Admin > Calendars > Demand Calendars**.
The Demand Calendars dialog box is displayed.

2 Click the calendar you want to delete, click **Delete**, then click **Yes** to confirm.

You cannot delete a calendar that is currently applied to one or more Channels; you must apply a different calendar to those Channels first.

## Adding periods to a demand calendar

You can extend a demand calendar into the past (history) or future (forecast) by adding more periods.

1 In Database Administration, select **DB Admin > Calendars > Demand Calendars**.
The Demand Calendars dialog box is displayed.

2 Click the calendar you want to edit, then click **Edit**. The Demand Calendar dialog box is displayed.

3 Click **Add**. The Add Periods dialog box is displayed.

4 Under **Calendar**, specify whether you want to add periods of history or forecast.

If you add history periods, Infor Demand Planning recalculates the calendar's start date accordingly.

5 In the **Periods To Add** box, type or select the number of periods you want to add.

6 Click **OK**, then **OK** again to confirm.
The Demand Calendar dialog re-appears.

## Removing periods from a demand calendar

1 In Database Administration, select **DB Admin > Calendars > Demand Calendars**.
The Demand Calendars dialog box is displayed.

2 Click the calendar you want to edit, then click **Edit**. The Demand Calendar dialog box is displayed.

3 Click **Remove**. The Remove Periods dialog box is displayed.

4 Under **Calendar**, specify whether you want to add periods of history or forecast.

5 In the **Periods To Remove** box, type or select the number of periods you want to remove.

If you remove history periods, Infor Demand Planning recalculates the calendar's start date accordingly.

6 Click **OK**, then **OK** again to confirm.
The Demand Calendar dialog re-appears.

## Viewing weekly end dates

You can view and print a table of weekly end dates for 4-4-5 or 13 equal periods type calendars (that is, calendars with an integer number of weeks in each period).

1 In Database Administration, select **DB Admin > Calendars > Weekly Dates**.
An initial Weekly Dates dialog box is displayed.

2 Click the calendar you want to view, then click **OK**. A second Weekly Dates dialog box is displayed, showing the calendar's weekly end dates.

3 To print the table to the default printer, click **Print**.

4 Click **Cancel** to close this dialog and return to the initial Weekly Dates dialog box.

## Applying a demand calendar to a Channel

You apply a demand calendar to one or more Channels by editing the Channels table. In a weekly-controlled database, all Channels must use the same demand calendar.

1 In Database Administration, select the Channels you want to edit.

See "Selecting Channels" on page 48.

2 Select **DB Admin > System > Edit Channel Data**.
The Channels dialog box is displayed, showing a editable grid of Channels table fields.

3 Scroll the right-hand pane until the **Demand Calendar Code** column is visible.

4 Do one of the following:

- To apply a demand calendar to an individual Channel, select the required calendar in that Channel's **Demand Calendar Code** cell.
- To apply a demand calendar to all Channels, click the topmost **Demand Calendar Code** cell. Select **Edit > Vertical Edit**. In the Vertical Edit dialog, select the required calendar and click **OK**. Click **Yes** to confirm.

  **Note:** You can use the Channels toolbar instead of the **Edit** menu.

Infor Demand Planning reminds you that changing a Channel's demand calendar could invalidate certain dates relating to the corresponding Channel Products (for example, effectivity and discontinuation dates, promotional events, and so on). It may also compromise their interpolation vectors.

## Editing period labels

Infor Demand Planning assumes that the fiscal year runs from January to December. If this is not the case, you can change this for individual Channels by editing the labels associated with each fiscal period.

1 In Database Administration, select **DB Admin > System > Period Labels**.
The Maintain Channel Period Labels dialog box is displayed.

2 In the **Channel ID** box, select the Channel code of the Channel you want to edit.
The dialog shows an editable table of fiscal periods. You can edit the period labels shown in blue.

3 To edit a label, click its cell, type a new value, then click outside the cell.

# Currencies

## About currencies

In Database Administration, you can define a base currency, and then define other currencies by specifying their exchange rates relative to the base currency.

Usually, Infor predefines the base currency to your requirements when Infor Demand Planning is installed. You can then add other currencies as required.

You can change the exchange rate for any currency as frequently as you wish. Each exchange rate has an effectivity date. This means that each exchange rate is applied from its effectivity date until the effectivity date of the subsequent rate (or indefinitely, if there is no subsequent rate).

If you apply a currency to one or more Channels, the selling price and cost price of the associated Channel Products are assumed to be expressed in terms of that currency.

**Note:**

- These currency features are not yet fully implemented. You can define currencies and apply them to Channels, but their exchange rates are not used within Infor Demand Planning.

## Adding a currency

1. In Database Administration, select **DB Admin > System > Currency**.
   The Currency Table dialog box is displayed.
2. Select **Edit > Add new Currency to Header**.
   A new currency row is added to the list of existing currencies in the upper panel of the dialog box.
3. Specify a unique currency code (up to three characters), and a name or description, for the new currency. Optionally, you can also give a reason for the new currency.
4. If you do not want to specify an initial exchange rate, click **OK**. Otherwise, select **Edit > Add new Currency Rate to Table** and click **Yes** when asked if you want to save the new currency before adding the rate.

   You can use the Currency Table toolbar instead of the **Edit** menu.

   A new exchange rate row, relating to the new currency, is added to the list of existing rates in the lower panel of the dialog box.
5. If necessary, change the effectivity date (that is, the date from which the rate will take effect). By default, it is today's date.
6. Specify the exchange rate, relative to the base currency.

## Deleting a currency

1. In Database Administration, select **DB Admin > System > Currency**.
   The Currency Table dialog box is displayed.
2. Click the currency you want to delete then, select **Edit > Remove Currency from Header**.
   - You cannot delete the base currency.
   - You cannot delete a currency that is applied to one or more Channels; you must first edit the Channels table to apply a different currency.
   - You can use the Currency Table toolbar instead of the **Edit** menu.
3. Click **Yes** to confirm.

## Adding an exchange rate

1. In Database Administration, select **DB Admin > System > Currency**.
   The Currency Table dialog box is displayed.
2. Click the currency to which the new rate applies then, select **Edit > Add new Currency Rate to Table**.
   - You cannot specify exchange rates for the base currency, because this is the currency relative to which all exchange rates are defined.
   - You can use the Currency Table toolbar instead of the **Edit** menu.

   A new exchange rate row, relating to the selected currency, is added to the list of existing rates in the lower panel of the dialog box.
3. If necessary, change the effectivity date (that is, the date from which the rate will take effect.) By default, it is today's date.
4. Specify the exchange rate, relative to the base currency.

## Deleting an exchange rate

1. In Database Administration, select **DB Admin > System > Currency**.
   The Currency Table dialog box is displayed.
2. Click the rate you want to delete then, select **Edit > Remove Currency Rate from Table**.
   You can use the Currency Table toolbar instead of the **Edit** menu.

## Changing the base currency

1. In Database Administration, select **DB Admin > System > System Data**.
   The System Data dialog box is displayed.
2. On the **General Settings** tab, in the **Base Currency** box, select the currency you want.
   - Any exchange rates associated with the new base currency are deleted automatically.
   - The previous base currency will not have any exchange rates relative to the new base currency; you must add these rates manually.

## Applying a currency to a Channel

By default, all Channels use the base currency. You can apply a different currency to one or more Channels by editing the Channels table.

1. In Database Administration, select the Channels you want to edit.

See "Selecting Channels" on page 48.

2 Select **DB Admin > System > Edit Channel Data**.
The Channels dialog box is displayed, showing a editable grid of Channels table fields.

3 Scroll the right-hand pane until the Currency Code column is visible.

4 Do one of the following:

- To apply a currency to an individual Channel, type the required currency code in the Channel's **Currency Code** cell.
- To apply a currency to all Channels, click the topmost **Currency Code** cell. Select **Edit > Vertical Edit**. In the Vertical Edit dialog, type the required currency code and click **OK**. Click **Yes** to confirm.

  You can use the Channels toolbar instead of the **Edit** menu.

# Interpolation Vectors

## About the forecasting frequency

### Monthly forecasting

The most appropriate periodicity for statistical forecasting is normally monthly.

Calculating statistical forecasts more frequently than this rarely brings significant benefit, for two main reasons:

- In most business sectors, product demand has an annual seasonality, and this is most apparent when analyzed on a monthly basis. Forecasting on a weekly or daily basis may mask this annual seasonality.
- At period end, when the forecast should be updated, a significant amount of work may be needed to ensure that the correct data is available. If period end processing is performed on a weekly or daily basis, the workload is likely to be disproportionate to the benefit gained.

For these reasons, statistical forecasting within Infor Demand Planning is always done on a monthly basis using either a 12- or 13-period forecasting year. At the end of each forecast period Infor Demand Planning automatically updates the model to take into account any changes in the pattern of demand. All components of the forecast are updated at this time.

However, in Infor Demand Planning monthly forecasting is completely compatible with weekly or daily operational control. Demand can be imported monthly, weekly or daily. If daily or weekly demand is imported, then these figures can be regularly compared to the forecast and, at period end, aggregated to a monthly figure which is used to update the forecast. Similarly, the monthly forecast can be interpolated into weekly and daily figures, which can be used for planning requirements and order scheduling.

### Weekly forecasting

Although the statistical forecast is always monthly, it is possible to adjust it on a weekly basis (by adding market intelligence) in a database that is set up as a "weekly-controlled" database.

In a weekly-controlled database, market intelligence (MI) is stored in weekly periods, although it may be specified in either weekly or monthly amounts. (In contrast, in a monthly-controlled database MI can be stored and specified only in monthly amounts.)

### Daily forecasting

Daily forecasting can be used for order scheduling. It works by interpolating the forecast into days. Because such daily interpolation imposes a significant computational overhead, Infor Demand Planning does not allow you to perform daily forecasting more than two years ahead (and less is advised).

## About interpolation vectors

Interpolation vectors are of two types:

- Month-to-weeks, used to derive weekly forecasts from a monthly forecast.
- Week-to-days, used to derive daily forecasts from a weekly forecast.

Note that interpolation vectors are only applied to forecast data, and never to historical data. If weekly or daily history is required, it must be imported separately.

Each interpolation vector must be associated with a named demand calendar. The demand calendar must be of the 4-4-5 or 13 equal periods type (because only these types have an integer number of weeks in every month), and must be applied to at least one Channel.

See "About demand calendars" on page 170.

### What's in an interpolation vector?

An interpolation vector consists of a set of one or more default and date-specific period vectors.

- Default period vectors

The default period vectors are automatically included in every new interpolation vector. The default vectors for a month-to-weeks interpolation vector are:

| | 1 | 2 | 3 | 4 | 5 | 6 | Total |
|---|---|---|---|---|---|---|---|
| Default 4 Week | 0.25 | 0.25 | 0.25 | 0.25 | | | 1.0 |
| Default 5 Week | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | | 1.0 |
| Default 6 Week | 0.15 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 1.0 |

The default vector for a week-to-days interpolation vector is:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Total |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Default 7 Day | 0.16 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 1.0 |

- Date-specific period vectors

As their name suggests, within an interpolation vector you can add your own period vectors for particular months (in a month-to-weeks interpolation vector) or weeks (in a week-to-days interpolation vector). For example, April (in which Easter usually falls) probably has a different demand spread than December (in which Christmas falls).

Periods that do not have their own date-specific vectors use the appropriate default vectors instead.

A Channel Product can have only one associated interpolation vector. If a Channel Product has no specific interpolation vector, Infor Demand Planning uses the appropriate default vectors instead.

See "Example of a month-to-weeks interpolation vector".

### How are interpolation vectors defined?

There are two ways to define interpolation vectors:

- In Database Administration, you can define each interpolation vector manually and apply it to one or more Channel Products.

See "Applying an interpolation vector to a Channel Product" on page 187.

- In Demand Forecaster, you can select a temporary forecast group (TFG) of Channel Products and have Infor Demand Planning automatically calculate an interpolation vector for them from their combined histories.

See "About the automatic calculation of period vectors".

If you edit an interpolation vector, this change may not be immediately apparent to other Infor Demand Planning users because some data is cached locally. Users may have to log off from Infor Demand Planning and then log on again to see the changed vector.

## Adding a month-to-weeks interpolation vector

To add a month-to-weeks interpolation vector:

1. In Database Administration, select **DB Admin > Calendars > Interpolation Vectors**.
   The Interpolation Vector Maintenance dialog displays the existing interpolation vectors.
2. Click **Add**.
   The Select Demand Calendar dialog displays the demand calendars that are currently applied to Channels. Only 4-4-5 or 13 equal periods calendars can have month-to-weeks interpolation vectors.
3. Click the calendar for which to define the vector.
4. Click **OK**.
   The Interpolation Vector Maintenance (Add) dialog is displayed.
5. In the **Interpolation Vector** field, specify a name for the vector and select M to W in the adjacent list.

The dialog displays an editable grid containing the default 4 week, 5 week and 6 week period vectors.

**Note:** Do not forget to specify a name for the interpolation vector. If you save it without a name, it cannot be named later.

6 To add a date-specific period vector, click **Add**.
A new vector is added to the grid with the description "New Period Vector" and a period end date. The period end date is the first available forecast period end date after the date that demand was last updated at the Channels that use this calendar.

**Note:** You cannot add a date-specific period vector if the date that the demand was last updated is missing or invalid.

7 Click the **Month End Date** cell of the vector, and select the required period end date from the available forecast period end dates in this calendar.

The number of weeks in the vector depends on the number of weeks in the selected period.

8 Click the **Description** cell and specify a name or description for the vector.

To delete a data-specific vector, click its row, click **Delete** and click **Yes** to confirm.

9 To add a Monthly Split, select **Monthly Split**. Save changes and select the required Month to Day vector from the list. Click **OK** to generate the values.

10 To calculate new default vectors select **Default Vectors**.

This calculates new default vectors using history data of all Channel Products with this vector assigned to them.

11 To calculate new date specific vectors select **Date Specific Vectors**.

This calculates new date specific vectors using history data of all Channel Products with this vector assigned to them.

12 To remove a calculation, select **Remove** and select **No** to keep existing date-specific vectors. Or, select **Yes** to delete existing date-specific vectors.

13 Repeat steps 6 to 12 as required.

14 Click **OK**, then **Yes** to confirm.
The Interpolation Vector Maintenance dialog is displayed. It includes the newly-added interpolation vector.

## Adding a week-to-days interpolation vector

To add a week-to-days interpolation vector:

1 In Database Administration, select **DB Admin > Interpolation Vectors**.
The Interpolation Vector Maintenance dialog displays the existing interpolation vectors.

2 Click **Add**.
The Select Demand Calendar dialog displays the 4-4-5 or 13 equal periods demand calendars that are currently applied to Channels.

3 Click the calendar for which to define the vector and click **OK**.
The Interpolation Vector (Add) dialog is displayed.

4 In the **Interpolation Vector** field, specify a name for the vector and select W to D in the adjacent list.
The dialog displays an editable table containing the default 7-day vector.

**Note:** Do not forget to specify a name. If you save the interpolation vector without a name it cannot be renamed later.

5 To add a date-specific period vector, click **Add**.
A new vector is added to the table of vectors with the description "New Period Vector" and a week end date. The week end date is the first available forecast period end date after the date that demand was last updated at the Channels that use this calendar.

**Note:** You cannot add a date-specific vector if the date that demand was last updated is either missing or invalid.

6 Click the Week End Date cell of the vector and select the required week end date from the available forecast week end dates in this calendar.

7 Click the Description cell and specify a name or description for this period vector.

8 To delete a data-specific vector, click its row, click **Delete** and click **Yes** to confirm.

9 To edit any default or date-specific vector value, click its cell, specify a new value, then click outside the cell. The values in the vector must total 1.0.

10 To add a Monthly Split, select **Monthly Split**, save changes and select the required Month to Day vector from the list. Click **OK** to generate the values.

11 To calculate new default vectors select **Default Vectors**. This will calculate new default vectors using history data of all Channel Products with this vector assigned to them.

12 To calculate new date specific vectors select **Date Specific Vectors**. This calculates new date specific vectors using history data of all Channel Products with this vector assigned to them.

13 To remove a calculation, select **Remove**. At the prompt, select No to keep existing date-specific vectors or **Yes** to delete them.

14 Repeat steps 5 to 13 as required.

15 The Interpolation Vector Maintenance dialog is displayed. It includes the newly-added interpolation vector.

## Editing an interpolation vector

1 In Database Administration, on the DB Admin menu, point to Calendars, then click Interpolation Vectors.
The Interpolation Vector Maintenance dialog is displayed.

2 Click the vector to edit and click **Edit**.
The Interpolation Vector Maintenance (Edit) dialog displays an editable table of default and date-specific period vectors.

3 To change the end date of a date-specific vector, click its Month End Date or Week End Date cell (depending on the type of interpolation vector) and select the required date.

4 To edit the name of a date-specific vector, click its Description cell, type a new name, then click outside the cell.

5 To edit any vector value, click its cell, type a new value, then click outside the cell. The values in the vector must total 1.0. To spread values evenly over a vector, click its row, and then click Even Spread.

6 To add a date-specific vector, click Add and edit the period end date, name and values as required.

7 To delete a date-specific vector, click its row, click **Delete**, and then click **Yes** to confirm.

8 To add a Monthly Split, select **Monthly Split**, Save Changes and select the required Month to Day vector from the list. **OK** will generate the values.

9 To calculate new default vectors select **Default Vectors**. This will calculate new default vectors using history data of all Channel Products with this vector assigned to them.

10 To calculate new date specific vectors select **Date Specific Vectors**. This calculates new date specific vectors using history data of all Channel Products with this vector assigned to them.

11 To remove a Calculation, select **Remove** At the prompt select **No** to keep any existing date specific vectors or select **Yes** to delete them.

12 To delete a date-specific vector, click its row, click **Delete**, and then click **Yes** to confirm.

13 Repeat Steps 3 to 11 as required.

14 Click **OK**, then click **Yes** to confirm.
The Interpolation Vector Maintenance dialog is displayed.

**Note:**

- You cannot edit the name of an interpolation vector or its type (M-to-W or W-to-D).
- You cannot rename or delete a default vector
- You must remove an existing monthly split before you can add another.

## Copying an interpolation vector

To copy an interpolation vector:

1 In Database Administration, select **DB Admin > Calendars > Interpolation Vectors**.
The Interpolation Vector Maintenance dialog is displayed.

2 Click the vector to copy and then click **Copy**.
The Interpolation Vector Maintenance (Copy) dialog displays an editable table containing the default and date-specific period vectors of the copied interpolation vector.

3 In the **Interpolation Vector** field, specify a name for the vector.

4 To change the end date of a date-specific vector, click its **Month End Date** or **Week End Date** cell (depending on the type of interpolation vector) and select the required date.

5 To edit the name of a date-specific vector, click its **Description** cell, specify a new name, then click outside the cell.

6 To edit any vector value, click its cell, type a new value, then click outside the cell.

The values in the vector must total 1.0. To spread values evenly over a vector, click its row, and then click **Even Spread**.

7 To add a date-specific vector, click **Add** and edit the period end date, name and values as required.

8 To delete a date-specific vector, click its row, click **Delete**, and then click **Yes** to confirm.

9 To add a Monthly Split, select **Monthly Split > Save Changes** and select the required Month to Day vector from the list. Click **OK** to generate the values.

10 To calculate new default vectors select **Default Vectors**.

This calculates new default vectors using history data of all Channel Products with this vector assigned to them.

11 To remove a Calculation, select **Remove** At the prompt select **No** to keep any existing date specific vectors or select **Yes** to delete them.

12 Repeat steps 4 to 11 as required.

13 Click **OK**, then **Yes** to confirm.
The Interpolation Vector Maintenance dialog is redisplayed.

**Note:** You cannot edit the type of an interpolation vector (M-toW or W-to-D).

**Note:** You cannot rename or delete a default vector.

## Deleting an interpolation vector

1 In Database Administration, select **DB Admin > Calendars > Interpolation Vectors**.
The Interpolation Vector Maintenance dialog box is displayed.

2 Click the vector you want to delete, then click **Delete**.

You cannot delete an interpolation vector that is currently applied to one or more Channel Products; you must first remove the interpolation vector from those Channel Products.

3 Click **Yes** to confirm.

## Applying an interpolation vector to a Channel Product

You apply an interpolation vector to one or more Channel Products by editing the Channel Products table.

1 In Database Administration, select the Products and Channels you want to edit.

See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Channel Products**.

The Channel Products dialog box is displayed, showing a editable grid of Channel Product fields.

3 In the **Report Type** box, select **Forecasting**.

4 Scroll the right-hand pane until either the **M to W Interpolation Code** or **W to D Interpolation Code** column is visible, as appropriate.

5 Do either of the following:

- To apply an interpolation vector to an individual Channel Product, select the required vector in that Channel Product's **M to W Interpolation Code** or **W to D Interpolation Code** cell.

- To apply an interpolation vector to all Channel Products, click the first **M to W Interpolation Code** or **W to D Interpolation Code** cell. Select **Edit > Vertical Edit**. In the Vertical Edit dialog, select the required vector and click **OK**. Click **Yes** to confirm.

  **Note:** You can use the Channel Products toolbar instead of the **Edit** menu.

Every interpolation vector is based on a particular demand calendar. Any interpolation vector that you apply to a Channel Product should be based on the same demand calendar that is applied to the Channel.

# Suppliers and Supply Channels

## About suppliers and supply channels

If a Channel Product is sourced from an external supplier, you must either specify a default supplier in its "Supplier Code (CPt)" field, or else or edit particular orders to specify the supplier as the source.

When Infor Demand Planning generates a schedule of recommended orders for a CP, the orders are always external if a "Supplier Code (CPt)" is defined, and always internal otherwise.

For this to be possible, you need first to define suppliers and supply channels, and then assign the appropriate suppliers to the relevant Channel Products.

### Suppliers

You can define as many external suppliers as you need. Each supplier is characterized by a name or description, and a unique supplier code.

When you add suppliers manually, Infor Demand Planning generates a unique supplier code. If you import a list of suppliers, their codes do not have to be in the format used by Infor Demand Planning.

It is possible to link information such as contact names and addresses to suppliers along with "assortments". An assortment may be REFRIGERATED where you identify a group of items that must be ordered together and be delivered in refrigerated trucks.

See "Adding addresses" on page 192.

See "Adding an assortment" on page 192.

See "Adding supplier assortments links" on page 193.

### Supply channels

A supply channel is simply a combination of a supplier and a Channel, and provides a means of holding information that is particular to that supplier at that Channel. Each supply channel is characterized by:

- A supplier code

- A Channel ID
- A short textual reminder of the terms under which items are supplied. For example, COD for "cash on delivery" or 60-days for "payment within 60 days", and so on.
- A minimum order value, expressed in the base currency, of each individual order.

The minimum order value is likely to be a negotiated figure. It does not automatically prevent a lower-value order being recommended, but you should compare it with the total order value before committing the order.

See "Adding orders" on page 409.

## Adding a supplier

1. In Database Administration, select **DB Admin > System > Suppliers > Suppliers**.
   The Suppliers dialog box shows the existing suppliers.
2. Select **Edit > Add New Supplier**.
   You can use the Suppliers toolbar instead of the **Edit** menu.
   A blank row is added to the table.
3. In the **Supplier Name** field, specify the name of the supplier.
4. Select the HQ and invoice address codes.
5. If required, specify the URL of the supplier's Web site.

A unique supplier code is automatically assigned.

## Editing a supplier

You can change the name, address and Web site details of a supplier.

1. In Database Administration, select **DB Admin > System > Suppliers > Suppliers**.
   The Suppliers dialog box shows the existing suppliers.
2. Click the cell that you want to edit, and specify a new value.

## Deleting a supplier

1. In Database Administration, select **DB Admin > System > Suppliers > Suppliers.**.
   The Suppliers dialog box shows the existing suppliers.
2. Click the **Supplier Name** cell of the supplier that you want to delete.
3. Select **Edit > Remove Supplier**.
   You can use the Suppliers toolbar instead of the **Edit** menu.

## Adding a supply channel

1. In Database Administration, select **DB Admin > System > Suppliers > Supply Channels**.
   The Supply Channels dialog box shows the existing supply channels.
2. Select **Edit > Add Supplier Code/Channel**.
   You can use the Supply Channels toolbar instead of the **Edit** menu.
   A blank row is added to the table.
3. Specify this information:

   **Supplier Code**
   Select the code of the required supplier. You cannot assign a supplier to the same channel more than once.

   **Channel ID**
   Select the channel ID of the required channel.

   **Terms**
   Specify a short reminder of the terms on which the supplier supplies this channel.

   **Minimum Order Value**
   Specify the minimum value of any single order that is placed with the supplier at this channel.

**Note:** To undo unsaved changes, select **Edit > Re-retrieve Data**.

## Editing a supply channel

1. In Database Administration, select **DB Admin > System > Suppliers > Supply Channels**.
   The Supply Channels dialog box shows the existing supply channels.
2. Modify the characteristics of the supply channel.
   You can modify all the characteristics identically to creation. See "Adding a supply channel" on page 190.

**Note:** To undo unsaved changes, select **Edit > Re-retrieve Data**.

## Deleting a supply channel

1. In Database Administration, select **DB Admin > System > Suppliers > Supply Channels**.
   The Supply Channels dialog box shows the existing supply channels.
2. Click the row that corresponds to the supply channel that you want to delete.
3. Select **Edit > Remove Supplier Code/Channel**.
   You can use the Supply Channels toolbar instead of the **Edit** menu.

To undo unsaved changes, select **Edit > Re-retrieve Data**.

## Applying a supplier to a Channel Product

To apply a supplier to one or more channel products, edit the Channel Products table.

1 In Database Administration, select the Products and Channels entity that you want to edit.
See "About selecting Products and Channels" on page 35.

2 Select **Product Admin > Channel Products**.

3 In the **Report Type** field, select General.

4 Scroll the right-hand pane to show the Supplier Code column.

5 Perform one of these steps:

- To apply a supplier to an individual channel product, select the required supplier in the product's **Supplier Code** cell.
- To apply the same supplier to all channel products, click the first **Supplier Code** cell. Select **Edit > Vertical Edit**. In the Vertical Edit dialog box, select the required vector and click **OK**. Click **Yes** to confirm.

You can use the Channel Products toolbar instead of the **Edit** menu.

## Adding a buyer group

1 In Database Administration, select **DB Admin > System > Suppliers > Buyer Groups**.
The Buyer Groups dialog box shows the existing buyer groups.

2 On the Buyer Groups toolbar, click **Add New Buyer Group**.
A blank row is added to the table.

3 Specify this information:

**Buyer Groups Code**
Specify the code of the buyer group.

**Description**
Specify the name of the buyer group.

## Editing a buyer group

You can change the code and the name of a buyer group.

1 In Database Administration, select **DB Admin > System > Suppliers > Buyer Groups**.
The Buyer Groups dialog box shows the existing buyer groups.

2 Click the cell of the buyer group that you want to edit, and then type a new code or name.

## Deleting a buyer group

1. In Database Administration, select **DB Admin > System > Suppliers > Buyer Groups**.
   The Buyer Groups dialog box shows the existing buyer groups.
2. Click the **Buyer Groups Code** cell of the buyer group that you want to delete.
3. On the floating Buyer Groups toolbar, click **Remove Buyer Group**.

## Adding an assortment

1. In Database Administration, select **DB Admin > System > Suppliers > Assortments**.
   The Assortments dialog box shows the existing assortments.
2. On the Assortments toolbar, click **Add New Assortment**.
   A blank row is added to the table.
3. In the new **Assortment Code** cell, specify the code of the new assortment.
4. In the new **Description** cell, specify the name of the new assortment.

## Editing an assortment

You can change the code and the name of assortments.

1. In Database Administration, select **DB Admin > System > Suppliers > Assortments**.
   The Assortments dialog box shows the existing assortments.
2. Click the cell that you want to edit, and modify the code or name.

## Deleting an assortment

1. In Database Administration, select **DB Admin > System > Suppliers > Assortments**.
   The Assortments dialog box shows the existing assortments.
2. Click the **Assortment Code** cell of the buyer group that you want to delete.
3. On the Assortments toolbar, click **Remove Assortments**.

## Adding addresses

1. In Database Administration, select **DB Admin > System > Suppliers > Addresses**.
   The Addresses dialog box shows the existing supplier addresses.
2. On the Addresses toolbar, click **Add Addresses**.
   A blank row is added to the table.

3 Specify this information:

**Description**
Specify the name of the address.

**Contact**
Specify the name of the new contact.

4 Specify the other details.

A unique Addresses code is automatically assigned.

## Editing addresses

You can change the name and other address-related information, but you cannot change the code.

1 In Database Administration, select **DB Admin > System > Suppliers > Addresses**.
The Addresses dialog box shows the existing supplier addresses.
2 To edit a cell, click the cell, specify the new value, then click outside the cell.

## Deleting addresses

1 In Database Administration, select **DB Admin > System > Suppliers > Addresses**.
The Addresses dialog box shows the existing addresses.
2 Select the **Address Code** cell of the address that you want to delete.
3 On the Addresses toolbar, click **Remove Addresses**.

## Adding supplier assortments links

1 In Database Administration, select **DB Admin > System > Suppliers > Supplier Assortments**.
The Supplier Assortments dialog box shows the existing supplier assortments.
2 On the Supplier Assortments toolbar, click **Add Supplier Assortments**.
A blank row is added to the table.
3 Select the supplier, assortment, and buyer group codes from the lists.
4 In the new **Preferred Buy Quantity** cell, specify the relevant quantity.
5 Specify the other information.

## Editing supplier assortments links

You can modify the content of all the displayed cells.

1. In Database Administration, select **DB Admin > System > Suppliers > Supplier Assortments**. The Supplier Assortments dialog box shows the existing supplier assortments.
2. Click the cell that you want to edit, modify the value, and click outside the cell.

## Deleting supplier assortments links

1. In Database Administration, select **DB Admin > System > Suppliers > Supplier Assortments**. The Supplier Assortments dialog box shows the existing supplier assortments links.
2. Click the **Supplier Code** cell of the supplier assortments link that you want to delete.
3. On the Supplier Assortments toolbar, click **Remove Supplier Assortment**.

## Configuring the Supplier Select screen

You can specify which fields are displayed to specific users in the Supplier Select dialog box.

1. In Database Administration, select **DB Admin > System > Supplier Select Defaults**. The Supplier Select Defaults dialog box is displayed.
2. In the **User** box, select the user that you want to configure.
3. In the Available fields panel, select the **Display** check boxes of the fields that you want to include.
4. To change the display order of the fields in the Supplier Select dialog box, use the **Move** buttons.
5. To apply the configuration only to the selected user, click **OK**. To apply the configuration to several users, click **Apply to**, select the users, and click **OK**.

# Alternative Channel Transfer Routes

## About alternative Channel transfer routes

Within a matrix, stock that is sourced internally is normally supplied to a Channel from its primary Channel.

However, there may be times when sufficient stock is not available at the primary Channel, or the stock is needed sooner than it can usually be supplied. In such circumstances, it may be beneficial to supply stock via an alternative transfer route. This may still be from the primary Channel, but using a faster type of transport, or it may be from a different Channel altogether.

Database Administration allows you to define alternative transfer routes between any two Channels. Each route is characterized by:

- The type of transport used.
- The cost of shipping stock by that route (by volume, by weight or per item).
- The relative preference for using this route compared to other alternatives.
- The average shipping offset lead time (in days).

You can define various transport types; each type being characterized by its capacity expressed in cubic volume, weight and number of pallets. For example:

| Transport Type | Volume (cubic meter) | Weight (kg) | Pallets |
|---|---|---|---|
| Courier | 0.25 | 20 | 0 |
| Train | 10 | 500 | 5 |
| Truck | 32 | 2500 | 25 |

You can use the Stock Re-balancing report in the Replenishment Planner module to identify and compare alternative transfer routes.

See "Viewing the Stock Re-balancing report" on page 434.

If the report shows an opportunity to supply stock via an alternative route, you must add or edit open orders to carry out the transfer. Such orders must specify the source, destination, date and quantity of the required shipment.

See "Editing individual orders" on page 410.

**Note:**

- Not all stock is sourced internally; it may be procured from an external supplier.

## Adding an alternative Channel transfer route

1. In Database Administration, select **DB Admin > System > Edit Alternate Channel Transfer Table**.
2. Click **Add**.
3. Select the source Channel and the destination Channel for this route.
4. Type the name of the new route (up to 20 characters).
5. Select the code of a predefined type of transport to be used for this route.
   See "Adding a transport type" on page 196.
6. Specify the preference for using this route over other alternative routes (type 1 for the most-preferred route, 2 for the second preference, and so on).
7. Specify the offset lead time (in days).
8. Specify the costs of using this route, by weight, by volume and per item.

## Editing an alternative Channel transfer route

1. In Database Administration, select **DB Admin > System > Edit Alternate Channel Transfer Table**.
2. Click the route you want to edit, then click **Edit**.
3. You can edit any characteristic of the route except the source and destination Channels.

## Deleting an alternative Channel transfer route

1. In Database Administration, select **DB Admin > System > Edit Alternate Channel Transfer Table**.
2. Click the route you want to delete.
3. Click **Delete**, then click **Yes** to confirm.

## Adding a transport type

1. In Database Administration, select **DB Admin > System > Edit Transport Types**.
2. Click **Add**.
3. Type a description of the new transport type (up to 20 characters).
4. Type a short code to identify the transport type (up to 3 characters).
5. Specify the capacity of this transport type by cubic volume, weight and number of pallets.

   The units of measurement of volume and weight depend on your Infor Demand Planning implementation, but are typically cubic meters and kilograms.

## Editing a transport type

1. In Database Administration, select **DB Admin > System > Edit Transport Types**.
2. Click the transport type you want to edit, then click **Edit**.
3. Edit the description and the capacities of this transport type as required.

   You cannot edit the code of a transport type.

## Deleting a transport type

1. In Database Administration, select **DB Admin > System > Edit Transport Types**.
2. Click the transport type you want to delete.
3. Click **Delete**, then click **Yes** to confirm.

You cannot delete a transport type that is currently assigned to one or more alternate Channel transfer routes. You must first edit those routes to remove the transport type.

# Orders

## Configuring defaults when committing orders

You can specify which fields are available to particular users when committing orders in Infor Demand Planning Replenishment Planner and Collaborative Replenishment Planner.

1 In Database Administration, select **DB Admin > System > Commit Orders Defaults**.
The Commit Orders Defaults dialog box is displayed.

2 In the **User** box, select the user, or one of the users, you want to configure.

3 On the **Received at Selected Channels** tab, specify the fields you want to display for "pull" orders, and on the **Distributed at Source Channels** tab, specify the fields you want to display for "push" orders. You do this by selecting the content of each field's Status cell.

The status of the fields can be either **Off** (not displayed) or **Read Only** (displayed but not editable) or **Editable**(displayed and editable). Initially, all fields are set to Off.

4 Specify a default sort order for the fields displayed when loading orders by selecting a number to indicate the order of the sort to be applied (1 – 5).

5 Chose whether the field is to be displayed in ascending or descending order. Select the check box for ascending.

You can use the **Move** buttons to change the order in which the fields are displayed. (The top-down order in the Commit Orders Defaults dialog represents the left-right order when committing orders.)

6 To apply these fields only to the selected user, click **Apply**. To apply these fields to more than one user, click **Apply to**. select the users you want, then click **OK**.

- You are prompted to save changes for the selected user when moving from one tab to another.
- The default sort facility selected in 4 is currently only available when used with the Received at Selected Channels option. It will only function properly if the fields included are populated correctly.

## Configuring the RP Information Page

You can specify which fields are available to particular users in the RP Information Page dialog box.

1 In Database Administration, select **DB Admin > System > RP Information Page Defaults**.
The RP Information Page Defaults dialog box is displayed.

2 In the **User** box, select the user, or one of the users, you want to configure.

3 On the **Product Fields**, **Channel Product Fields** and **Order Fields** tabs, select the **Display** check boxes of the fields you want to include from the Products, Channel Products and Orders tables respectively.

   You can use the **Move** buttons to change the order in which the fields are displayed in the RP Information Page dialog (except that **Product** fields always appear before **Channel Product** fields).

4 To apply these fields only to the selected user, click **OK**. To apply these fields to more than one user, click **Apply to**, select the users you want, then click **OK**.

   The fields displayed in the RP Information Page Defaults dialog are not editable.

# Order Book

## About the Order Book

In Replenishment Planner, it is possible to use an Order Book in conjunction with the forecast to drive the procurement scheduling process. The Order Book is a list of customer orders in the replenishment pipe-line to be processed at particular times in the future.

Order Book functionality is optional. It is enabled by setting the "Order Book (St)" field.

### Order Book table

The information that can/must be stored for each order is:

| Field name | Description | Required/Optional |
|---|---|---|
| Order Book Reference Number | System generated reference for the entry. | Required but read-only |
| Channel Product Reference Number | System generated code of the required Channel Product. | Required |
| Customer Code | Code of the customer that the order is intended for. It must be a valid code set up in the Customer table. | Required |
| Good Quantity | The quantity of stock required by the customer. | Required |
| Ship Date | Projected date that the stock should be despatched to the customer. | Required |
| Customer Due Date | Date that the customer requires delivery of the stock. | Optional |

| | | |
|---|---|---|
| PO Number | A user maintained field defining the purchase order number for the order. | Optional |
| Multi-user locking number | System generated field to deal with multiple user edits. | Required but not displayed |
| Userstring 0-3 | User-definable fields. | Optional |

The required fields must be populated. The optional fields are provided to store other relevant information to maintain more complete records.

This table may be maintained in both the Replenishment Planner and Database Administration modules.

### Customers table

The Customers table is used in conjunction with the Order Book table to ensure that customers are recognized and correctly linked to potential supply Channels. It contains the following information:

| Field name | Description | Required/Optional |
|---|---|---|
| Customer Code | System generated code, unique for each Customer. Alternative codes may be imported however. | Required |
| Customer Description | Customer name. | Required |
| Userstring 0-3 | User definable fields. | Optional |

This table is maintained in the Database Administration module.

### Channel Product fields used

The following fields are used when calculating planning requirements using Order Book:

"Days To Use Order Book (CPt)"

"Days To Compare Order Book/Forecast (CPt)"

"Greater Period Or Cumulative (CPt)"

"Use Order Book Plus Forecast (CPt)"

"Use Comparison Or Add Forecast (CPt)"

## Enabling the Order Book

1. In Database Administration, select **DB Admin > System > System Data**.
   The System Data dialog box is displayed.
2. On the **General Settings** tab, select the **Order Book** check box.
3. Click **OK**.

## Adding a customer

1. In Database Administration, select **Product Admin > Order Book > Customers**.
   The Customers dialog box is displayed, showing a table of the existing customers.
2. Select **Edit > Add New Customer**.
   You can use the floating Customers toolbar instead of the **Edit** menu.
   A blank row is added to the table.
3. In the new **Customer Description** cell, type the name of the customer.
4. Specify any other user-defined information that may be required.

   **Note:**

   - Infor Demand Planning automatically assigns a unique customer code.
   - Up to five items of user-defined information can be specified for a customer, provided that the corresponding user-defined fields of the Customer table have been made editable.
   - Instead of adding customers manually, you can use Infor Demand Planning's automated importing feature to import a list of customers.

## Editing a customer

You can change the name and supply Channel of a customer, and any editable user-defined information related to that customer.

1. In Database Administration, select **Product Admin > Order Book > Customers**.
   The Customers dialog box is displayed, showing a table of the existing customers.
2. To edit any blue cell, click the cell, type or select the new value, then click outside the cell.

## Deleting a customer

1. In Database Administration, select **Product Admin > Order Book > Customers**.
   The Customers dialog box is displayed, showing a table of the existing customers.
2. Click the customer you want to delete.
3. Select **Edit > Remove Customer**.

   **Note:**

   - You cannot delete a customer who is currently referenced in the order book.
   - You can use the floating Customers toolbar instead of the **Edit** menu.

## Adding a customer order to the Order Book

1 In Database Administration, select **Product Admin > Order Book > Order Book**.
The Order Book dialog box is displayed, showing all existing orders in the Order Book.

2 Select **Edit > Add Order**. A blank row is added to the Order Book dialog box.

3 To edit any cell in the new order (other than the Order Book Ref), click the cell, type or select the required value, then click outside the cell. Alternatively, click any cell in the order then, select **Edit > Detail** to open the Order Book (Details) dialog box.

In either case, you must specify this information:

- The Channel Product reference number, or the Product code and Channel ID.
- The customer code of the customer who placed the order.
- The order's ship date and, optionally, the date it is due at the customer.
- The good quantity.
- The purchase order number (optional).
- Any other user-defined information.

4 Select **Edit > Save Changes**.

**Note:**

- Infor Demand Planning prompts you to add a customer if none has yet been defined.
- The content of the Order Book and the Order Book (Details) dialog boxes depends on which fields of the Order Book table have been made active in the application defaults; unused fields are not shown, read-only fields are grey, and in the Order Book dialog most editable fields are blue.
- Up to five items of user-defined information can be specified for a customer order, provided that the corresponding user-defined fields of the Order Book table have been made editable in the application defaults.
- You can use the floating Order Book toolbar instead of the **Edit** menu.

## Editing a customer order in the Order Book

1 In Database Administration, select **Product Admin > Order Book > Order Book**.

2 To edit any value in the Order Book, click its cell, type or select the new value, then click outside the cell. Alternatively, if you want to edit several cells in a particular order, click any cell in the order then, select **Edit > Details** to open the Order Book (Details) dialog box.

3 When you have finished, select **Edit > Save Changes**.

## Deleting a customer order from the Order Book

1 In Database Administration, select **Product Admin > Order Book > Order Book**.

2 Click the order you want to delete then, select **Edit > Remove Order**.
3 Click **Yes** to confirm.

# Sales and Operations Planner

## Configuring Sales and Operations Planner

Sales & Operations Planner (S&OP) is usually configured when the database is set up.

**Note:**

- You can enable Sales Budgeting & Tracking (SBT) at the same time as enabling S&OP.
- The database's application defaults are usually set up so that every channel product that you import or create is automatically enabled for the S&OP and SBT functions that you have configured.
- If you reconfigure S&OP after adding channel products to the database, you must explicitly reinitialize the S&OP database tables to add rows for these channel products.

1 Enable the required S&OP functions.
See "Enabling S&OP" on page 202.
2 Specify which S&OP plans you want.
See "Specifying which S&OP plans to store" on page 203.
3 If you include the S&OP inventory plan, you must specify on which of the selected S&OP sales plans it is based.
See "Specifying which sales plan underlies the inventory plan" on page 203.

## Enabling S&OP

1 Select **DB Admin > System > System Data**.
The System Data dialog box is displayed.
2 In **SOP Control**, select one of these values:
   - **Forecasting Only (SBT)**, to enable the Sales Budget and Tracking function.
   - **Full SOP**, to enable full S&OP Sales, Requirements and Inventory functions.
   - **Full SBT and SOP**, to enable all SBT and S&OP Sales, Requirements and Inventory functions.
   - **S&OP Sales Only**, to enable S&OP Sales functions (but not S&OP Requirements or S&OP Inventory).
   - **SBT & S&OP Sales Only**, to enable SBT and also S&OP Sales functions.
   - **Weekly S&OP Sales Only**, to enable weekly S&OP Sales functions.

- **SBT & Weekly S&OP Sales Only**, to enable SBT and weekly S&OP Sales functions.
- **Full Weekly S&OP**, to enable full weekly S&OP Sales, Requirements and Inventory functions.
- **SBT & Full Weekly S&OP**, to enable all SBT and weekly S&OP Sales, Requirements and Inventory functions.

Changing this setting affects the value of the **S&OP Data Stored (St)** field. See "S&OP Data Stored (St)".

3 Click **OK**.

## Specifying which S&OP plans to store

1 Select **DB Admin > System > Set Up S&OP > Plans to Store**.

2 Under Plans To Store in the Plans To Store dialog box, specify whether you require the following plans:

- S&OP Sales Plan 101: Net Forecast, including Customer Forecast
- S&OP Sales Plan 102: DRP Requirements, including Dependent Demand
- S&OP Sales Plan 103: Statistical Forecast
- S&OP Sales Plan 104: Total Demand, that is, 101 + 102
- S&OP Requirements Plan 101: Requirements Orders
- S&OP Inventory Plan 101: Inventory

S&OP Requirements and Inventory plans are available as options only if full S&OP functions have been enabled.

3 Click **OK**.

## Specifying which sales plan underlies the inventory plan

1 Select **DB Admin > System > System Data**.

2 In the **Sales Plan for Inventory Calculation** list in the System Data dialog box, select the sales plan on which the inventory plan is based. Depending on which plans you have decided to store, this can be one of the following:

- S&OP Sales Plan 101: Net Forecast, including Customer Forecast
- S&OP Sales Plan 102: DRP Requirements, including Dependent Demand
- S&OP Sales Plan 103: Statistical Forecast
- S&OP Sales Plan 104: Total Demand, that is, 101 + 102

Changing this setting affects the value of the **Sales Plan For Inventory Calculation** field of the System table. See "Sales Plan For Inventory Calculation (St)".

3 Click **OK**.

# Enabling Channel Products for S&OP and SBT

Typically, the application defaults ensure that when new channel products are added to the database, they are automatically enabled for all S&OP and SBT functions that have been configured. This is achieved by configuring the application defaults so that the default initial value of Store SOP Data (CPt) is "1". See "Store SOP Data (CPt)" and "Editing application defaults" on page 70.

However, if a channel product is not enabled, you can enable it by editing the Channel Products table.

1 In Database Administration, select the required channel products and perform these actions for the selected channel products:
   a Select the check box in the **Store SOP Data** cell.
   b Optionally, for SBT functions, in the **SOP Offset Periods** cell, specify the offset, in periods, between the SBT sales plan values and the period forecast values.

   See "Editing the Channel Products table" on page 116.

2 If S&OP functions are already in use, reinitialize the S&OP tables.

   This is necessary because the S&OP tables require new rows for the newly enabled channel products. See "Reinitializing sales and Operations Planner" on page 204.

   **Caution:** If the S&OP tables contain data that you do not want to lose, export the data before you reinitialize S&OP, then import it again afterwards.

   See "Configuring Sales and Operations Planner" on page 202 and "Configuring Sales Budgeting && Tracking" on page 458.

# Reinitializing sales and Operations Planner

Reinitializing the S&OP database tables clears all the existing plan data and ensures that there are rows for every channel product that has been enabled for S&OP functions. See "Enabling Channel Products for S&OP and SBT" on page 204.

You may need to reinitialize the S&OP tables if one of these situations occur:

- After channel products have been added to the database, you have reconfigured S&OP.
- You have newly enabled some channel products for S&OP.

1 In Database Administration, select **DB Admin > System > Set Up SOP > Set Up SOP**.

   **Caution:** If the S&OP tables contain data that you do not want to lose, you should export the data before you reinitialize S&OP, then import it again.

2 Click **Yes** to confirm.

# Collaborate

## About Collaborate

Infor Demand Planning Collaborate is a Web-based application that replicates a subset of the functionality of the Infor Demand Planning Demand Forecaster and Infor Demand Planning Replenishment Planner modules. It enables users to access databases via an Internet or extranet connection. Some features of Collaborate are managed within Database Administration.

### Collaborate's data displays

Collaborate has the ability to display selected database fields to particular users. There are two pages within Collaborate where such database fields can be displayed:

- Information

The Information page can display a wide selection of fields from the Products and Channel Products tables.

- Schedule Worksheet

The lower part of the Schedule Worksheet page, termed the Worksheet Manager, can display up to ten fields from the following tables:

- Products table
- Channel Products table
- Product Notes table (can contain a 255-character note for each Product)
- Collaborate Schedule Worksheet Manager CP Status table (can contain a 255-character status description for each Channel Product)

The specific fields for each user are configured within Database Administration. Fields that are marked as editable in the application defaults are editable within Collaborate.

See "About application defaults" on page 70.

### Collaborate's report templates

Report templates are used in Collaborate to assist in the presentation of Sales & Operations Planner, Net Forecast Change, Schedule Summary or Demand Planning Monitor reports. Although these templates can be created, edited and deleted individually within the Collaborate, you can delete several at once only within Database Administration.

## Configuring Collaborate's Information page

You can specify which fields of the Products and Channel Products tables are displayed to particular users in Collaborate's Information page.

1. In Database Administration, select **DB Admin > System > Collaborate > Collaborate Information Page Defaults**.
   The Collaborate Defaults dialog box is displayed.
2. In the **User** box, select the user, or one of the users, you want to configure.
3. On the **Product fields** tab, select the **Display** check boxes of the Product fields you want to include, and on the **Channel Product fields** tab, select the **Display** check boxes of the Channel Product fields you want to include.

   You can use the **Move** buttons to change the order in which the fields are displayed in Collaborate.
4. To apply these fields only to the selected user, click **Apply**. To apply these fields to more than one user, click **Apply to**, select the users you want, then click **OK**.

   You are prompted to save changes for the selected user when moving from one tab to another.

## Configuring Collaborate's Schedule Worksheet page

You can specify up to ten database fields to be displayed to particular users in the Worksheet Manager part of the Schedule Worksheet page in Infor Demand Planning Collaborative Replenishment Planner.

1. In Database Administration, select **DB Admin > System > Collaborate > Collaborate Schedule Worksheet Manager Options**.
   The Collaborate Schedule Worksheet Manager Options dialog box is displayed.
2. In the **User** box, select the user, or one of the users you want to configure.
3. Select the **Display** check boxes of up to ten fields.

   You can use the **Move** buttons to change the order in which the fields are displayed in Collaborate.
4. To apply these fields only to the selected user, click **Apply**. To apply these fields to more than one user, click **Apply to**, select the users you want, then click **OK**.

   - You can specify a maximum of ten fields for each user.
   - Fields that have been configured as editable within the application defaults can be edited in the Schedule Worksheet page; otherwise, they are merely displayed.

## Adding an initial order status

1. In Database Administration, select **DB Admin > System > Initial Order Status**.
   The Initial Order Status dialog box shows the existing codes.
2. Select **Edit > Add New Initial Order Status**.

   You can use the floating Initial Order Status toolbar instead of the Edit menu.

A blank row is added to the table.

3 Type a short code to identify the initial order status (up to 2 characters).

4 Type a description of the new initial order status (up to 40 characters).

## Editing an initial order status

You can change the code and name of an initial order status.

1 In Database Administration, select **DB Admin > System > Initial Order Status**.
The Initial Order Status dialog box shows the existing codes.

2 Click the initial order status cell you want to edit, then type a new code and/or description as required.

## Deleting an initial order status

1 In Database Administration, select **DB Admin > System > Initial Order Status**.
The Initial Order Status dialog box shows the existing codes.

2 Click the initial order status you want to delete.

3 Select **Edit > Remove Initial Order Status**.
You can use the floating Initial Order Status toolbar instead of the **Edit** menu.

## Deleting Collaborate report templates

1 In Database Administration, select **DB Admin > Delete Collaborate Report Templates**.
The Delete Collaborate Report Templates dialog box is displayed.

2 Select the type of report template you want to delete:

- Collaborate S&OP Report
- Collaborate Net Forecast Change Report

3 Select the report templates you want to delete. To select all the listed templates, click **Select All**.

4 Click **Delete**, then click **Yes** to confirm.

- Stewards can delete any public template and their own private templates. Other users can delete only their private templates.
- If Database Administration does not allow you to delete a particular type of report template, this may be because you are not licensed to use the Collaborate module that produces templates of that type, or you do not have the system access privilege needed to delete templates of that type.

# Demand Forecaster

5

## About Demand Forecaster

The principal uses of the Demand Forecaster (DF)module are:

- To generate and edit statistical forecast models.
- To apply market intelligence.
- To define and apply promotions.
- To report and review the accuracy of the net forecast.

Sales budgeting and tracking (SBT) reports enable you to track actual sales against the forecast and to create and monitor sales budgets.

See "About Sales Budgeting and Tracking" on page 457.

## About Bayesian theory and the Dynamic Linear Model

The Bayesian method was developed by the Reverend Thomas Bayes over 200 years ago. The essence of Bayes is how a belief may be modified in outcome in the light of new evidence: ‘belief’ and ‘evidence’ may be based on hard facts, but they are just as likely to be based on a more subjective view. The latter concept does not fit easily into the world of science; it does however closely resemble the real world where the question - ‘how many packs of a new flavor of snack will we sell next month?’ cannot be answered without subjective input.

The Dynamic Linear Model is the mathematical construct used to model a time series and incorporate and quantify a subjective input. The advantage of the DLM is that it is a superset of the existing techniques and has been structured to support the Bayesian concept from inception.

At a basic level, the Bayes theorem shows how the chances of an event happening are altered by the occurrence of another event. Given a situation with hard evidence it is easy to see how this may be applied, for example, what is the probability of picking an ace from a pack of cards, given that the 3 of clubs, the ace of hearts and the 6 of spades have already been drawn?

However, there is another, more powerful, way of interpreting Bayes’ theorem. A belief in an initial theory, for example, how many packs of the new flavor snack could be sold, is firstly influenced by the

results from the last time a new flavor was launched. It is subsequently influenced by the early sales figures as the product is rolled out. Bayes' theorem then turns into a recipe, highlighting how the original, "prior" belief should be updated in the light of the new evidence.

### Example

Suppose a researcher is conducting an experiment in which he is aware that the results are affected by whichever one of many existing alternatives prevails. Although he is not certain as to which one of these alternatives will ultimately prevail, nevertheless he has some information on which he is willing to make a subjective judgement concerning the probabilities of the alternatives. Thus he assigns probabilities to all the alternatives before obtaining the experimental evidence.

Since these probabilities primarily affect the researcher's judgement before an actual occurrence, they are known as prior probabilities. Now the researcher is in a position to obtain experimental evidence by collecting a set of data, and therefore the conditional probabilities can be computed. These probabilities are known as posterior probabilities in the sense that they are determined after the experimental evidence has been obtained.

See "Thomas Bayes".

# About the Exception view pane

Demand Planning Exception Alerting provides management by exception logic to the Core user. Time to plan is reduced by alerting to problem areas.

The floating Exceptions View pane is enabled. When a planner select channel product, each channel product in the selection is checked. The enabled exceptions that are triggered by the current CP are identified.

Exceptions are grouped by Severity. Drilling down into each severity displays the Exception Views in that severity and the number of Channel Products in the Exception, based on the current selection.

The number of Channel Products in each severity is also displayed.

Once the Exceptions have been expanded, any Channel Product can be selected by right-clicking selecting **Select Channel Product**.

After a Channel Product within an Exception has been selected, the previous grouping can be reselected by right-clicking and selecting **Reselect Group**.

Channel Products can be removed from Exceptions by selecting the Channel Product, right-clicking and selecting **Delete Exception View**. Alternatively, the Exception can be removed by selecting the Exception, right-clicking and selecting **Delete Exception Views**. In the latter case, the Channel Products that listed in the Exception are removed based on the current selection.

Via the Display section on the **Home** tab of the ribbon, the Exception pane can be set to be displayed or not.

It can also be resized and hidden.

# Alternate Channel Matrices

## Applying an alternate matrix to individual Channel Products

Once established, the Channel matrix applied to a Product can only be changed in the Database Administration module. However, an alternative matrix may be applied to a Product on a temporary basis for the purpose of balancing forecast changes through the alternative structure.

See "About Channel matrices" on page 78.

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Model > Alternative Forecast Balance**.
   The Apply Alternate Matrix dialog box is displayed.
4. Click the required matrix in the Matrix Description panel.
5. Optionally, click **Details** to review the structure of the selected matrix. This includes the matrix ID, its description, the component Channels and their behaviors. Click **OK** to return to the Apply Alternate Matrix dialog box.
6. Click **OK** to start the process. A log is displayed in the Output pane.

   **Note:**

   - If, having applied an alternate matrix, you want to revert to the CP's usual matrix, follow this procedure but select the **Use current matrix** check box at step 4. This causes Infor Demand Planning to balance using the matrix defined in the "Channel Matrix Code (Pt)" field. Any selection in the Matrix Description panel is disregarded.
   - To close the Output pane, select **View > Output**.

## Applying an alternate matrix to several Channel Products

Once established, the Channel matrix applied to a Product can only be changed in the Database Administration module. However, an alternative matrix may be applied to a group of Products on a temporary basis for the purpose of balancing forecast changes through the alternative structure.

See "About Channel matrices" on page 78.

1. In Demand Forecaster, select the desired Channel Products.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Alternative Channel Matrix**.
   The Apply Alternate Matrix dialog box is displayed.
3. Click the required matrix in the Matrix Description panel.

4 Optionally, click **Details** to review the structure of the selected matrix. This includes the matrix ID, its description, the component Channels and their behaviors. Click **OK** to return to the Apply Alternate Matrix dialog box.

5 Click **OK** to start the process. A log is displayed in the Output pane.

**Note:**

- If, having applied an alternate matrix, you want to revert to each CP's usual matrix, follow this procedure but select the **Use current matrix** check box at step 3. This causes Infor Demand Planning to balance using the matrix defined in the "Channel Matrix Code (Pt)" field. Any selection in the Matrix Description panel is disregarded.
- To close the Output pane, select **View > Output**.

# The Forecast Model

## About the forecast model

The principal modeling technique used is known as Bayesian Learning and the Dynamic Linear Model (DLM). The DLM is particularly effective at forecasting product sales in changing environments, and is quick to spot shifts in trend or seasonal patterns as well as changes in the uncertainty of forecasts.

See "About Bayesian theory and the Dynamic Linear Model" on page 209.

You can establish forecast models inside the system and manipulate as necessary until you are satisfied that an acceptable forecast has been achieved. This manipulation can take the form of changes to level/ growth and seasonality as well as the addition of market intelligence.

See "About market intelligence" on page 251.

Once established, a forecast is maintained at period end by the system when the actual period performance is compared to the expected forecast.

### How is seasonality calculated?

The system uses Fourier series (sine and cosine waves) to detect seasonality. A model is expressed as containing a number of model terms. Level and growth are model terms and peaks and troughs (seasonality) come in pairs or harmonics.

See "About seasonality calculations" on page 213.

### Slow Moving Products

A special forecasting case is Slow Moving Products (SMPs). An SMP is defined as being a live item on the database with a user defined minimum number of periods of zero or negative history within the last year. The default value is six.

All periods where no sales were made are ignored and a single term (level) DLM forecast, through the periods with any demand, produced. When looking at the graph of an SMP in the Edit Forecasts Graph window, the top forecast line (red) represents the estimate of the next demand event that will occur. The bottom forecast line (green) is this estimate of the next event multiplied by the estimate of an event happening, and therefore represents the best estimate of average period sales.

See "About Slow Moving Products" on page 271.

## About seasonality calculations

Demand Forecaster uses Fourier Series (Sine and Cosine waves) to detect seasonality. A model is expressed as containing a certain number of model terms. Level and growth are model terms and peaks and troughs (seasonality) come in pairs or harmonics.

Not all pairs of model terms (harmonics) are said to be significant. Significant means that when using that harmonic the forecast error is significantly reduced, hence better representing the adjusted demand history.

Assuming that there is sufficient history for the system to generate a forecast, the simplest model would contain a single model term, that is a straight line only containing a level. This would have no detectable growth, either positive or negative.

Next would be a model with both level and growth. This model still contains a straight line but with a gradient, two model terms. Growth is often described as a number of units increase (or decrease) per period and is expressed either as a number or a percentage of the level.

A Fourier analysis is applied to discover any seasonality (regular variations) in the historical data. The Fourier analysis attempts to match the data by superimposing sine and cosine waves of various amplitudes, frequencies and phase angles.

If the model has a seasonal profile it is described by additional pairs of terms, which are the coefficients of cosine and sine waves of increasing frequency. This pair of terms is equivalent to the amplitude and phase angle of a sine wave, but it is easier to deal mathematically with the terms as two sinusoidal waves that are always 90 degrees out of phase with each other. A forecast model is considered seasonal if it has more than 2 terms in the model.

The most complex model is 13 model terms for a twelve period database (Level + Growth + 6 harmonics but the term in the last harmonic will always be zero). In a 13 period database, the maximum number of terms will be 14 as the condition that caused the term in the last harmonic will no longer exist.

## Fitting a forecast model to individual Channel Products

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.

3 With the Graph window selected, select **Model > Fit Model**.
If the calculation generates exception conditions, the Exception Views dialog box is displayed.

4 Click **OK** to continue.

5 Select **File > Save**.

**Note:**

- Although this process may generate and display exceptions conditions, it will not save any exception views to the database.
- The fields normally updated during the period end roll will not be updated if the Channel Product has an invalid statistical model. The offending Channel Product will be include in the "INVALID STAT" exception view.

## Fitting a forecast model to several Channel Products

1 In Demand Forecaster, select the desired Products and Channels.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Generate Forecasts**.
The Fit DLM dialog box is displayed.

3 On the **Main** tab, select the **Clear market intelligence** check box if you want to delete any existing market intelligence.

4 Specify this information:

**Clear future trend changes**
Select this check box if you want to clear out any future changes stored against the selected Channel Products.

**Recalculate history start date**
Select this check box if you want to reposition the history length marker at the first non-zero history value.

**Recalculate annual forecast**
Select this check box if you want to recalculate the extra 10 years of annual figures as well as the periods up to the forecast horizon.

**Permanently remove all Independent Variables**
Select this check box if you want to remove from the database all of the independent variables applied to the selected Channel Products.

5 On the **Parameters** tab, select the control fields required. As these parameters are key to the generation of a successful forecast, they should be changed only with caution and a full understanding of their effects on the forecast.
See "About parameter sensitivity" on page 222.

6 On the **Mask** tab, select the mask required.
See "About history" on page 161.

7 Click **OK**. Any exception views created are displayed in the Output panel at the bottom of the window.

**Note:** The fields normally updated during the period end roll will not be updated if the Channel Product has an invalid statistical model. The offending Channel Product is included in the "INVALID STAT" exception view.

## Summary of the CP fields updated when fitting a model

The following Channel Products table fields are automatically updated when running Fit DLM:

| | |
|---|---|
| "Annual Average Safety Stock (CPt)" | "Annualised Forecast (CPt)" |
| "Current Level (CPt)" | "Date Forecast Last Changed (CPt)" |
| "Days Cover (CPt)" | "Discontinuation Date (CPt)" |
| "First Forecast Period (CPt)" | "Forecast For Next Year (CPt)" |
| "Future Change Level Or Growth (CPt)" | "Growth (CPt)" |
| "Model Calculation Date (CPt)" | "Model Start Date (CPt)" |
| "Number Of Coefficients (CPt)" | "Obsolescence Quantity (CPt)" |
| "Preferred Lot Quantity (CPt)" | "Re-order Point (CPt)" |
| "Replenishment Period (CPt)" | "Safety Stock Units (CPt)" |
| "Estimated Annual Usage (CPt)" | "SMP Average Event (CPt)" |
| "SMP Chance Of Monthly Event (CPt)" | "Standard Deviation (CPt)" |
| "Standard Deviation Covering The Re-supply Lead Time (CPt)" | "Theoretical Stock On Hand (CPt)" |

**Note:**

- If "Automatically Update Successor (CPt)" is true, then the "Introduction Date (CPt)" is updated for the successor Product to reflect any changes.
- The fields normally updated during the period end roll will not be updated if the Channel Product has an invalid statistical model. The offending Channel Product is included in the "INVALID STAT" exception view.

## Summary of the exception views related to fitting a model

The following exception views may be created when fitting a model:

| | | |
|---|---|---|
| "CAUSAL MODEL INVALID" | "FUT DISCON" | "FUT EFFECTIVITY" |
| "FUT PROMOTION" | "INVALID BAYES FACTOR" | "INVALID SS CODE" |
| "INVALID TPSS CODE" | "LUMPY HISTORY" | "NO DLM FIT" |

| | | |
|---|---|---|
| "NO FIT DEAD" | "NO FIT NSP" | "NO FIT UFP" |
| "OBSOLESCENCE" | "OHS OVER MAX" | "OHS OVER SHELF" |
| "OUTLIERS" | "PASSED DISCO" | "PASSED EFF" |
| "POSSIBLE NORMAL" | "SHORT HISTORY" | "SMP DEMAND ZERO" |
| "SMP LONG GAP" | "SMP SIG DIFF" | "SPARSE HISTORY" |
| "STEP CHANGE" | "TPSS LIMIT" | "TREND SHIFT" |

## About Periodic Item Forecasting

Periodic Items are those items that sell in a predictable manner, but only for a few months of the year: sunscreen for example.

These differ from seasonal items as they have a zero forecast for a selection of certain months. These are different to slow-moving products as the zero data points are contiguous, whereas with SMPs the zero values are sporadic.

Periodic item forecasting can be applied in two different ways:

A periodic detection percentage, as seen in Data window Parameters, can be set which will identify sales and non-sales periods based on their percentage of overall demand.

A stored periodic pattern can be created (see Model>Periodic pattern in Edit Forecasts) and applied to the item.

Stored periodic pattern can also be applied as part of an Alternate Model Forecast.

Items can use a periodic detection percentage or a stored periodic pattern.

By default, periodic item forecasting is turned off.

# Masking History

## Masking history for individual Channel Products

Demand Forecaster allows any unrepresentative periods of history to be masked so that these periods are ignored by the forecasting process, allowing a forecast model to be produced from the remaining representative data. Alternatively the demand history may be edited to give a more "realistic" pattern of demand.

**1** In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 In the Graph window, do one of the following:

- Right-click a single history period, then click **Mask out history** on the shortcut menu.
- Click and drag horizontally across a range of history periods (identified by a yellow bar along the x-axis). Right-click the selected periods, then click **Mask out history** on the shortcut menu.

4 Click **Yes** to confirm the correct period or periods are selected.
The masked periods are identified by ⊗ symbols over the data points.

5 Select **Model > Fit Model** to recalculate the model, ignoring the masked periods.

**Note:**

- To remove a mask, select one or more periods as before, then right-click the periods, click **Remove mask** on the shortcut menu, and click **Yes** to confirm.
- To make it easier to select individual periods, select **Tools > Zoom in**.

## Masking history for several Channel Products

Demand Forecaster allows any unrepresentative periods of history to be masked so that these periods are ignored by the forecasting process, allowing a forecast model to be produced from the remaining representative data. Alternatively the history may be edited using the adjusted demand history option to give a more "realistic" pattern of demand.

1 In Demand Forecaster, select the desired Products and Channels.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Generate Forecasts**.
The Fit DLM dialog box is displayed.

3 Select the **Masks** tab.

4 Click the periods to mask and type "1" in the cells to mask for this run of Fit DLM. The mask applied will also be saved against all the Channel Products processed so that you can use it in the future.

5 Select the Mask Type you want to use.

6 Click **OK** to start the model fitting process.
See "About the forecast model" on page 212.

# Forecasting Periodicity

## About forecasting periodicity

The periodicity of the forecast is an area of flexibility within the Demand Forecaster and Collaborative Demand Forecaster modules. Statistical forecast calculations are always made at monthly intervals. This frequency offers the most advantageous combination of stability and responsiveness. However, control may be exercised at more frequent intervals. The system is able to record sales demand at weekly or monthly intervals. If sales are recorded weekly, then these values may be regularly compared to forecast and, at the period end, aggregated to a monthly figure and used to generate a further forecast. The monthly forecast generated by the system may be interpolated to weekly figures for comparison and control purposes. In order to utilize this functionality it is necessary to establish the database with this in mind.

A database may be established which will maintain a forecast at a weekly level. This facility is initially controlled by "Level Of Forecast Control (St)". There are several options to consider when a weekly forecasting option is selected.

Under a weekly-controlled database, the statistical forecast is always monthly. This is then interpolated to weekly periods. Market intelligence (MI) can be added to this forecast figure in either weekly or monthly time periods. In a monthly-controlled database MI can only be entered and stored in monthly periods.

If a weekly-controlled database is set to allow daily market intelligence ("Allow Daily MI (St)" is true) and valid values exists in the "Daily Forecast Horizon In Weeks (St)" and "Weekly Forecast Horizon (St)" fields, you can add, view and manipulate daily market intelligence in the Table page of Collaborative Demand Forecaster. The daily option is not available when using temporary forecast groups, however.

### Calendars

For a weekly-controlled database, the demand calendar must be an integer number of weeks per period and the same calendar must be used for every Channel.

### Interpolation vectors

Interpolation vectors are used to express a monthly forecast in weekly buckets and a weekly forecast in days. These vectors only apply to the forecast, and are never applied to historical information, as monthly history is never interpolated into weeks. If weekly history is required, it must be loaded separately. Interpolation vectors are stored as a period end date and a value. This means that they are not rolled at month end, and therefore, must periodically be extended manually.

Interpolation vectors may be assembled manually in the Database Administration module. Additionally, the facility exists within the Demand Forecaster module to assemble interpolation vectors automatically from historical data.

See "About interpolation vectors" on page 182.

## History

Weekly history is not a requirement for a weekly-controlled database. The weekly data is only used to accumulate to monthly data at month end, and for information purposes, such as, analysing the pattern of sales throughout the month. For the initial database population, monthly history must be loaded due to the fact that this data is required to generate the statistical model. If there is no weekly history, then the Edit Forecasts option, when displaying weekly data (and other reporting tools), will display only forecast information.

## Period end processing

At period end there are three fields that can potentially be used:

- "Accumulate Daily History To Weeks (Ct)"
- "Accumulate Weekly History To Months (Ct)"
- "Accumulate Daily History To Months (Ct)"

These fields are only relevant at period end, where they are used to control the potential aggregation of daily history to weeks and/or months, and the aggregation of weekly history to months. These table fields are not used in any of the interactive forecast editing/reporting tools.

Sales, Demand, and/or Adjusted Demand history is posted firstly to the Import Raw Sales table and then moved to the Open Daily, Open Weekly, and Open Monthly tables. This transfer will utilize the above fields in the following way. A Channel Product is rejected if:

- Weekly data is being imported and "Accumulate Daily History To Weeks (Ct)" is true.
- Monthly data is being imported and "Accumulate Weekly History To Months (Ct)" is true.
- Monthly data is being imported and "Accumulate Daily History To Months (Ct)" is true.

## Databases

There are three types of weekly-controlled database that may be encountered:

| Database Required | Set up |
|---|---|
| Store weekly and monthly history, no accumulation from weeks to months at period end. | "Accumulate Weekly History To Months (Ct)"= 1 |
| Store weekly and monthly history, accumulate from weeks to months at period end. | "Accumulate Weekly History To Months (Ct)"= 0 |
| Store monthly history only. | "Weekly History Retained (Weeks) (St)" = 0 |

See "About monthly- and weekly-controlled databases" on page 67.

### System table fields

- "Weekly Forecast Interpolation (St)":If "Level Of Forecast Control (St)" is set to weekly, using this switch will allow a forecast to be interpolated into weeks. This allows the population of the weekly net forecast table and allows the forecast display and reporting tools to operate on weekly information.
- "Weekly History Retained (Weeks) (St)":controls the number of weeks of history to be shown in the Edit Forecasts windows. It is subject to a maximum of 212 weeks. If this field is zero, then no weekly history will exist on the database.

**Note:** If "Level Of Forecast Control (St)" is set to 1 (weekly), "Weekly Forecast Interpolation (St)" must also be set to 1 (true).

# Discount Factors

## About discount factors

Discount factors, also known as smoothing rates, are parameters that are used in the BATS forecasting calculations. They determine how much weight or emphasis the calculations put on recent data.

See "About Bayesian theory and the Dynamic Linear Model" on page 209.

Each discount factor can have a value of between 0 and 1. A value of 1 represents a static model in which all data points are given equal weight; a value closer to 0 gives more weight to recent data.

In order to consistently apply these discount factors to a range of Channel Products, you can define sets of factors in the Database Administration module. You can then apply a particular set to selected Channel Products by editing the "Discount Factor Code (CPt)" field.

Each set comprises eight discount factors; four standard factors and four matching intervention factors:

| Standard factors | Intervention factors |
|---|---|
| Trend Discount factor to be applied to the trend elements of the forecast (level and growth) when the forecast is created, or revised at period end. The default value of 1 represents a static model. | Intervention Trend Rapid discount factor which will be applied to revise the trend elements of the forecast (level and growth). It should typically be set lower than the standard discount factor. |
| Seasonal Discount factor to be applied to the seasonal model coefficients when the forecast is created, or revised at period end. The default value of 1 represents a static model. | Intervention Seasonal Rapid discount factor to be applied to revise the seasonal coefficients of the forecast. It should typically be set lower than the standard discount factor. |
| Variance Discount factor to be applied to the variance when the forecast is created, or revised at period end. The default value of 1 represents a static model. | Intervention Variance Rapid discount factor which will be applied to revise the variance estimate of the forecast. It should typically be set lower than the standard discount factor. |

| | |
|---|---|
| Regression Discount factor to be applied to the independent variables used in causal modeling during the dynamic linear modeling (DLM) process. | Intervention Regression Rapid discount factor which will be applied to independent variables used in causal modeling during the DLM process. |

Intervention factors can be applied in two circumstances:

- If the item has a tracking signal. The intervention factors are applied between the detected step change and the point at which the tracking signal is issued. The maximum number of periods used to detect tracking signals is defined by the "Run Length Limit (St)" field, and thus that field acts as a maximum limit to the number of periods to be used along with this rapid discount factor to revise the forecast.
- If the corresponding threshold is broken. "Scale Inflation Factor (St)" stores a factor, which is used to develop an alternative model to monitor the increase in the estimate of variance. This comparison of the two models provides a Bayes factor which is compared to the value held in the "Scale Inflation Threshold (St)" field, thus providing a tracking signal for items where there is believed to be a significant change in the variance over a period of months.

## Default sets of discount factors

Infor Demand Planning comes with (at least) two default sets of discount factors:

- Default static settings ("Discount Factor Code (CPt)" = 0)

These are the default factors for Normal Products.

| | | | |
|---|---|---|---|
| Trend | 1.0 | Intervention Trend | 1.0 |
| Seasonal | 1.0 | Intervention Seasonal | 1.0 |
| Variance | 1.0 | Intervention Variance | 1.0 |
| Regression | 1.0 | Intervention Regression | 1.0 |

- Default SMP settings ("Discount Factor Code (CPt)" = 1)

These are the default factors for Slow Moving Products.

| | | | |
|---|---|---|---|
| Trend | 0.6 | Intervention Trend | 1.0 |
| Seasonal | 1.0 | Intervention Seasonal | 1.0 |
| Variance | 0.6 | Intervention Variance | 1.0 |
| Regression | 1.0 | Intervention Regression | 1.0 |

These sets of discount factors can be automatically applied when a model is fitted to a Channel Product in the Demand Forecaster module, if the process detects that the status of the item has changed. If an SMP is changed to a Normal product, its "Discount Factor Code (CPt)" is set to 0; conversely, if a Normal Product is changed to an SMP, its "Discount Factor Code (CPt)" is set to 1.

# Parameter Sensitivity

## About parameter sensitivity

Manipulating the statistical models in order to get the best statistical forecasts possible requires an understanding of the parameters involved:

### Monitoring parameters

| Parameter Field | Table | Sensible Values |
|---|---|---|
| Scale Inflation | System | 1 <= 100 |
| Scale Inflation Threshold | System | 0 < 1 |
| Level Inflation Factor | Channel Product | 1 <= 100 |
| Level Inflation Threshold | Channel Product | 0 < 1 |
| Run Length Limit | System | 1 < 10 |

These parameters are used to control the sensitivity of the forecast monitoring. Monitoring refers to checking for outliers, tracking signals and step-changes. The two parameters referring to the scale inflation operate together, and the two parameters referring to the level operate together.

To increase the sensitivity of the monitoring, decrease the factor and/or increase the threshold. This means that more outliers and tracking signals are likely to be flagged. To decrease the sensitivity of the monitoring increase the factor and/or decrease the threshold.

### Model selection parameters

| Parameter Field | Table | Sensible Values |
|---|---|---|
| Maximum No. Of Model Terms | Channel Product | 1,2,4,6,8,10,12, or 14 |
| Confidence % For Seasonality | Channel Product | 0, 90, 95, 97.5, 99, 99.5 |
| Lumpy History Threshold | System | 0 < 10 |

The form that the model takes can be manipulated through the "Maximum Model Terms (CPt)" and the "Confidence For Seasonality (CPt)" fields. The maximum number of model terms values correspond to the maximum number of coefficients that are allowed in the model prior to significance testing on seasonal terms.

The level of the harmonic significance test is determined by the "Confidence For Seasonality (CPt)" field. To prevent any harmonic selection occurring, set this value to 0 (there is no test for significance). The higher this value the more significant a harmonic needs to be for selection, that is the higher the value, the less likely a given harmonic is to be selected.

To make the lumpy data test less sensitive, that is less likely to flag a data set as lumpy, increase the value of the "Lumpy History Threshold (St)" field.

### Model sensitivity parameters

| Parameter Field | Table | Sensible Values |
|---|---|---|
| Trend Discount Factor | Discount Factor | 0<=1 |
| Seasonal Discount Factor | Discount Factor | 0<=1 |
| Variance Discount Factor | Discount Factor | 0<=1 |
| Regression Discount Factor | Discount Factor | 0<=1 |
| Intervention Trend Discount Factor | Discount Factor | 0<=1 |
| Intervention Seasonal Discount Factor | Discount Factor | 0<=1 |
| Intervention Variance Discount Factor | Discount Factor | 0<=1 |
| Intervention Regression Discount Factor | Discount Factor | 0<=1 |

These parameters deal with the dynamic/weighting aspect of the statistical model fit. This refers to the amount of weighting given to each data point. For static models, that is making all data points equally weighted, make the discount factors 1. To increase the dynamic aspect, that is put more weight on more recent data, the discount factors should tend to, but not be set at, zero.

The routine discount factors, that is the ones without interventionin the name, should generally be set near to 1 for less dynamic behavior. The intervention discount factors are only used in certain monitoring situations where the model needs to learn quickly about a potential model change and should certainly be set lower than the routine discount factor.

### Multiplicative seasonality

The default value for this code is 0 which denotes Additive seasonality. It can be changed to Level Modulated type multiplicative seasonality by changing the code to 1. Codes 2 and 3 are reserved for future development.

### Slow moving products (SMP) specific parameters

| Parameter Field | Table | Sensible Values |
|---|---|---|
| SMP Discount Factor | System | 0<=1 |

The chance of an event calculation performed for SMPs is a dynamic calculation using the forecasting algorithms. It uses a one-term model and has been given its own specific discount factor. The "SMP Discount Factor (St)" is defaulted to be 0.8 and is effectively the equivalent of the trend discount factor. This default is significantly more dynamic than for normal items.

### Growth damping parameters

| Parameter Field | Table | Sensible Values |
|---|---|---|

| | | |
|---|---|---|
| Growth Damping Factor | Channel Product | 0< 1.2 (any higher value causes exponential growth). |
| Growth Damping Percentage | Ad-hoc in the Growth Damping Factor dialog | 0 <= 100 (this relates directly to the factor). |
| Growth Damping Level | Ad-hoc in the Growth Damping Factor dialog | No restrictions. |
| Growth Damping Growth | Ad-hoc in the Growth Damping Factor dialog | Growth damping growth and existing model growth must be the same sign. |
| Growth Damping Start Date | Channel Product | Within the forecast horizon. |
| Growth Damping End Date | Channel Product | Within the forecast horizon. |

The Growth damping factor of the forecast can be manipulated in the Edit Forecasts screens. The factor is applied to the model growth value for the duration of the damping period so a factor less than 1 will reduce the model growth whereas a value greater than 1 will increase the growth and a value of 1 will not change the model growth.

# Editing History, Forecast and MI

## About forecast editing

The Edit Forecasts option in Demand Forecaster provides a safe environment where you can experimentally adjust history and forecast data, the statistical model and market intelligence for selected Channel Products, with an instantaneous graphical display of the results. The changes you make within a session do not affect the underlying database unless or until you decide to save them.

Five windows become available:

- The graph (Graph window).
- The history and forecast in two spreadsheet-like grids (Table window).
- The history and forecast in a Fiscal Year format in a grid (Fiscal Year window).
- Various fields from the database (Data window).
- A general information and legend window, which is not editable (Information window).

Any changes you make to the data in one window is automatically reflected in the other windows. All windows need not be open at once and closing one window does not close the others. Changes you

make to any Channel Product must be saved before the last window is closed. There are buttons on the toolbar that either open any of the windows that have been closed, or position that window on top. If the window has not been closed, you can select it from the Window menu.

There is one toolbar which controls all of the four windows which appears directly below the main toolbar but can be moved by clicking and dragging on any blank (no buttons) area. Buttons may be active or greyed out depending on the window currently in use.

You may open more than one set of windows at any one time. A different Channel Product selection may be chosen in each set of windows. To avoid confusion, the title bars of all windows in the set display the current item details (Product code, description, Channel code, and Channel name).

## About negative forecasts

A forecast for any Channel Product may or may not be allowed to go negative according to the setting of the field "Allow Negative Forecasts (CPt)".

Whether or not a negative forecast is a sensible concept depends upon the nature of the business. A negative forecast may, for example, indicate seasonal returns.

If a negative forecast is not allowed for a Channel Product then any forecast that would otherwise be a negative quantity is displayed and reported as zero. In this case the aggregation of such a forecast either to a higher Channel or within a temporary or permanent forecast group is handled in the following manner:

### Example 1 - Allow negative forecast

| | Statistical Forecast | Market Intelligence | Net Forecast |
|---|---|---|---|
| CP 1 | 300 | 0 | 300 |
| CP 2 | 80 | -100 | -20 |
| Aggregated CP | 380 | -100 | 280 |

### Example 2 - Do not allow negative forecast

| | Statistical Forecast | Market Intelligence | Net Forecast |
|---|---|---|---|
| CP 1 | 300 | 0 | 300 |
| CP 2 | 80 | -100 | 0 |
| Aggregated CP | 380 | -80 | 300 |

The aggregated market intelligence in example 1 (allow negative forecast) is -100 whilst in example 2 (do not allow negative forecast) is -80. This is because the -20 net forecast for CP2 in example 1 is treated as zero.

If market intelligence is added at the aggregated level (higher Channel, TFG or PFG) which results in a negative forecast at that level, the net forecast may be displayed as the negative figure or as zero according to the setting of the field "Allow Negative Forecasts (CPt)" at that Channel Product level.

## About forecast uncertainty

The principal forecasting technique used within the Demand Forecaster module is the Dynamic Linear Model (DLM). Because of its "dynamic nature", the DLM is particularly effective at forecasting Product sales in changing environments, and is quick to spot shifts in trend or seasonal patterns as well as changes in the uncertainty of forecasts.

In order to manage this uncertainty, the system compares the calculated forecast to the actual sales demand at each period end. By means of tracking signals, the variability is monitored and intervention discount factors substituted for routine discount factors as required in order to increase the rate at which the system learns about a new trend.

See "About parameter sensitivity" on page 222.

When using the following techniques, a different mechanism is used to deal with the uncertainty involved in the creation of the new forecast.

"Applying an alternate model forecast" on page 244 Applying an alternate model forecast

"Applying future changes (level)" on page 241 Applying future changes to level

"Applying future changes (growth)" on page 241 Applying future changes to growth

"Applying an alternate forecast" on page 243 Applying an alternate forecast

To help the model learn more quickly following the application of a new technique, the component variances of the BATS statistical model will be inflated. The inflation is carried out using the factor defined in "Variance Inflation Factor (St)".

The operation of this factor is such thata value greater than one will cause the model to ‘learn’ more quickly, whilst a value less than one will cause it to ‘learn’ less quickly. In the case of Future Changes(only to level or growth) the component variances will be inflated for the changed component (level or growth) from the time of that change forward. With the other changes, the variances are inflated throughout the forecast horizon. The system will automatically reduce or inflate these variances depending on the long term accuracy of the new forecast.

## About the buttons and icons used in Edit Forecast

The following icons and buttons are displayed in the Graph Window. Other windows within Edit Forecasts display a reduced number of icons according to the functionality within the selected window.

| | |
|---|---|
| **Control Channel** | If this icon is displayed, a control Channel has been selected. This is a Channel at which forecast changes may be made without the risk of being subsequently overwritten by the effects of Channel balancing. |

| | |
|---|---|
| **Non Control Channel** | If this icon is displayed, a non-control Channel has been selected. This is a Channel at which forecast changes may be subsequently overwritten by the effects of Channel balancing. |
| **Save** | Save changes. |
| **Print** | Print the Graph, Fiscal Year, and Table windows. |
| **First** | Move to first **Product from** list box. |
| **Previous** | Move to previous **Product from** list box. |
| **Next** | Move to next **Product from** list box. |
| **Last** | Move to last **Product from** list box. |
| **Zoom In** | Zoom in - enlarge a section of the graph area. |
| **Zoom Out** | Zoom out - reduce a section of the graph area. |
| **Fit Model** | Fit model. |
| **Future Change** | Add/edit a future level or growth change. |
| **Growth Damping Factor** | Add/edit the growth damping factor. |
| **Effectivity Date** | Add/remove/move an effectivity date. |
| **Discontinuation Date** | Add/remove/move a discontinuation date. |
| **Promotional Event Weight** | Change weighting. |
| **Fiscal Year Window** | Display the Edit Forecast - Fiscal Year window. |
| **Graph Window** | Display the Edit Forecast - Graph window. |
| **Table Window** | Display the Edit Forecast - Table window. |
| **Data Window** | Display the Edit Forecast - Data window. |

## Changing multiplicative seasonality

When the initial forecast model is fitted, the system will automatically apply additive seasonality, however, there is an option to apply multiplicative seasonality if required.

Multiplicative seasonality can be described as a seasonal peak to trough difference (amplitude) increasing or decreasing through time in proportion to the underlying level of demand. This differs from additive seasonality where the peak to trough difference is constant.

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Model > Multiplicative seasonality**.
   The Multiplicative Seasonality dialog box is displayed.
4. Choose one of the two types of multiplicative seasonality currently available (Linear Expansion and Exponential Expansion are not available in this release):
   - Additive allows the model to be returned to the default setting of additive if a multiplicative option has been previously imposed.
   - Level Modulated the peak to trough difference changes depending on the underlying level of the model. For example, if the level goes down, the peak to trough difference will go down, and vice versa.
5. Click **Test** to apply the changes to the graph without exiting the dialog (this provides the opportunity to view the change and make corrections if required).
6. Click **OK** to apply the change.
7. Select **File > Save**.

## Editing forecasting data fields

It is possible to change certain forecast data fields for the selected Channel Products. Some fields, however, contain sensitive calculation factors and, although editable, changing these without a clear understanding of their function may cause unexpected alterations to forecast and safety stock calculations.

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Click the Data window.
4. Select the tab required:
   - **Base**
   - **Supercession**

- **SMP**
- **Parameters**
- **Forecast**
- **Inventory**
- **Chan Prod Info** (displayed if custom Channel Product fields have been defined)
- **Product Info** (displayed if custom Product fields have been defined)

The data presented are fields from various tables, which affect the forecast or inventory levels. Editable fields have a white edit box alongside the field description.

5 Edit the appropriate fields.

6 Select **File > Save**.

**Note:**

- When Channel Products are grouped (using the **Group** check box), the Data window only displays three tabs, **Base**, **Forecast** and **Parameters**. The other tabs contain data inapplicable to Temporary Forecast Groups and are therefore not displayed.
- When displaying information for scenario items, an extra tab will appear, labeled **Scenarios**.

# Refreshing the forecast

Changes made to the forecast during the current Edit Forecasts session may be canceled.

Select **Model > Refresh** and click **Yes**, or click the **Refresh** icon on the **Edit Forecasts toolbar** and click **Yes.**
This restores the model to the original position, i.e. up to the last save.

# Edit Forecast windows

## The Graph Window

### About the Graph window

The Graph window is one of the windows within the Edit Forecasts function. It displays a graphical representation of the history and forecast for a Channel Product. It has many features that you can use to view and manipulate the history and forecast.

The Graph window has three modes of operation, which you can access by double-clicking the left mouse button to cycle through the options. The modes are:

- Basic mode. No handles drawn on any periods or the trend line.
- Edit individual periods mode. Handles drawn on each history and forecast period.

- Edit trend line mode handles drawn at each end of the trend line (SMPs only have the first handle to allow level to be edited because there is no growth for these items).

Although the display is set by default to display a monthly periodicity, a weekly selection may be available depending upon the setting in "Level Of Forecast Control (St)".

There is a vertical grid line for every quarter year, which may be hidden. All displayed graph lines including the now line are defined within the Plot Options dialog (select Tools and Options).

The title of the graph window contains the Product code and description and the Channel code and description. The selections in the Product and Channel list boxes on the main toolbar reflect the items that are displayed in the Edit Forecasts windows.

If the **Control Channel** icon is displayed, a control Channel has been selected. This is a Channel at which forecast changes may be made without the risk of being subsequently overwritten by the effects of Channel balancing.

If the **Non Control Channel** icon is displayed, a non-control Channel has been selected. This is a Channel at which forecast changes may be subsequently overwritten by the effects of Channel balancing.

See "About balancing" on page 245.

The label for the y-axis defaults to units/month. The x-axis, by default, displays monthly period end dates. If a weekly display is possible and selected (from Tools, Display, Weekly), the y-axis is labeled by default units/week and the x-axis displays specified weekend dates. If a different weighting is selected in either case, the y-axis displays items per month or week as selected.

If selected in the **Options** box, outliers are marked on the graph by a black circle around the particular data point on the graph after running Fit Model. Periods of history that have been masked out are shown by a black circle and a black cross through the data point.

Optionally, the presence of Forecast, History and MI notes can be flagged in the Graph window. It is also possible to see the notes via tool tip tabs in the Fiscal Year window.

The Information box displays the legend for the graph. Above the legend is the information section, which contains history length, outlook, rolling 12 months forecast, current level, growth, standard deviation and the number of outliers in the history used to fit the model.

See "About the Information box" on page 236.

## Status Bar

The status bar of the application frame displays extra pieces of information when a Graph window is open and the net forecast is being manipulated, that is which period(s) are currently selected and cursor tracking (the period that the mouse is currently over and the value of adjusted demand or net forecast at that period).

## Scrolling

The Graph window has both a vertical and a horizontal scroll bar. These scroll bars scroll the graph area of the window only.

## Scaling

The scaling of the Y-axis may be changed. Both the minimum and maximum values of the Y-axis can be specified. The scale of the Y-axis is also changed if the user chooses to zoom the graph in or out. The scale of the Y-axis is specified in the Plot Options dialog (select Tools and Options).

## Zooming

Choose the range of periods to display on the graph. Choosing a smaller range of periods has the effect of ‘zooming in’ and choosing a larger range of periods has the effect of ‘zooming out’. Use the **Zoom In** and **Zoom Out** buttons on the toolbar.

## Generating a model

To generate a model using existing criteria, click **Fit model** on the toolbar or select **Model and Fit** model from the main menu.

See "About the forecast model" on page 212.

**Note:** When the Weekly option is selected, some features described above are not available.

## Periodicity

By default the periodicity displayed is monthly. Provided that the database has been appropriately established, weekly data may be displayed. This is selected through the main menu options Tools and Display. Click the required periodicity.

See "About forecasting periodicity" on page 218.

If "Level Of Forecast Control (St)" is set to monthly but with the weekly forecast interpolation set to Yes, the data may not be edited. If, however, the setting is weekly, editing is possible by adding/editing market intelligence in weekly or monthly buckets.

See "About market intelligence" on page 251.

See "About Notes" on page 257.

See "About the buttons and icons used in Edit Forecast" on page 226.

### Editing history in the Graph window

You can edit history in Edit Forecasts mode but only Adjusted Demand. Changes to the adjusted demand are allowed for group items (both permanent forecast groups and ad hoc groups), however, these changes are not spread down to the members of the group.

1. In Demand Forecaster, select the desired Product and Channel..
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
3. In the Graph window, either:
   - Double-click to display rectangles on each data point and click and drag one data point to the required position

- Click and hold down the left mouse button over the first history period in a range and drag across to the last history period in the range then release the button. A yellow strip is highlighted along the x-axis to show which periods are selected. Click and drag the selection to the new position.

**4** Select **File > Save**.

**Note:**

- History changes will not be saved at an aggregate Channel
- History changes made to a temporary forecast group is not saved
- History changes made to a permanent forecast group item will be saved
- If **Monthly/Weekly History Synchronisation** is set in the System table, upon save, any monthly history edits will be synchronized to the weeks in that month based on their previous values. Any weekly history edits are synchronized to the corresponding month(s)
- If **Weekly/Daily History Synchronisation** is set in the System table, upon save, any weekly history edits are synchronized to the days in that week(s)

### Changing what is displayed in the Graph window

You can change what and how data is displayed in the Graph window in Edit Forecasts.

**1** Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

**2** Select **Tools > Options**.
The Plot Options dialog box is displayed.

**3** Select the tab required:

- **Graph**
- **Line Settings**
- **Display**
- **General**

**4** Make the appropriate changes and click **OK**.

## The Fiscal Year Window

### About the Fiscal Year window

The Fiscal Year window is a window of the Edit Forecasts function.

The Fiscal Year window allows the history, forecast, and any time-phased weightings to be edited from within a spreadsheet-type environment. Budgets may be selected for viewing only; they may not be edited. Select from the central list box to change the display.

The presentation is laid out to cover at least 5 fiscal years. By default, the grid contains six columns (5 years) but if there is more than 3 years of history or 2 years of forecast stored, you can scroll back and forward in the grid to display the required period.

Columns to the left of the Now line contain history. The history displayed is, by default, Adjusted Demand. You can display all types of history (by choosing the history type in the list box in the Edit Forecasts toolbar) but only the Adjusted Demand history is editable. Double-clicking on the historical period you wish to amend allows the existing number to be typed over.

If Monthly/Weekly History Synchronisation is set in the System table, upon save, any monthly history edits are synchronized to the weeks in that month based on their previous values. Any weekly history edits will be synchronized to the corresponding month(s).

If Weekly/Daily History Synchronisation is set in the System table, upon save, any weekly history edits are synchronized to the days in that week(s).

Rows contain either months or weeks according to the selection made in Tools, Display. In the case of the sales/forecast display, total and outlook rows are also displayed. In the Budget display, a total row is included. Outliers are displayed with a red background and masked out periods are displayed with a black background.

The forecast displayed is the total of the forecast elements that have been chosen from the Options dialog box. You may edit the market intelligence but not the statistical forecast.

See "About market intelligence" on page 251.

It is possible to add Forecast, History and MI notes in the Fiscal Year window. They can be displayed via tool tip tabs.

See "About Notes" on page 257.

You can use the Fiscal Year window to apply effectivity and discontinuation dates and any time-phased weightings defined on the database may be edited.

See "About effectivity and discontinuation dates" on page 247 and "About time-phased weightings" on page 108.

Predefined budgets may be displayed but not edited.

See "Viewing budgets in the Fiscal Year window" on page 234.

User data series can be displayed and edited.

See "About User Data series" on page 340.

### Editing TPWs in the Fiscal Year window

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Click the Fiscal Year window.
4. Select **TPW Edit** from the central list box on the toolbar.
   The Select TPW dialog box is displayed.
5. Select the required TPW from the list box.
6. Click **OK**.
7. Click the appropriate cell, type the new value and press ENTER (all cells are editable).

8 Select **File > Save**.

### Viewing budgets in the Fiscal Year window

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Click the Fiscal Year window.

4 Select **Budget** from the central list box on the toolbar.
The Select Budget Type dialog box is displayed.

5 Select the budget type to view and click **OK**.

**Note:**

- You cannot edit budget data in this window.
- This screen is not available when viewing a returns item (Product type 3).

### Editing history in the Fiscal Year window

In Edit Forecasts mode, you can edit only adjusted demand history. Any changes you make to a permanent forecast group or a temporary forecast group are not be spread to the members of the group.

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Click the Fiscal Year window.

4 Select **Adjusted Demand** from the central list box on the toolbar.

5 Click the appropriate cell, type the new value and press ENTER (all cells are editable).

6 Select **File > Save**.

**Note:**

- Any changes made to the adjusted demand in this way is automatically reflected in both the Graph window and the Table window.
- If **Monthly/Weekly History Synchronisation** is set in the System table, upon save, any monthly history edits will be synchronized to the weeks in that month based on their previous values. Any weekly history edits are synchronized to the corresponding month(s)
- If **Weekly/Daily History Synchronisation** is set in the System table, upon save, any weekly history edits are synchronized to the days in that week(s)

# The Table Window

**About the Table window**

The Table window is a window of the Edit Forecasts function.

The Table window contains two spreadsheet type displays, one for history and one for forecast. From within this window, you can edit the adjusted demand, add market intelligence, edit customer forecasts and add effectivity or discontinuation dates. Any other information displayed in the window is not editable.

## History table

To display the history details, click the list box on the Edit Forecasts toolbar and select **History**.

The table then contains the following rows:

- Adjusted Demand
- Demand
- Sales
- Weighting

By default, the table displays six columns of history on the screen but you are able to scroll through the entire history as required. The adjusted demand row (if it is displayed) is the only row that you can edit. Outliers are displayed with a red background and masked out periods are displayed with a black background.

See "About history" on page 161.

## Forecast table

To display the forecast details, click on the list box on the Edit Forecasts toolbar and select **Forecast**.

The table then contains the following rows by default:

- Net
- Statistical
- Market intelligence
- Customer Forecast
- Demand to date
- Weighting

As in the history table, the forecast table displays six columns by default but you can use the scroll controls to view through the forecast horizon.

See "About market intelligence" on page 251 and "About customer forecasts" on page 260.

Any User Data Series that are assigned to the user will also be displayed in both Forecast and History views.

See "About User Data series" on page 340.

### Forecast and History Notes

These can be added in the Table window.

See "About Notes" on page 257.

## The Data Window

#### About the Data window

The Data window is a window of the Edit Forecasts function. It contains information relating to the Channel Product being viewed, some of which is editable.

The Data window has these tabs:

- **Base**
- **Supercession**
- **SMP**
- **Parameters**
- **Forecast**
- **Inventory**
- **Demand Sensing**
- **Chan Prod Info** (if Channel Product custom fields have been defined)
- **Product Info** (if Product custom fields have been defined)
- **Scenarios** (if this is a Scenarios product)

The data presented are fields from various database tables, which affect the forecast or inventory levels.

**Note:** When Channel Products are grouped using the **Group** check box before **Edit Forecasts** is selected, the Data window displays only three tabs, **Base**, **Forecast** and **Parameters**.

Some fields contain sensitive calculation factors. Although editable, changing these without a clear understanding of their function may cause unexpected alterations to forecast and safety stock calculations.

## The Information Box

#### About the Information box

The Information box is one of the windows within the Edit Forecasts function. It displays general information about the current Channel Product forecast and legends for the Graph, Fiscal Year and Table windows.

If the control Channel icon is displayed, the selected Channel Product is one at which forecast changes may be made without the risk of being subsequently overwritten by the effects of Channel Balancing.

If the non-control Channel icon is displayed, the selected Channel Product is one at which forecast changes may be subsequently overwritten by the effects of Channel Balancing.

If the Partial Control icon is displayed, the selected Channel Product is one at which forecast changes can be made but are not necessarily overwritten, but the Channel Product is not a full control channel either.

Items listed in the **Information** box are:

- Pds of history used for model fit. The number of history periods used to calculate the forecast. Set in the History Length dialog (from the main menu, select **Edit > History Length**).
- Outlook. The sum of the history to the current month in this fiscal year and the net forecast for the rest of the year.
- Rolling 12 months. The sum of the forecast periods for the next 12 months from "now".
- Level. The current model level, that is the point on the Y-axis at which level & trend line cuts the now line.
- Growth. Displayed for standard items only. It is the period-by-period increase or decrease in the forecasted demand.
- Standard Deviation. The current estimate of the average variability between the forecast model and the demand for the item at the period in time. This is initialized with the creation of the original model and then revised during each period end process.
- Re-order point. Calculated as part of the inventory routines. This item is only displayed for slow moving Products (SMPs). To view a normal item’s re-order point, see the Data window, **Inventory** tab.
- SMP Average Event. Only displayed for SMP items and will hold the value returned from the BATS routines for the estimate of demand in any month that has a sales event.
- SMP Chance of monthly event. Only displayed for SMP items and will hold an estimate of the chance of getting an event in any month.
- Number of Outliers. The number of outliers detected by the model fitting process. Outliers are statistically unrepresentative periods of historical data which have been ignored in the forecast calculation. They are identified during model fitting according to threshold settings in the Channel Products table.
- Weighting. The weighting currently in use to display the history and forecast data.
- Legend (Graph). Established in the Plot Options dialog (select Tools and Options).
- Legend (Scenarios). Included if the current item has associated Scenario Products.
- Legend (Table & Fiscal Year). The legends for the Table and Fiscal Year windows.

**Note:**

- All the decimal fields are shown to four decimal places.

# Editing History

## Editing the history length

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Do one of the following:

- Click the history length arrow displayed on the x-axis, and drag to the desired period of history. This is then used as the first period of history from which to fit the model.
- Select **Edit > History length**On the . In the History Length dialog enter either a number of periods of history, or the date of the first period of history to use for the model fitting process.

4 Click **OK**.

5 Click **Yes** to refit the model.

6 Select **File > Save**.

## Applying alternate history

This feature enables you to take an established Channel Product's history and donate it to another Channel Product. It is often used in cases of Product succession.

To apply an alternate history:

1 In Demand Forecaster, select both the donor and the recipient Channel Products.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

To give Product B the history of Product A, display Product B in the Graph window.

3 Select **Model > Alternate History**.
The Alternate History dialog box is displayed.

4 On the **Selection** tab, choose the history to be given to Product B (Product A's history profile) by clicking the appropriate Product and Channel in the list boxes.
The history profile is displayed if the Display Profile check box is ticked.

5 On the **Detail** tab, select a level of demand for the new item, if expected to be different to the donor item. Either over-type the Level edit box or specify a Factor by which to multiply the donor's history level.

6 Select the history type(s) to donate.

7 Select **Add to existing history** if you want to add the history of the donor Product to the history of the receiving Product, rather than overwriting it.

8 Click **OK**.

**9** Select **File > Save**.

**Note:** Click **Test** to apply the alternative history to the current Product without closing the dialog box. You can view the changes and additional editing may be carried out, if required, before confirming the new history.

**Note:** When using the **Add to existing history** option, if the **Test** button is clicked and then the **OK** button, the history for the currently selected source item will be transferred twice. If the **Test** button is used to apply the history then the **Close** button should be used to close the dialog, not the **OK** button. Remember to then save the changed history to the database.

**Note:** If Monthly/Weekly History Synchronization is set in the System table, when saved, any monthly history edits are synchronized to the weeks in that month based on their previous values. Any weekly history edits will be synchronized to the corresponding month(s)

**Note:** · If Weekly/Daily History Synchronization is set in the System table, upon save, any weekly history edits are synchronized to the days in that week(s)

# Level and Growth

## Editing the level

**1** In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

**2** Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

**3** In the Graph window, do one of the following:

- Select **Edit > Level** or right-click anywhere in the forecast area of the graph and click **Edit level**. Enter a new value in the Edit Level dialog and click **OK**.
- Double-click twice on the graph and a blue level and growth line appears with handles at either end. Drag and drop the left-hand handle to the desired value.

**4** Select **File > Save**.

## Editing the growth

**1** In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

**2** Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

**3** In the Graph window, do one of the following:

- Select **Edit > Growth** or right-click anywhere in the forecast area of the graph and click **Edit growth**. Enter a new value in the Edit Growth dialog and click **OK**.

- Double-click twice on the graph and a blue level and growth line appears with handles at either end. Drag and drop the right-hand handle to the desired value.

4 Select **File > Save**.

## Applying a growth damping factor

A growth damping factor may be used to level off or increase the growth rate in the future. It can be applied to the model growth value for the duration of the damping period, so a factor less than 1 will reduce the model growth whereas a value greater than 1 will increase the growth. A value of 1 (the default) will not change the model growth. The factor must be within a range 0 to 1.2.

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Select **Edit > Growth Damping Factor**.
The Growth Damping Factor dialog box is displayed.

4 Select the date on which the growth damping will start from the **Start date** list box.

5 Either select the date on which the growth damping will end or select the number of periods during which the growth damping is to be applied.

6 Use the option buttons to select the type of growth damping to be applied and type the value required in the adjacent edit box.

7 Select the **Zero growth beyond end date** check box if you want the system to level off the forecast after the end date. If the box is not ticked then the growth rate at the end of the damping period will continue into the future as the database rolls forward.

8 Click **OK** to file the change.

9 Click **Yes** if you wish to refit the model.

10 Select **File > Save**.

# Future Changes

## About future changes

A future change is a change to the level or growth of an item that takes effect on a specified date in the future. For example, you might define future changes to take account of the opening of new stores, competitors ceasing to trade, or predicted changes in buying patterns.

Future changes can be specified only for Normal Products that already have a statistical model.

### Example

Consider the case where a new customer agrees to take the product at some known point in the future. You believe that overall sales will increase, and you can estimate this quantity. This number is highly subjective, but an examination of what happened in similar circumstances in the past combined with a view of current market conditions can provide a good estimate.

The variance attached to the new level is increased by a factor that is typically higher than the existing model, as a phase of increased uncertainty is being entered. This makes the model learn more quickly at the time the change is expected.

## Applying future changes (level)

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Edit > Future Changes**.
   The Future Changes dialog box is displayed.
4. On the **Level** tab, in the **Date of Change** box, select the period from which the change is to be applied.
5. Enter the Future Value for the level, either as an absolute value or a percentage increase.
6. Edit the default Description as required.
7. Click **Test** to apply the changes to the graph without exiting the dialog (this provides the opportunity to view the change and make corrections if required).
8. Click **OK** to file the future change.
9. Click **Yes** if you wish to refit the model.
   See "About future changes" on page 240.

## Applying future changes (growth)

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Edit > Future Changes**.
   The Future Changes dialog box is displayed.
4. On the **Growth** tab, in the **Date of Change** box, select the period from which the change is to be applied.
5. Enter the Future Value for the growth, either as an absolute value or a percentage increase.
6. Edit the default Description as required.
7. Click **Test** to apply the changes to the graph without exiting the dialog (this provides the opportunity to view the change and make corrections if required).

8 Click **OK** to file the future change.
9 Click **Yes** if you wish to refit the model.
10 Select **File > Save**.
See "About future changes" on page 240.

## Viewing/removing future changes

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.
2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.
3 Select **Edit > Future Changes**.
The Future Changes dialog box is displayed.
4 Select the **View/Remove** tab.
5 Select the date required from the **Date of Change** list.
6 Click **Remove** to delete the displayed future change data or click **Remove All** to delete all future change data against the selected Channel Product.
7 Click **OK** to file the change.
8 Click **Yes** if you wish to refit the model.
9 Select **File > Save**.
See "About future changes" on page 240.

# Annual Forecasts

## About the annual forecast

A facility exists within the Demand Forecaster module to generate and edit an annual forecast for the displayed Channel Product. This is a net forecast and is therefore inclusive of all MI and other forecast additions and adjustments. It will be calculated and displayed in years to the forecast horizon specified in the field, "Annual Forecast Horizon (St)". This horizon is subject to a 10 year maximum and may be set in the Database Administration module using the System Table Data option.

The feature is accessed from the Edit Forecasts windows, menu option, Model, Annual Forecast, Generate, or Edit. Provided that at least one year of annual forecast horizon has been specified in the system table field identified above, when the feature is first used only the Generate option will be available. When this option is selected the forecast will be generated, the menu list closed and control returned to the main screen.

## Generating the annual forecast

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Select **Model > Annual forecast > Generate**.

**Note:** To view the generated forecast, select **Model > Annual forecast > Edit**.

See "About the annual forecast" on page 242.

The forecast is generated, the menu list closed and control returned to the Edit forecasts main screen.

## Editing the annual forecast

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Select **Model > Annual forecast > Edit**.
The Annual Forecasts - Forecast Edit screen is displayed.

4 Use the **Units**, **TPW** and **Actual** tabs to edit as desired.

If the annual forecast has not been generated for the selected Channel Product, this option is not available.

See "About the annual forecast" on page 242.

# Alternate Forecasts

## Applying an alternate forecast

This feature enables you to take an established Channel Product's forecast model and donate it to another Channel Product. This is usually used when introducing a new Product without history, but it is known that this new Product will have a similar seasonal pattern to an existing Product.

1 In Demand Forecaster, select both the donor and the recipient Channel Products.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Select **Model > Alternate forecast**.
The Alternate Forecast dialog box is displayed.

4 On the **Selection** tab, choose the forecast model to be given to Product B (Product A's profile) by clicking on the appropriate Product and Channel in the list boxes. The forecast profile is displayed if the **Display Profile** check box is ticked.

5 On the **Detail** tab, select a level of demand for the new item, if expected to be different to the donor item. Either over-type the **Level** edit box or type a Factor to be used to multiply the donor's forecast by.

6 Select a level of growth for the new item if expected to be different to the donor item. Either over-type the **Growth** edit box or type a Factor to be used to multiply the donor's forecast by.

7 Type an anticipated Standard Deviation or select an existing Variance Estimate from the list.
See "About variance estimates" on page 299.

8 Click **Test** to apply the alternative forecast model to the current Product without closing the dialog box. You can view the changes and additional editing carried out if required before confirming the new forecast.

9 Click **OK**.

10 Select **File > Save**.

## Applying an alternate model forecast

This feature enables you to create a statistical model for a Channel Product using market intelligence from within the Edit Forecasts Graph window.

1 In Demand Forecaster, select both the donor and the recipient Channel Products.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Select **Modules > Demand Forecasting > Alternate model forecast**.

If effectivity or discontinuation dates are in place, a warning is displayed. Click **OK** to continue.

The Alternate Model Forecast dialog box is displayed and, in the Edit Forecasts windows, the forecast is zeroed. All the current model information, for example, model coefficients, growth damping, future changes, market intelligence etc. are held in memory and cleared from the Graph window. If the item is a slow moving Product, it is set to normal. The Edit Values option should be selected by default.

4 Do one of the following:

- Select the **Edit Values** option and type values for each period to define the seasonal profile. The values entered are used to calculate a level and growth. This seasonal pattern is then repeated over the monthly forecast horizon using the previously calculated level and growth to calculate the forecast up to the forecast horizon.
- Select the **Edit Level/Growth** option if you wish to change the level and growth of the forecast. If this option is checked, the previously entered seasonal profile is lost. A warning message appears to indicate this.

5 Select the Effectivity Date i.e. the date from which the alternative model forecast is effective.

6 Select a Variance Estimate from the list.

7 Select the **Retain initial net forecast** check box if you want to keep the original net forecast. If the original net forecast is saved, the difference between the new model created and the original net forecast is saved as I-type market intelligence.

8 Click **Test** to view the alternate model forecast in the forecast windows.

9 Click **OK** if you are happy with the forecast created.
Warnings are displayed that the original model is lost and, if applicable, that the chosen effectivity date has been set up.

10 Click **OK**.

11 Select **File > Save**.

**Note:**

- This functionality is only available if variance estimates have been defined.
- This functionality is not available when **Weekly** is selected in the **Display** option on the **Tools** menu.

# Balancing

## About balancing

Balancing through a Channel matrix is the process where changes at a Channel are passed through the sequence of linked Channels. The controls for this procedure are contained within the Channel behaviors, which hold information relating to individual Channels. They permit or deny history, forecast or requirements data to be passed to or accepted from other Channels in the matrix.

See "About Channel behaviors" on page 72.

The sum of the statistical forecasts at the lower levels is not always equal the statistical forecast of the total level; market intelligence is added to balance the forecasts in these instances. This will be in addition to any market intelligence you have added to change the forecast.

Channels that pass data to other Channels are known as control Channels. Data that passes from a control Channel to a non-control Channel may overwrite any changes previously made to that non-control Channel.

Release 6.5 sees the introduction of partial control channels, enabling the user to create market intelligence at multiple levels in the channel matrix.

Changes made to the forecast in Edit Forecasts may be overwritten by the balancing process, which occurs automatically when saving to the database. Such changes may therefore be lost when the data is saved. During the saving process, warnings will be issued which indicate the revisions being made by balancing.

Balancing may be forced through an alternative matrix in order to transfer an edited change though a series of Channels that may differ from those in the prescribed Products Channel matrix.

See "Applying a Channel matrix to Products" on page 82.

Within Edit Forecasts, Balance may be selected and executed from the menu option Model. This option may not be available if balancing will not cause any change to the displayed Channel Product, for example, at a control Channel.

Any changes made to the level, growth, step changes, discontinuation dates and so on at a control Channel will be reflected at other Channels that accept the forecast being passed to them from that control Channel, however, all changes are seen as C-type market intelligence at the non control Channels.

Channel Product fields automatically updated by this process are as follows:

- "Safety Stock Units (CPt)"
- "Preferred Lot Quantity (CPt)" or "Replenishment Period (CPt)"
- "Re-order Point (CPt)"
- "Theoretical Stock On Hand (CPt)"
- "First Forecast Period (CPt)"
- "Forecast For Next Year (CPt)"

**Note:** These fields will not be updated if the forecast is unchanged.

### Examples of Channel balancing:

- Bottom Up Structure the forecast is changed at the lowest level and the system aggregates to the top level.
- Top Down Structure the forecast is changed at the top level and the system spreads to the lower levels.
- Centre Out Structure the forecast is changed at a middle level (of 3 or more) and the forecast is overridden at the higher and lower levels.

## About Offline Channel Balancing

Offline Channel Balancing provides an option for Channel Balancing to occur in a non-user-interactive model, improving planner productivity for large scale problems or complex Channel Structures.

Offline balancing is done at a product level. The Offline Balance setting in the Products table determines whether balancing occurs interactively or offline.

If the **offline** value is selected, during edits to a Channel Product, the Channel Product is flagged as requiring balancing and the balancing is performed in the background. Consequently, during the balancing, the forecast at aggregated or pro-rated channels may be displayed incorrectly.

The application server must be running and the server host and application server Port number must be added to the user who is performing and saving the edits. The Server host and Server Port details are added to a user via Maintain Users in Database Administration.

If the offline balancing flag is set for a product, the application server is running and linked to the user currently logged in, then upon save balancing is performed offline and the offline balancing log is generated.

If the application server is not running or the user's port and host information is incorrect, offline balancing is be run and the products are flagged as having dirty data. These products are displayed as Pending Balancing in the Edit Graph and the Grid screens in Core.

Once the application server is running or the user's port and host information has been correctly updated after saving, the edited products whose dirty data flag is set are no longer flagged as having dirty data. The display is refreshed in the Edit Graph and Edit Grid screens.

For temporary forecast groups, the offline balancing flag must be set for all the products in the group so that offline balancing can be performed. If only some products in the temporary forecast group are set to use offline balancing, offline balancing is be performed and balancing is performed from within Demand Forecaster.

The same rule applies to edits made in the Edit Grid to a grouping where only some products in the group are set to Offline Balance.

When edits are saved in the Edit Graph and the Edit Grid in Demand Forecaster and in the Demand Forecaster section of Collaborate, balancing is performed.

## Balancing the forecast

Changes made in Edit Forecasts mode may be subject to being overwritten by the balancing process that occurs automatically when saving to the database. The potential effects of such changes to the item being edited may be checked prior to saving.

Select **Model > Balance**.

See "About balancing" on page 245.

# Effectivity and Discontinuation Dates

## About effectivity and discontinuation dates

Effectivity and discontinuation dates can be applied and edited in the Graph, Fiscal Year and Table windows. (This feature is not available when the weekly view option is selected.)

The effectivity date is the date at which the Channel Product’s forecast begins. Usually, the forecast begins "now", but you might want a future effectivity date if, for example, the Channel Product is replacing another Channel Product that is being phased out. Prior to the effectivity date, the statistical forecast is zero.

See "Applying an effectivity date" on page 248.

The discontinuation date is the date past which no more demand is anticipated. Typically, this is because the Channel Product is to be phased out by that date. After the discontinuation date, the statistical forecast is zero.

See "Applying a discontinuation date" on page 249.

Infor Demand Planning can automatically calculate a discontinuation date if required. This feature can be accessed from within either the Demand Forecaster or Replenishment Planner module.

See "About the automatic calculation of discontinuation dates" on page 248.

**Note:** Effectivity dates are sometimes referred to as "introduction dates".

## About the automatic calculation of discontinuation dates

This function may be accessed from within either the Demand Forecaster or Replenishment Planner modules. It will attempt to calculate the projected stock run out date on each of the currently-selected Channel Products. If successful, the system will then place the preceding month end date to this calculated run out date as the date in the "Discontinuation Date (CPt)" field. Discontinuation datesare used in the Replenishment Planner module to plan future orders.

The automatic calculation of the discontinuation date uses the current forecast stored in the net forecast table and any current RP plans stored on the database. The on-hand stock at each Channel is consumed by the monthly net forecast held in the net forecast table where the Channel is not aggregating requirements from a lower Channel. If a Channel is aggregating requirements, the consumption of stock is based on the RP orders from the lower Channels.

The opening stock at each Channel is based on the values in the fields "Opening Stock (CPt)" and "Due In Stock (CPt)", as well as the good quantities of open orders due in and planned for shipment. Specifically, any order with a "Ship Date (Ot)" in the past (stock posting date or earlier)has been assumed to have been picked and so the quantity is not included in the reported on-hand stock. Where the "Ship Date (Ot)" is later than the stock posting date the assumption is that the orders have not been picked and so the on-hand stock will therefore be decreased by the order in the calculations.

If the "Update Successor Effectivity Date (CPt)" field is set to 1 for the predecessor, the effectivity date of the successor is automatically set equal to the newly calculated discontinuation date of the predecessor.

The following fields are checked by the system for each selected Channel Product:

| Field | Setting required for the automatic calculation of discontinuation dates |
|---|---|
| "Product Status (Pt)" | Must be code 0: Live. |
| "Product Type (Pt)" | Must not be code 2: Not UFP. |
| "Discontinuation Type (CPt)" | Must be codes 3 or 4: Automatic codes. |
| "BOM Level Code (CPt)" | Must be codes 0 or 1: Not a BOM subordinate. |

## Applying an effectivity date

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.

The five Edit Forecasts windows are displayed.

3 Select **Model > Effectivity**.
The Period End Dates dialog box is displayed.

4 Select the period in which you want to add the effectivity date.

5 Click **OK**.

6 Select **File > Save**.

**Note:** If an effectivity date exists, the Launch Date dialog box is displayed, giving you the options to remove or move the existing effectivity date.

## Moving an effectivity date

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Select **Model > Effectivity** or right-click in the forecast area of the Graph window and click **Move effectivity date** on the shortcut menu.
The Period End Dates dialog box is displayed.

4 Select the period in which you want to move the effectivity date to.

5 Click **OK**.

6 Select **File > Save**.

## Deleting an effectivity date

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Select **Model > Effectivity > Remove effectivity date** or right-click in the forecast area of the Graph window and click **Drop Effectivity Date** on the shortcut menu.

4 Click **OK** or **Yes**.

5 Select **File > Save**.

## Applying a discontinuation date

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Select **Model > Discontinue**.
The Period End Dates dialog box is displayed.
4 Select the period in which you want to add the discontinuation date.
5 Click **OK**.
6 Select **File > Save**.

**Note:** If a discontinuation date exists, the Launch Date dialog box is displayed, giving you the options to remove or move the existing discontinuation date.

## Moving a discontinuation date

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.
2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.
3 Select **Model > Discontinue** or right-click in the forecast area of the Graph window and click **Move Discontinuation Date** on the shortcut menu.
The Period End Dates dialog box is displayed.
4 Select the period in which you want to move the discontinuation date to.
5 Click **OK**.
6 Select **File > Save**.

## Deleting a discontinuation date

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.
2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.
3 Select **Model > Discontinue > Remove discontinuation date** or right-click in the forecast area of the Graph window and click **Drop Discontinuation Date** on the shortcut menu.
4 Click **OK** or **Yes**.
5 Select **File > Save**.

## Calculating discontinuation dates

1 In Demand Forecaster, select the desired Products and Channels.
See "About selecting Products and Channels" on page 35.
2 Select **Modules > Demand Forecasting > Discontinuation Dates**.
The Automatic Calculation of Discontinuation Dates dialog box is displayed.
3 Select the **Remove MI** check box if you want to drop all market intelligence (except T-type MI) after the calculated discontinuation date.

4 Select the **Align existing Pre/Suc dates** check box if you want to automatically set the effectivity date of the successor equal to the newly calculated discontinuation date of the current (predecessor) item.

These dates will always be aligned when the "Update Successor Effectivity Date (CPt)" field for the predecessor is set to 1 (true), irrespective of this selection.

5 Click **OK**.
On completion, the output screen is displayed providing details of the calculations completed and any restraints encountered.

**Exception Views**

The process may generate these exception views:

- "BOM SUB AUTO DISC"
- "FUT EFF AUTO DISC"
- "POT OBS AUTO DISC"
- "RETURNS AUTO DISC"

# Market Intelligence

## About market intelligence

The generic term "market intelligence" (MI) is used to describe any short term changes that you may make to a statistical forecast, whether it be the result of sales and marketing activity or external factors such as legislation, competitive activity or economic conditions.

MI is treated differently in monthly-controlled and weekly-controlled databases. In a monthly-controlled database, MI can be specified and stored only in monthly amounts. In a weekly-controlled database, MI can be specified in either monthly or weekly amounts but is always be stored in weekly amounts.

Each time MI is input or calculated by the system, it is allocated a MI type code. Certain types of MI also gain an identifier (name and description). The name is an internally generated code, whilst the description is supplied by the user. The identifier allows you to select the specific MI to be changed, moved or deleted.

### Types of market intelligence

- I -type: Individual item has been manually input against an individual Channel Product. This MI type requires an identifier (text description) to be defined in order to enable it to be selected and deleted, changed or moved in time.
- S-type: Spread from Groups is created by spreading the forecast from a group of items, temporary forecast groups (TFGs) or permanent forecast groups (PFGs), down to the individual members of the group.
- C-type: Channel is created as a result of forcing the net forecast down through the Channel structure. It is automatically allocated the identifier "Balance".

- A-type: Aggregated is created by aggregating the MI only, up through the Channel structure. It is automatically allocated the identifier "Balance".
- N-type: Net Freeze refers to MI created by period end routines to ensure that the defined net forecast remains the same.
- E-type: External refers to any changes made to the forecast in the Offline Forecast Workbench or any other imported changes to the forecast.
- T-type: Transferred is market intelligence transferred from associated Products within the Promotions function.
- B-type: Baseline has been manually input against an individual Channel product. This MI type requires an identifier (text description) to be defined in order to enable it to be selected and deleted, changed or moved in time.

### Market intelligence categories

Market intelligence of types I, B and T require an MI Category to be assigned to them.

Market intelligence categories enable users to expand on the MI type, with different market intelligence events able to have the same MI Type, but different categories, depending on their significance.

Each MI Type (I, B and T) will have a default MI Category, but additional categories and the default of these can be set up and assigned from within Database Administration.

**Note:**

The "Level Of Forecast Control (St)" field determines whether the database is monthly- or weekly-controlled.

## Adding market intelligence in the Graph window

#### Adding MI to a single point

To add MI to a single point:

1. Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.
2. In the Graph window, double-click the left mouse button in the graph area to display rectangles on each data point.
3. Click the data point of the period to be changed and drag to the desired position.
   This information relating to the change is displayed at the bottom of the window:
   - 1 period selected: Periods you have selected and the date involved
   - MI Offset: Value of the market intelligence you have added
   - Total Net: Sum of the statistical forecast and the market intelligence which you have added
   - Total MI Offset: The sum of all market intelligence added if more than one value of market intelligence has been added for this period.

   The MI details dialog box shows the change (I-type MI) you have made.
4. Make any changes required.
5. Select a different MI category if the category required differs from the default.

6 Annotate the Notes pane if required.

7 Select **Display this note on Edit Graph screen** if you want to indicate that a note exists by flagging it in the Edit Graph window.

8 Select **File > Save**.

#### Adding MI to a range of points

To add MI to a range of points:

1 Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.

2 Drag to select the range of periods.
A yellow strip is highlighted along the x-axis to show which periods are selected.

3 Click anywhere within the selected range and drag up or down to the required position.
The MI details dialog box is displayed.

4 Make any changes required.

5 Select a different MI category if the required category differs from the default.

6 Annotate the Notes pane if required.

7 Select **Display this note on Edit Graph screen** if you want to indicate that a note exists by flagging it in the Edit Graph window.

8 Select **File > Save**.

See "Specifying market intelligence adding options" on page 256.

**Note:** If a range of forecast periods are edited, the market intelligence at each period in the range is given the same identifier.

**Note:** Depending on the switches set in the Options dialog, the MI is added as new MI, extend existing MI, or you are prompted to decide the action to take. If it is Add New Market Intelligence, a dialog box prompts you for a description. If you choose to Add To Existing Market Intelligence and the MI is being entered into a period in which there is existing MI, you are presented with a list of the existing MI. Decide which event to edit.

## Adding S-type market intelligence

1 In Demand Forecaster, select the required Products and Channels.
See "About selecting Products and Channels" on page 35.

2 Click the **Group** tick box in the toolbar of the main screen.

3 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

4 Make the desired forecast changes to the Group item as you would a normal Channel Product.
See "About forecast editing" on page 224.

5 Click to save the changes.
The Spread dialog box is displayed.

6 On the **Spread** tab, specify the forecast components to spread, the method to be used to calculate the spreading ratios and the periods to spread. Type a market intelligence description if required.

7 On the **Exclude** tab, select the Channel Products to be excluded from the spread and the exclusion option to use.
8 Click **OK**.
9 Select **File > Save**.

## Moving market intelligence

### Moving market intelligence in the Graph window

1 Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.
2 In the Graph window, right-click the data point of the period containing the MI to be moved and select **Move Market Intelligence**.
The Period End Dates dialog box is displayed.
3 Click to highlight and select the period to move the MI to.
4 Click **OK**.
5 Select **File > Save**.

### Moving market intelligence in the Fiscal Year window

1 Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.
2 In the Fiscal Year window, click the cell containing the MI to be moved.
3 Right-click the selected cell and click **Move Market Intelligence**.
The Period End Dates dialog box is displayed.
4 Click to select the period to move the MI to.
5 Click **OK**.
6 Select **File > Save**.

### Moving market intelligence in the Table window

1 Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.
2 In the Table window, click the Market Intelligence cell containing the MI to be moved.
3 Click **Show Market Intelligence details**.
4 Right-click the cell and select **Move Market Intelligence**.
The Period End Dates dialog box is displayed.
5 Click to highlight and select the period to move the MI to.
6 Click **OK**.
7 Select **File > Save**.

**Note:**

- Only I-type and S-type MI can be moved in these ways.

- Daily market intelligence cannot be moved in the Demand Forecaster module. See *Infor Demand Planning Collaborate Help*.

See "Specifying market intelligence adding options" on page 256.

## Dropping market intelligence

**Dropping market intelligence in the Graph window**

1. Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.
2. In the Graph window, right-click the data point of the period containing the MI to be dropped and select **Drop Market Intelligence**.
3. Select **File > Save**.

**Dropping market intelligence in the Fiscal Year window**

1. Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.
2. In the Fiscal Year window, click the cell containing the MI to be dropped.
3. Right-click the selected cell and click **Drop Market Intelligence**.
4. Select **File > Save**.

**Dropping market intelligence in the Table window**

1. Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.
2. In the Table window, click the Market Intelligence cell containing the MI to be moved.
3. Click **Show Market Intelligence details**.
4. Right-click the cell and select **Drop Market Intelligence**.
5. Select **File > Save**.

   **Note:** This does not apply to promotional MI (T-type).

## Clearing market intelligence

1. Use the Product and Channel list boxes to select the required Channel Product from among the currently selected items.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Edit > Clear Market Intelligence** or click **Clear MI** on the Edit Forecasts toolbar.
4. Select **File > Save**.

   **Note:** This does not apply to promotional MI (T-type).

## Adding/editing market intelligence in the Fiscal Year window

- You can also add MI by editing the total row for the forecast columns. This extra amount will then either be spread evenly or proportionally over each period in the year, depending on the selection made in the MI Details dialog box.

To add or edit market intelligence in the Fiscal Year window:

1. Use the Product and Channel list boxes to select the required Channel Product from the currently selected items.
2. Highlight the required cell or cells in which the MI is to be added.

   Click the first period and press the SHIFT key then click the last period; alternatively, click and drag over the required period, release to select.
3. Right-click the selected cell(s) and select **Add Market Intelligence**.
4. Add any new MI or change existing MI as desired.
   The MI Details dialog box is displayed.
5. Make any changes required.
6. Select a different MI category if the require category differs from the default.
7. Annotate the Notes panel if required.
8. Select **Display this note on Edit Graph screen** if you want to indicate that a note exists by flagging it in the Edit Graph window.
9. Select **File > Save**.

   **Note:** Depending on the switches set in the Options dialog, the MI will be: added as new MI, will extend existing MI, or you will be prompted to decide the action to take. If it is Add New Market Intelligence, a dialog prompts you for a description. If you choose to Add To Existing Market Intelligence and the MI is being entered into a period in which there is existing MI, you will be presented with a list of the existing MI. Decide which event to edit.

## Specifying market intelligence adding options

There can be more than one piece of market intelligence against any one period for a particular item. If there is already market intelligence at the period where the net forecast is being edited one of two things could happen; the value of the market intelligence already present could be changed or a new piece of market intelligence added altogether. There are 3 options to choose between to handle this behavior.

1. In Demand Forecaster, select the desired Products and Channels.

   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Tools > Options**.
   The Plot Options dialog box is displayed.
4. Select the **General** tab.
5. In the Editing Market Intelligence panel, select one of the following:

- Add new Market Intelligence a new piece of market intelligence is added against the particular period for the item every time the net forecast for a period is edited.
- Add to existing Market Intelligence if this option is chosen and the net forecast is being edited at a period where there already exists manually created market intelligence, then the value of the existing market intelligence is changed accordingly. If there is more than one piece of manually entered market intelligence at the period being edited, the system will prompt you for which piece of market intelligence to change.
- Prompt each time you will be prompted whether to change an existing piece of market intelligence or add a new piece of market intelligence each time the net forecast is edited where individual market intelligence already exists.

**6** Click **OK**.

# Notes

## About Notes

In Demand Forecaster you can add annotations (notes) to any new or existing market intelligence event, with the exception of temporary forecast group (TFG) MI events. Such notes are intended to explain why the MI has been added. You are also able to add forecast and history notes to any selected Channel Product (excluding TFGs) via the Graph and Fiscal Year windows.

Notes must be added for a specific week or month end date. On monthly-controlled databases, notes are added on month end dates. On weekly-controlled databases, the dates are week end dates. If adding a note in the monthly view on a weekly-controlled database, you will have to select a weekly period end date within that month.

Optionally, the presence of Forecast, History and MI notes can be flagged in the Graph window. It is also possible to see the notes via tool tip tabs in the Fiscal Year window.

All notes are stored in the PERIOD_NOTES table.

## Adding MI notes

**1** In Demand Forecaster, select the required MI event in either the Edit Graph or Fiscal windows. The MI Details dialog box is displayed.

**2** Type the annotation in the Notes panel.

**3** If required, select the **Display this note on Edit Graph Screen** check box.

**4** Click **OK**.

**5** Select **File > Save**.

**Note:** There are restrictions on the characters Oracle can accept.

## Adding forecast and history notes

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. In either the Graph or Fiscal Year window, right-click the period in which to add the note.
4. Select **Add Forecast Note** or **Add History Note** from the shortcut menu.
   The New Note dialog box is displayed.
5. Type a description in the **Description** box (up to 40 characters).
6. If required, click the **Date** list box to select a different date.
7. Select the **Display this note on user interface** check box to make the annotation visible in both the Graph and Fiscal Year windows.
8. Type the annotation in the main panel and click **OK**.

   **Note:** There are restrictions on the characters Oracle can accept.

## Viewing notes

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Tools > Notes Maintenance**.
   The Notes Maintenance dialog box is displayed.
4. Select the tab and note required and click **View Note**.
   The View Note dialog box is displayed.
5. Click **OK**.

   **Note:** You can view notes as tool tips by either clicking on tab in the Fiscal window or pointing the cursor at the flag in the Graph window.

## Editing notes

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Tools > Notes Maintenance**.
   The Notes Maintenance dialog box is displayed.
4. Select the tab and note required in and click **Edit Note**.
   The Edit Note dialog box is displayed.

5 Change the annotation as required.
6 Click **OK**.
7 Select **File > Save**.

**Note:** You can edit notes by either right-clicking on the flag in the Graph window or the tool tip tab in the Fiscal window. Select **Edit Note** from the shortcut menu.

## Deleting notes

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.
2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.
3 Select **Tools > Notes Maintenance**.
The Notes Maintenance dialog box is displayed.
4 Select the required tab and the note to be removed and click **Delete Note**.
5 Click **Yes** to confirm.
6 Click **OK**.
7 Select **File > Save**.

## Adding flags and tabs in the Edit Forecast windows

1 In Demand Forecaster, select the desired Product and Channel.
See "About selecting Products and Channels" on page 35.
2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.
3 Select **Tools > Notes Maintenance**.
The Notes Maintenance dialog box is displayed.
4 Select the tab required, either **MI Notes** or **History/Forecast Notes**.
If **History/Forecast Notes** is selected, choose the type of notes to include, Forecast, History or both.
5 Click the note required and select the **Display Flag** check box in the View Flag column.
6 Click **OK**.
7 Select **File > Save**.

**Note:** The flag types to be displayed must be selected in the Notes panel of the **Display** tab in the Plot Options dialog.

## Removing flags and tabs in the Edit Forecast windows

1 In Demand Forecaster, select the desired Product and Channel.

See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.

3 Do one of the following:

- Select **Tools > Notes Maintenance**. Select the relevant tab in the Notes Maintenance dialog and clear the **Display Flag** check box for the selected note. Click **OK**.
- In the Graph window, right-click on the flag to be removed and select **Edit Note** from the shortcut menu. In the Edit Note dialog and clear the **Display this note on user interface** check box for the selected note. Click **OK**.

4 Select **File > Save**.

# Customer Forecasts

## About customer forecasts

A customer forecast is a forecast imported from outside Infor Demand Planning which is intended to be used as a Channel Product's net forecast, at least in the medium term. The net forecast generated by Infor Demand Planning (that is, statistical forecast plus market intelligence) still exists but is overridden.

A CP's customer forecast is configured by three database fields:

- "Customer Forecast Periodicity (CPt)" must be defined as either monthly or weekly (the latter option is available only in a weekly-controlled database). This defines whether the customer forecast is specified in monthly or weekly amounts.
- "Periods Of Customer Forecast (CPt)" specifies for how many periods (weeks or months) the customer forecast is to be used as the net forecast. If this field is zero, the customer forecast is effectively disabled for this CP. The customer forecast values themselves are kept in the Customer Forecast table.
- "Periods Of Customer Forecast Retained (CPt)" specifies how many historical periods (weeks or months) of customer forecast are to be kept in the Customer Forecast History table. (At period end, the current value in the Customer Forecast table is automatically shifted into the Customer Forecast History table.)

### Comparing the customer forecast with the net forecast

There are no standard reports currently available to compare the accuracy of the customer forecast with the net forecast generated by Infor Demand Planning. Instead, you can export the "Forecast Last Period (CPt)" and "Market Intelligence Last Period (CPt)" fields and compare the total with the most recent value in the Customer Forecast History table.

# Net Forecast

## About the net forecast

There is a facility within Infor Demand Planning that allows the component tables making up the net forecast to be assembled. These tables are:

- The Statistical Forecast
- Different MI Types
- Customer Forecasts

These components of the net forecast are assembled and stored in the Net Forecast function accessible from the Demand Forecaster and Replenishment Planner modules.

When the program is run for the first time during a month, the existing Net Forecast table (previous month) is deleted and a new table is created with column names set to the current period names. The net forecast is assembled and the new table updated. If no Net Forecast table exists then a new one is created.

Only live items with the following values in "Product Type (Pt)" may be created or updated:

- 0 = A Standard Product.
- 1 = A Non-Standard Product (promotional variant).
- 2 = An Unspecified Forecast Product (UFP).
- 3 = A Returns Product.
- 8 = A Forecast Group Product.
- 9 = A Scenario Product.

And where the "SMP Code (CPt)" is:

- 1 = A Slow Moving Product which will be reviewed to see if it could be forecasted.
- 2 = A Slow Moving Product which is not to be reviewed to suggest moving to a forecasted item.

This table holds a snapshot of the current forecast that is available to report against. The table is not updated as the forecast changes; it exists to publish an official statement of the forecast when prompted and is used in the Replenishment Planner module.

Whenever necessary, the Net Forecast table can be updated or overwritten. If the Net Forecast table is updated, then any matching Channel Products are updated with the current net forecast. If there are Channel Products in the update list that do not exist on the current Net Forecast table then these are appended as extra rows.

### Net Forecast tables

The Net Forecast procedure produces two tables for each forecast period, a header and a data table with columns as follows:

Header Table

NET_FCAST_HD for monthly, NET_FCAST_WEEK_HD for weekly or NET_FCAST_DAY_HD for daily.

The column names for the header table are explained below:

| Column | Meaning |
|---|---|
| Ref | This is an incremental integer for cross-reference from the header table to the data table. |
| User_Id | This refers to the user that updated/overwrote the net forecast table (not the user that last changed the forecast). |
| Pub_date | This is when the forecast was published (not when it was last changed and not the period in the year to which it refers). |
| Period | As "Date Demand Last Updated (Ct)". |
| Descrip | This is the text that is typed into the Net forecast export dialog by the user. |
| Period_1, Period_2 etc | Should contain the period end dates of the forecast from the first forecast period up to the last forecast period (forecast horizon). |

Data Tables

The column names for the data table are explained below:

**Table 1: NET_FCAST for monthly and NET_FCAST_WEEK for weekly**

| Column | Meaning |
|---|---|
| Ref | This is an incremental integer for cross-reference to the header table described above. |
| Prod_cd | This is the Product code for this item. |
| Chan_id | This is the Channel id for this item. |
| Period_1, Period_2 etc | There are a number of period labels depending on the forecast horizon selected, with the first date matching the header date. The numbers in these columns are the net forecast for each period. |

**Table 2: NET_FCAST_DAY for daily**

| Column | Meaning |
|---|---|
| Ref | This is an incremental integer for cross-reference to the header table described above. |
| Prod_cd | This is the Product code for this item. |
| Chan_id | This is the Channel id for this item. |
| Datenum | The day in the forecast horizon. For example, "1" means the forecast horizon's first day. |
| Value | Net forecast value for this day. |

**Table 3: NET_FCAST_MONTHLY for calendar months**

| Column | Meaning |
|---|---|
| Prod_cd | This is the Product code for this item. |
| Chan_id | This is the Channel id for this item. |
| Value | Net forecast value for this calendar month. |
| Pd_end_dt | The calendar month period end date. |

**Note:**

- Any fields in the above tables that store dates will use the format as defined by the database setting. However, for any client application, it is possible to display dates that have been read from the database in an alternative date format. This means that for the core Infor Demand Planning modules, the date format that is used to display this information is defined by the locale setting of the client PC the client application is running on.
- Values stored in the Net Forecast table can be stored in either integer of decimal format, depending on the setting of the "Net Forecast Table: Integer Or Decimal (St)" field.
- To produce daily tables, "Allow Daily MI (St)" must be true, "Level Of Forecast Control (St)" set to 1 (weekly) and valid values must exist in the "Daily Forecast Horizon In Weeks (St)" and "Weekly Forecast Horizon (St)" fields.
- If the current Net Forecast table is for a period other than the current period on the database the option to update is not available due to the miss-match of dates in the table.
- Only Channel Products selected at the beginning of the session will be updated in the Net Forecast table.
- If any returns Products, "Product Type (Pt)" = 3 exist on the database, they may affect the results in this table.
- Calendar months can only be exported on weekly-controlled databases where "Level Of Forecast Control (St)" is set to **1** (weekly).
- Calendar months can only be exported from Demand Forecaster.

# About Forecast BOMs

Forecast BOMs enable the Net Forecast at a parent channel product to be added as Market Intelligence to any component products that are linked to the parent. The quantity of Market Intelligence is added and any offset can be specified to suit requirements.

Forecast BOMs are channel specific and can be created for numerous channels.

Forecast BOMs are created and maintained within Database Administration. Select **DBAdmin > System > Forecast BOM's**.

After you have created Forecast BOM relationships, to Explode the BOM for the currently selected channel product, select the parent of the BOM, specify the Edit Forecasts and select **Explode BOM**. This will explode the BOM at this channel level.

If the selected channel product is not the parent of a Forecast BOM, the **Forecast BOM** option is not available.

Exploding the BOM allows you to add market intelligence to the component products of the BOM at that channel. The Market Intelligence equals the Net Forecast at the parent of the BOM.

To Explode BOM for multiple channel products, based on the current selection, select the Forecast BOM option on the **Demand Forecaster** tab of the ribbon.

Market Intelligence is in the same manner to all the component products, at the channels based on the current selection.

The Market Intelligence applied has a separate Market Intelligence category.

## Updating the Net Forecast table

1. In Demand Forecaster, select the desired Products and Channels.
   See "About selecting Products and Channels" on page 35.
2. Select **Tools > Export Forecasts > Net Forecast**.
   The Net forecast export dialog box is displayed.
3. Select the Product types to include.
   See "About Products" on page 33.
4. Choose to:
   - Update table. This option is not available if the existing Net Forecast table is for a month other than the current one (normally this would be last month's data).
   - Overwrite table. The data from the existing net forecast table (usually last month's) is deleted and new data assembled.
5. Select the periodicity required, **Monthly**, **Weekly** , **Daily**, or **Calendar Months**.
   The **Calendar months** option is only available in a weekly controlled database and can only be exported from Demand Forecaster.
   If you choose to report the data in weekly periods and weekly history is stored on the database, this is the reported history. If there is no weekly history stored on the database, the monthly history is interpolated into weeks based on the calendar. The daily option is only available in a weekly-controlled database when "Allow Daily MI (St)" is true and valid values exist in the "Daily Forecast Horizon In Weeks (St)" and "Weekly Forecast Horizon (St)" fields.
   See "About forecasting periodicity" on page 218.
6. A short Description may be typed in the edit box if required.
7. Click **OK** to close the dialog and assemble the table.
8. Select **View > Output** to remove the progress log information at the bottom of the screen.

**Note:** The setting of the Net Forecast Table: "Net Forecast Table: Integer Or Decimal (St)" field determines whether the forecast values are stored in integer (0) or decimal (1) format.

The Net Forecast table will now be up to date and can be exported (using Database Administration) or used for interfacing to other systems.

# Edit Grid

## Edit Grid

The Edit Grid initially displays a summary view of the net forecast for the selected Channel Products. You can expand the view to display the components of the net forecasts. The display is in either integers or decimals as defined in the Forecast: Integer Or Decimal (St) field.

From Infor 11, Customer forecast and User Data Series can be displayed and edited in the grid.

You can display History only, or a combination of History and Forecast, by using the **All** option.

Select the **Periodicity** option to specify your preferred periodicity settings for Forecast, History or both.

Forecast periodicity can only be set if you are currently viewing Forecast or All.

History periodicity can only be set if you are currently viewing History or All.

These settings can be changed for the current session and can be saved to the database.

The last columns in the grid display the MI Description and the MI category. The default description is "MI Added by <username>". The default MI category is assigned by the user. MI categories can be created and assigned in the database administration core module.

### Net Forecast view

If the **Forecast** option is selected, the Net Forecast view displays the net forecast (the statistical forecast + any market intelligence), for each Channel Product displayed.

The Net forecast and Total Net forecasts can be edited for single and/or multiple periods by directly entering a value (single period/channel product only) or by right-clicking and selecting **Edit Net Forecast** (valid for both single and multiple period edits)

From Infor 11, Customer Forecast can be displayed in the grid, and is the default display when entering the grid. In the Detail view of the grid, the new row Customer Forecast is displayed.

Where Customer Forecast exists, the Net Forecast is overridden for the periods of Customer Forecast. For example, if a channel product has six periods of monthly Customer Forecast, for the first six months the Customer Forecast replaces the Net forecast that is displayed in the grid. However, the type label remains "Net Forecast". From month 7 onwards, and even if Customer Forecast exists for month 7 and beyond, the Net forecast equals statistical forecast plus Market intelligence. This formula reflects the display in the Table window in Edit Forecasts.

Channel products with 0 period of Customer Forecast show the usual net of statistical forecast plus Market intelligence.

Totals sum the total of what is displayed in the grid.

Monthly Customer Forecast is interpolated to weeks and days based on the interpolation vectors that are assigned to the channel product. Daily Customer Forecast values are summed into calendar months.

Weekly Customer Forecast are summed to months and interpolated to days, based on the interpolation vector that is assigned to the channel product. Daily Customer Forecast values are summed into calendar months.

For Channel products where Net forecast equals Customer Forecast, the Net forecast and the New MI cannot be edited up until the end of the periods of Customer Forecast. Non-customer forecast Net forecast periods can be edited.

Totals that comprise the Net forecast and Customer Forecast cannot be edited. If the New MI is apportioned to periods where Net Forecast equals Customer Forecast, the Total New MI, that is displayed in the Detail view of the grid, cannot be edited.

If the new Net forecast is apportioned to periods where Net Forecast equals Customer Forecast, multiple periods and channel products cannot be edited.

Profiles can be applied from non-customer forecast periods onwards and can only be applied to totals once all periods in that total use non-customer forecast Net Forecast.

In the Customer forecast row in the Detail view, any negative Customer Forecast is displayed as such. However, in the Net Forecast view, if negative forecasts are allowed, a negative Net Forecast is displayed, otherwise the Net Forecast is displayed as 0.

If the **History** option is selected, the Net Forecast view displays the Adjusted Demand for each Channel Product displayed.

The Adjusted Demand and Total Adjusted Demand can be edited for single and/or multiple periods by directly entering a value or by right-clicking and selecting **Edit Adjusted Demand** (valid for both single and multiple period edits).

If the **All** option is selected the grid displays the Adjusted Demand and the Net forecast. Both can be edited in the same way as the Adjusted Demand and Total Adjusted Demand.

## Detailed view

If the **Forecast** option is selected in the Net Forecast view, either right click and select **Detail View** from the options or click in the left-hand side of the grid. The grid expands to display these details:

**Net**
The net forecast, the sum of the statistical forecast and any market intelligence.

From Infor 11, Customer Forecast can be displayed in the grid, and is the default display. In the Detail view of the grid, the new row Customer Forecast is displayed.

Where Customer Forecast exists, the Net Forecast equals Customer Forecast for the periods of customer forecast only.

Editing rules where Customer Forecast exists and the negative Customer Forecast display are as per the Customer Forecast in the Net Forecast view of the grid.

**Stat**
The statistical forecast calculated in the Infor Demand Planning Demand Forecaster module.

**Old MI**
Summed market intelligence (MI) values across all the MI events.

**New MI**
New MI is any market intelligence entered in this view that has not been saved.

New MI can be entered by directly typing a value into the New MI period and then pressing Enter, Tab or clicking on another cell to register the edit.

Total New MI (period and channel product totals) can be overtyped, with the MI spread to the individual periods/channel products based on the spreading options defined in Edit Grid Spreading Options.

**Customer Forecast**

This field displays any Customer Forecast for this channel product. When entering the grid, Customer forecast is the default view but can be changed to display a User Data Series via a list.

Customer forecast can be edited in any periodicity and saved back to the database.

Where Net forecast equals Customer Forecast, any edit to the Customer Forecast is reflected in the Net forecast.

Customer forecast periods beyond the periods of Customer Forecast can also be edited but the Net Forecast is not updated with the edits.

When the **History** option has been selected, whilst in the Net Forecast view, either right click and select **Detail View** from the options or click in the left-hand side of the page. The grid expands to display these details:

**Adjusted Demand**
The Adjusted Demand values for the displayed Channel Products. Initially read from the database, but updated if adjusted demand has been edited, or recalculated if New Adjusted Demand has been added.

**Demand**
The Demand values for the displayed Channel Products.

**Sales**
The Sales values for the displayed Channel Products.

**New Adjusted Demand**
Any New Adjusted demand that has been added to the Channel Product.

New Adjusted Demand can be entered by directly typing a value into the New Adjusted Demand period and then pressing Enter, Tab or clicking on another cell to register the edit.

Total New Adjusted Demand (period and channel product totals) can be overtyped, with the Adjusted Demand spread to the individual periods/channel products based on the History spreading options defined in Edit Grid Spreading Options.

When the **All** option has been selected, the Detail View displays these details:

- Adjusted Demand/Net
- Demand/Stat
- Sales/Old MI

- New Adjusted Demand/New MI

You can edit New MI and New Adjusted Demand in the same way as New and Total New Adjusted Demand.

**User Data Series**

From Infor 11, User Data Series can be displayed in the grid.

Initially, Customer Forecast is displayed in the Detail View of the grid, but all the User Data Series to which the user has access can be selected via a list that is displayed under the Weighting list.

After a User Data Series has been selected, a new row is displayed in the Detail View under New MI with the Type **User Data Series** selected.

User Data Series can be displayed in any of the available periodicities.

Monthly User Data Series are interpolated down into weeks and days, based on the interpolation vectors that are assigned to the channel product. Daily User Data Series values are summed to calendar months.

Weekly User Data Series are summed to months and interpolated down into days, based on the interpolation vector that is assigned to the channel product. Daily User Data Series values are summed to calendar months.

Editable User Data Series can be edited in any periodicity and saved back to the database.

Weightable User Data Series can be weighted by any of the available weightings.

User Data Series can be displayed in History and Forecast periodicities.

**Views**

The Edit Grid can one of four views. Click the appropriate icon on the toolbar.

The Views are:

**Current CP**
Displays the currently selected Product at the currently selected Channel.

**Note:** The product and channel must form a valid channel product.

Changing the Product or Channel selected from the selection drop downs or product navigation buttons will update the channel product displayed in the Edit Grid.

**Product at All Selected Channels**
Displays the Product in focus at all selected Channels.

Changing the Product selected from the selection drop downs or product navigation buttons will update the channel products displayed in the Edit Grid.

**All Products at selected Channel**
Displays All Selected Products at the Channel in focus.

Changing the Channel selected from the selection drop downs will update the channel products displayed in the Edit Grid.

**Select All**
Displays All selected Products at all selected Channels.

## Sorting

Click the Product, Description, or Channel column headers to sort the data in ascending or descending order.

You can only sort in the Net Forecast view of the grid.

## Copy and Paste

You can use the **Edit** menu options to copy some or all of the data from the edit grid.

You can paste values into the grid for single and multiple periods and channel products.

You can paste Net forecast values only in the Net forecast view of the grid.

You can paste New MI and New Adjusted Demand values only in the Detail view of the grid.

You cannot edit Old MI, Statistical forecast, Demand, and Sales values.

You cannot paste values in periods where the Net Forecast equals Customer forecast or in a Total that imply spreading to periods where the Net Forecast equals Customer forecast.

## Weighting

All data in the grid can be weighted by a Product, Channel Product or Time Phased Weighting.

Default weighting is Units.

## Period Notes

You can add Forecast notes to any of the channel products displayed in the grid when in the Forecast view or in the Forecast section of the All view.

You can add History notes to any of the channel products displayed in the grid when in the History view, or in the History section of the All view.

You can add notes in any periodicity.

You can view, edit and delete notes from within the grid.

## Profiles

You can apply Profiles to single and multiple channel products in both the Net forecast and Detail view.

When applying to multiple channel products, the MI can be spread to all or some of the channel products in the grid, depending on the option selected.

You cannot apply a profile to periods where the Net forecast equals Customer Forecast.

Similarly, profiles cannot be applied to Totals where the periods in that total comprise Customer Forecast and Net Forecast.

### Database field display

You can specify that up to three database fields (from the Products and/or Channel Products tables) are displayed in the grid alongside the standard data.

**Note:** Changes not saved in the Detail view are retained when moving to the Net Forecast view.

Negative Net forecast will only display as negative if **Yes** is specified as the value of Allow Negative Forecasts in the Channel Product field for the channel product in question. If **No** is specified, the net Forecast will display as zero

You are prompted to save if changes have been made and any of these actions are taken:

- Product or Channel selection is changed via the drop down selection boxes/Product Navigation buttons.
- A different View is selected.
- A different periodicity is set and Revise is selected.
- Any Product Filters, Channel Product Filters, Product Views, Channel Product Views and User Data Access Filters will be adhered to when displaying channel products in the Edit Grid.

It is not advisable to select all channel products on a large database with the Select All grouping.

## Preferences - Display options

## Edit Grid - Graph

The Edit Grid graph is available in all views and periodicity buckets and is a graphical representation of the Forecast and/or History values displayed in the grid.

Any edits made in the grid will be displayed in the graph once the edits have been saved.

Hovering over each of the points on the graph will highlight the channel product in the legend as well as displaying the channel product and value for the selected period.

The graphical display can be changed to suit your requirements using the Graph toolbar options.

The graph is accessible via the Window menu or the Graph icon on the Edit Grid toolbar.

## Preferences - Forecast Periodicity Settings

## Preferences - History Periodicity Settings

## Preferences - Spreading Options

# Products

## Slow Moving Products

### About Slow Moving Products

Some items may be difficult to forecast with normal statistical methods because sales are so sparse. There are many companies where, although the greatest proportion of items are constant sellers which can be forecasted using normal statistical methods, problems are still encountered when handling a few sparse items.

The Slow Moving Product functions in the Demand Forecaster module provide a general solution to all sparse items, not just the true slow movers, but also items that sell in large numbers, but only intermittently.

You can classify Channel Products as Slow Moving Products (SMPs). The classification is held in the "SMP Code (CPt)" field. There are three valid codes for this field:

- 0 - Not an SMP item.
- 1 - An SMP item which should be reviewed at period end roll to see if it could be moved to being a normal item.
- 2 - An SMP item which should not be reviewed at period end roll to see if it could be moved to being a normal item.

When a Channel Product is classed as a SMP, the forecast routine applied to the item is different to that used for normal items. A single term dynamic linear model is calculated through the periods, which have seen any positive demand. A second single term model is calculated to give an estimate of a demand happening in any given month. This means that SMP items will not have a forecast model with growth or seasonality, there will only be an estimate of the next demand event and an estimate of the current average period demand.

When a forecast is created by Fit DLM, or by recalculating a forecast in Edit Forecasts, an SMP is defined as being a live item on the database with more than a user defined minimum number of periods of zero or negative history, within the last year. This number is held in "Minimum Zero Periods For Sparse History (CPt)", the default value for this field is 6. This means that if, for example, a Channel Product shows a historical demand pattern of 2 periods (which is 6 or less) with demand in the last year then it is likely to be classified as a SMP.

There are also tests that happen during the period end processes. There is a forecasting field establishing the number of periods of zero or negative history used to detect normally forecasted items which could be moved to SMP status. The minimum number of periods with zero demand in the last year for migration of a normal Product to SMP status must be specified to the system. The default field value is 8 and is stored in "Minimum Periods For SMP (CPt)". Items are checked during the forecast revision process and any item which have this number (or greater) of periods of history with zero or negative demand, and which are not yet set up as SMP items, are listed as probable SMP items.

The "Maximum Zero Periods For Normal Product (CPt)" field controls those items which may need to be migrated to a normal forecast item. This field requires a value for the maximum number of periods with zero demand in the historical demand over the last year. The system default value for this field is 4. Items are checked during the forecast revision process at period end. Any items which have this number (or less) of periods of history with zero or negative demand, and which are set up as "SMP Code (CPt)" = 1 will be listed as probable normal forecast items.

## Calculation of the SMP forecast

Slow Moving Products present a number of difficulties for any business trying to provide an acceptable level of customer service, while avoiding unnecessarily high inventory levels. Normal methods for the calculation of a Product forecast would use every data point within the chosen history. However, the high occurrence of zero demand periods distorts the forecast as it treats zero as a valid number and would significantly reduce the average demand per period. Trying to obtain a realistic estimate of the amount of the next period of demand or indeed an estimate of how often it is likely to occur in the future together with an annual forecast figure is difficult.

The calculation of future demand for SMPs within Demand Forecaster addresses these problems by adopting a totally different approach. By removing the periods of zero demand from the calculation, it is possible to obtain a more accurate estimate of the size of the next event (period of sales) and also the associated estimate of forecast error.

Having derived the size of the next event, the next step is to calculate the number of times the event is likely to occur within the forecast horizon. This is achieved by analysing the demand history to determine the number of periods with positive activity. Once the estimate of the next event and the likelihood of occurrence have been calculated. The system uses the two estimates to determine a realistic estimate of the annual demand forecast.

The choice is available to switch an item between SMP and normal status. For an SMP item, the adjusted demand history can be edited and changes made to the current level. If an SMP item is a member of an ad hoc group it is excluded from any changes that are spread down.

Slow moving Products may be edited within the Edit Forecasts function. In some cases the displays and available data are different to those for a normal item.

## Graph window

When displaying slow moving Products, the Graph screen is constructed as a bar chart (or histogram). Vertical bars in the history area show the size and distribution of past sales. The forecast is represented by a series of horizontal lines showing:

- SMP Average Event
- Re-order point
- Statistical forecast

The Graph screen may be used to add MI in the same way as for a Standard Product. The level of the Product may be adjusted, but not the trend. Growth Damping and Future Changes are not available when editing a SMP.

## Information box

This window displays information specific to slow moving Products:

- Re-order point. If the "SMP Re-order Point Code (CPt)" field for the Channel Product is set to "0", the re-order point represents the integer number of expected sales events (rounded up to the next integer) multiplied by the average event quantity plus the required safety stock at the end of the lead-time. If "SMP Re-order Point Code (CPt)" is set to "1", the re-order point is calculated as for normal items, that is, the net forecast during the lead-time (including unusual demand) plus the full safety stock at the end of that lead time. This value is rounded up to the next integer. The forecast over the lead-time used in the re-order point calculation is then set to which ever is greater between the net forecast or the integer number of expected events, multiplied by the average SMP event. The greater of these values is then added to the safety stock at the end of the lead time to give the re-order point.
- SMP Average Event. The value returned from the BATS routines for the estimate of demand in any month which has a sales event.
- SMP Chance of monthly event. Only displayed for SMP items and holds an estimate of the chance of getting an event in any month.

## Data window - SMP tab

The SMP tab shows the status of the Product:

- SMP code. General field used to define whether the item is treated as a normal forecast item, a slow moving Product which is reviewed to see if it could be forecasted or a slow moving Product which is not to be reviewed to suggest moving to a forecastable item. Select from the list box.
- SMP average event. Will only be valid for SMP items and will hold the value returned from the BATS routines for the estimate of demand in any month which has a sales event. Normally system generated, no editing allowed from this tab.
- SMP chance of a monthly event. Will only be valid for SMP items and will hold an estimate of the chance of getting an event in any month. Normally system generated, no editing allowed from this tab.

**Note:**

- The other screens within Edit Forecasts contain data as for a Standard Product.

- Discount factors may be changed by the Fit DLM function. Within this function, if a normal Channel Product is changed to a slow moving Product then the Discount Factor code is changed to 1 (default SMP settings). If, within the same functions, a slow moving Product is changed to Normal, the Discount Factor code is changed to 0 (default static settings).

# Unspecified Forecast Products

## About Unspecified Forecast Products

New Products need a forecast in advance so that production or purchasing plans can be derived and where appropriate, raw materials, components and packaging scheduled. You can establish a record for a notional Product in the early stages of Product design to aid with planning and budgeting.

Unspecified Forecast Products (UFPs) may hold market intelligence for the forecast and this forecast and history of the forecast may be incorporated into the sales planning data. You can also import and store customer forecasts against these items.

You cannot store normal history against a UFP, nor create or control a statistical forecast. Safety stocks, schedules, RP calculations and deployment plans are not available for these items. UFPs may not be specified as promotional or slow moving Products and there is no facility for successor/predecessor functionality.

# Returns Products

## About Returns Products

A Returns Product is a Product that has been returned by the customer may be returned to stock as one or more base products. The Returns Product features of Infor Demand Planning will be available if "Return Type (St)" has been set to a value other than zero (the default).

To identify a Returns Product, a separate Product code is required. This new item has its "Product Type (Pt)" field set to 3. The Returns Product must be linked to one or more base products (standard ornon-standard). The relationship between the returns and the base items must specify the proportion of the returned item that will be available to be returned to stock and the number of each linked base product to be restocked for each unit of return. The same specification will also define the offset period involved in this stock return process.

The returns functionality may be enabled by selecting one of the returns options in the System database table and a Returns Product may be created in the usual way.

See "Adding Products" on page 84.

A relationship between the Returns Product and one or more base Products must then be specified for each base product. This relationship must specify this information:

- The proportion of the returned items that will be available to be returned to stock.
- The number of each linked base item to be restocked for each unit of the returned item.
- The offset period involved in this stock return process.

These relationships are established by using the Returns wizard in the Demand Forecaster module.

## Enabling Returns relationships

Before you can create Returns relationships, you must first enable them in the database.

1. In Database Administration, select **DB Admin > System > System Data**.
   The System Data dialog box is displayed.
2. On the **General Settings** tab, in the **Returns Code** box, select **Forecasting Returns (Internal)**.

## Creating Returns relationships

1. In Demand Forecaster, select **Modules > Demand Forecasting > Returns > Create/Modify**.
   The Returns wizard is displayed.
2. Choose to either use the Products which are currently selected or to open the Select Products dialog to re-select.

   See "About selecting Products and Channels" on page 35.
3. Click **Next**.
4. Click the Product to be used as the returns item then click **Next**.
5. Select a Channel to be used as the returns Channel in the relationship then click **Next**.
6. Select the Product or Products in the Available items panel to be included in the returns relationship and click **Add** to transfer them to the Selected items panel.
7. Click **Next**.
8. In the Offset column, type the number of days between the input of the return Channel Product and the stock increase in the linked base Channel Product.

   Enter a positive integer.
9. In the Proportion column, type the proportion of the return Channel Product that may be converted into good base Channel Product.

   Enter a decimal between zero and one.
10. In the Quantity column, type the number of base Channel Product that will result from processing each good unit of return Channel Product.

    Enter a positive integer.
11. Click **Finish**.

## Editing Returns relationships

1. In Demand Forecaster, select **Modules > Demand Forecasting > Returns > Create/Modify**. The Returns wizard is displayed.
2. Choose to either use the Products which are currently selected or to return to the Select Products dialog to re-select.

   See "About selecting Products and Channels" on page 35.
3. Click **Next** if using currently selected Products or **OK** when different Products have been selected.
4. Select the returns item for the relationship to be modified.
5. Select the Channel for the relationship to be modified.
6. Use the **Add** and **Remove** buttons to change the items to be included in the relationship.
7. Change the relationship parameters as required:
   - Offset specify with a positive integer.
   - Proportion overtype with a decimal between zero and one.
   - Quantity overtype with a positive integer.
8. Click **Finish**.

## Deleting Returns relationships

1. In Demand Forecaster, select **Modules > Demand Forecasting > Returns > Delete**. The Delete Returns Relationships dialog box is displayed.
2. In the Existing returns items panel, select the returns items to be deleted and click **Add** to transfer to the Deleted returns items panel.
3. Click **OK**.

# Scenario Products

## About Scenario Products

A Scenario Product is a fictitious variant of a real Product created to try ‘what-if’ projections. If these changes need to be saved for later reference, a Scenario Product must be created, the forecast amended and then saved. This amending of the forecast will not be applied to the live, Product (known as the base case) until the Scenario Product forecast has been approved and formally copied across to the base case.

The Product code selection routine used elsewhere in the module does not allow any access to Scenario Product codes, and consequently none of these codes appear in the standard Select Products dialog box. Scenario Products may however be included in RP and DP module selection.

As Scenario Products cannot be selected, they cannot be used in any Demand Forecaster functionality unless specifically allowed. For instance, if all Products are selected and Fit DLM is run, the Scenario

Products are unaffected. The only cases where Scenario Products can be accessed are from within the Edit Forecasts windows and for forecast reporting.

Within the Fiscal Year window, time-phased weightings (TPWs) may be selected, these will be those transferred from the base case Product. However, it is important to note that only Channel Product TPWs are copied to the Scenario Product in this manner.

At period end, Scenario Products are controlled by "Forecast Calculation Code (CPt)", which is set to 2 by default when the Scenario Product is created. This means that the forecast rolls to the correct month, but is not revised. If a month end revision is required this field must be manually re-set to code 0. This will cause the Scenario Product to be smoothed as with a normal item.

**Note:**

- This functionality is only available for Standard Products and PFGs.
- You can not define sales planning or budgeting for Scenario Products and sales plans are not stored at period end.
- When a Scenario is created, it is created for all Channels associated with the base case Product.

## Creating Scenarios

1. In Demand Forecaster, select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
2. Select the required Product from the list.
3. Select **Edit > Scenarios > Create Scenario**.
   The Select scenario suffix dialog box is displayed.
4. Select a Scenario suffix from the list or type a new one.
5. Type a description if required.
6. Click **OK**, then click **OK** again when created successfully.

   **Note:**

   - This functionality is only available for Standard Product and PFGs.
   - When a Scenario is created, it is created for all Channels associated with the base case Product.

## Copying Scenarios

1. In Demand Forecaster, select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
2. Select the required Product from the list.
3. Select **Edit > Scenarios > Copy Scenario**.
   The Copy Scenario dialog box is displayed.
4. Click the code of the Product to copy to.
5. Click **OK**, then click **Yes** to confirm.
6. Click **OK** when copied successfully.

## Deleting Scenarios

1. In Demand Forecaster, select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
2. Select the required Product from the list.
3. Select **Edit > Scenarios > Delete Scenario**.
   The Delete Scenario dialog box is displayed.
4. Select the Scenario you want to delete and click **Delete**.
5. Click **Yes** to confirm.
6. Click **OK** when deleted successfully.

## Editing Scenarios

You edit Scenario Products in the same way as a Normal Product.

1. In Demand Forecaster, select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
2. Select the required Scenario Product from the list box in the Scenarios toolbar.
3. Perform the required changes in the normal way.

   **Note:** An additional Scenarios tab now exists in the Data window. This tab indicates the scenario's parent Product and enables you to specify the percentage chance of the scenario occurring (although this percentage is not used in any calculations).

## Reporting Scenario forecasts

1. In Demand Forecaster, select **Modules > Demand Forecasting > Reports > Current Forecasts**.
   The Current Forecast Reports dialog box is displayed.
2. Select the desired options in the **General** tab as for normal items and click the **Details** tab.
3. Select **Other Options**, ensuring the **Include Scenarios** check box is selected.
4. Click **OK**.
   The Select scenario(s) to include dialog box is displayed.
5. Click to highlight and select the scenarios to report from the Scenario List.
6. Click **OK**.

# Permanent Forecast Groups

## About permanent forecast groups

A permanent forecast group is a system view established to monitor and control groups of Products. You can assemble the groups from any items on the database and the group identity consolidated into a single fictitious Product known as a Group Product. The individual items within the group maintain their individual identities and the group item reflects the aggregated forecast of the group generated from a history assembled from the weighted totals of the group members.

You can manipulate the forecast by the usual Edit Forecasts routines and market intelligence (MI) may be added as required. Options are available to relate the forecast of the forecast group to its group items as follows:

- The net forecast of the forecast group may be constructed such that it equals the weighted sum of the constituent items.
- The net forecast of the forecast group, as generated from a weighted aggregate history from constituent items, may be forced down to those items.

### Uses for permanent forecast groups

- To facilitate the creation and maintenance of a permanent group forecast across period ends
- To provide the facility to create and maintain group seasonal patterns which may be useful in setting up forecasts for new items.
- To provide statistical comparison between the group and the sum of the forecasts for the members of that group.

### Limitations of forecast groups

- Stock may not be held against a forecast group.
- Sales planning functions are not allowed with a forecast group.
- Returns and non-returns Products may not be mixed in the same group.

## Creating permanent forecast groups

1. In Demand Forecaster, select **Modules > Demand Forecasting > Forecast Group > Create/Modify**. The Forecast Groups wizard is displayed.
2. Select the Products to use then click **Next**.
3. Select a group item from the list then click **Next**.
4. Select the group members then click **Next**.
5. If history is to be weighted, select the field to use and the table in which it is stored from the lists.

6 Use the **Transfer** check box to select the history types to transfer. Sales are transferred by default.
7 For each history type selected, use the **Weight** check box to weight it by the chosen weighting field then click **Next**.
8 Select the options to use to create a forecast model for the new group Product.
See "About the forecast model" on page 212.
9 If you want to remove all of the independent variables relating to the selected Channel Products select the **Permanently remove all Independent Variables** check box.
10 Click **Finish**.

## Editing permanent forecast groups

1 In Demand Forecaster, select **Modules > Demand Forecasting > Forecast Group > Create/Modify**. The Forecast Groups wizard is displayed.
2 Select the Products to use then click **Next**.
3 Select the group item from the list then click **Next**.
4 Add and remove group members as required then click **Next**.
5 If history is to be weighted, select the field to use and the table in which it is stored from the lists.
6 Use the **Transfer** check box to select the history types to transfer. Sales are transferred by default.
7 For each history type selected, use the **Weight** check box to weight it by the chosen weighting field then click **Next**.
8 Select the options to use to create a forecast model for the new group Product.
See "About the forecast model" on page 212.
9 If you want to remove all of the independent variables relating to the selected Channel Products select the **Permanently remove all Independent Variables** check box.
10 Click **Finish**.

## Deleting permanent forecast groups

1 In Demand Forecaster, select **Modules > Demand Forecasting > Forecast Group > Delete**. The Delete Forecast Group dialog box is displayed.
2 Select the forecast group item of the group to delete.
The Group members will be displayed in the right-hand panel.
3 Click **OK**.
The forecast group item will not be deleted, only the group.

## Spreading MI to PFG members

1. In Demand Forecaster, select the required group Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Make the desired forecast changes to the group item as you would a normal Channel Product.
   See "About forecast editing" on page 224.
4. Select **Model > Force forecast down**.
   The Force forecast down to member items dialog box is displayed.
5. On the **Spread** tab, specify the forecast components to spread, the method to be used to calculate the spreading ratios and the periods to spread. Type a market intelligence description if required.
6. On the **Exclude** tab, select the Channel Products to be excluded from the spread and the apportion option to use.
7. Click **OK**.
8. To save the new forecasts, select **File > Save**.

## Recalculating group forecasts

It is possible to recalculate the Permanent Forecast Group item forecast by summing the forecast of its members.

1. In Demand Forecaster, select the PFG item and associated Channels.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Model > Sum forecast up**.
   The Recalculate group forecast dialog box is displayed.
4. Select the forecast components of the group subordinates to sum.
5. Click **OK**.
6. To save the new forecast, select **File > Save**.

# Temporary Forecast Groups

## About temporary forecast groups

You can create temporary forecast groups (TFGs) to manipulate forecasts at a group level which can then be pro-rated down to individual Channel Product level for saving. They may also be used for grouping Products together for reporting purposes. As suggested in their name, TFGs are not stored on the database. They are created during a session by clicking the Group tick box within the toolbar of the main screen.

TFGs may also be created from a predefined view on the database. Such a View may, for example, contain Channel Products with a common factor, identified by the business.

Once grouped, the forecast may be manipulated as if it were a normal Channel Product.

**Notes**

- You cannot mix Standard Products with Non-Standard, Returns, Scenario, Unspecified Forecast or Forecast Group Products in the same TFG, and Infor Demand Planning reminds you of this if you try.
- Take care if a model is fitted to a weighted TFG whose member items have MI. There may be unexpected results.
- You can edit TFGs in weekly as well as monthly periodicity provided that the database has been configured to support this.
- Grouped history can be manipulated, but can never be saved.
- Periodic patterns cannot be applied to TFGs
- User Data Series will not be displayed or calculated for TFGs.
- Any new Market Intelligence added to a TFG will not have a category assigned to it.

## Creating and spreading temporary forecast group forecasts

Temporary forecast groups (TFGs) may be created to enable forecasts to be manipulated at a group level and then pro-rated down to individual Channel Product level for saving. They may also be used for grouping Products together for reporting purposes. As suggested in their name, TFGs are not stored on the database, but are created during the session for manipulation.

1. In Demand Forecaster, select the desired Channel Products.
   See "About selecting Products and Channels" on page 35.
2. Click the **Group** check box in the toolbar of the main window.
3. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
4. Make the desired forecast changes to the group item as you would a normal Channel Product.
   See "About forecast editing" on page 224.

5 Select **File > Save**.
The Spread dialog box is displayed.

6 On the **Spread** tab, specify the forecast components to spread, the method to be used to calculate the spreading ratios and the periods to spread. Type an MI description if required.

7 On the **Exclude** tab, select the Channel Products to be excluded from the spread and the apportion option to use.

8 Click **OK**

9 Select **File > Save**.

See "About temporary forecast groups" on page 282.

# Predecessors and Successors

## About predecessors/successors

The Demand Forecaster module enables you to achieve smooth succession from one Product to another by establishing a link between a replacement Product and its predecessor. On a monthly basis, the system copies demand from the predecessor to the new Product. There is also the facility to link discontinuation and effectivity dates for both Products. The discontinuation datemay be time fixed or dependant on the depletion of stocks. If this is the case, the theoretical on-hand stocks are taken into account and the discontinuation and effectivity dates changed accordingly.

You may set up a chain of Products, for example, if there is an annual Product code change, these new Product code successions can be defined:

A > B > C > D > E etc.

time---------->

There is no limit to the number of predecessors and successors you can have in a chain for a particular Channel. The system however will not allow one predecessor to be divided into two or more successors at the same Channel.

Once a predecessor/successor relationship is established and discontinuation/effectivity dates set, demand data should not be entered at period end to a predecessor after its discontinuation date or to a successor before its effectivity date. If such data is added, the CHANNEL PRODUCT is written to the appropriate exception view, either "PASSED DISCO" or "PASSED EFF".

**Note:**

- A returns item may not be used as part of a succession chain with any other Product type.

## Creating predecessor/successor relationships

1. In Demand Forecaster, select **Modules > Demand Forecasting > Predecessor/Successor > Create**.
   The Predecessor - Successor wizard is displayed.
2. Choose to either use the Products which are currently selected or to open the Select Products dialog to re-select.
   See "About selecting Products and Channels" on page 35.
3. Click **Next**.
4. Click the Product to be used as the predecessor item then click **Next**.
5. Click the Product to be used as the successor item then click **Next**.
6. Select the Channels you want to use for the linkage. To select all the listed Channels, use the **Select All** option.
7. Click **Next**.
8. Use the **History** check boxes to select the history types to transfer to the successor during the set up and at period end.
9. Select the corresponding **Weight** check boxes if weightings are to be applied to the transfer.
10. Specify the weighting factors for each Channel:
    a. Click **Define History Weightings**.
       The Define History Weightings dialog box is displayed.
    b. Type the desired factors in the Weighting column and click **OK**.
11. Click **Next**.
12. Use the check and edit boxes to define the discontinuation date of the predecessor and the effectivity date of the successor for the selected Channels.
13. Select the **Pred. Remove MI** check box if you want to delete any non T-type market intelligence for the predecessor, up to and including the successor's introduction date.
14. Select the **Succ. Remove MI** check box if you want to delete any non T-type market intelligence for the successor, after the predecessor's discontinuation date.
15. Click **Next**.
16. Select **Permanently Remove All Independent Variables** to delete any existing independent variables for the successor Channel Products.
17. Select the Options to use and click **Finish** to fit a DLM to the successor Channel Products.

## Editing predecessor/successor relationships

1. In Demand Forecaster, select the predecessor Product.
2. Select **Modules > Demand Forecasting > Predecessor/Successor > Modify**.
   The Modify Predecessor/Successor Relationships dialog box is displayed.
3. On the **Main** tab, click the Channel/Successor item to modify.

4 On the **Dates** tab, use the check and edit boxes to modify the discontinuation date of the predecessor and the introduction date of the successor.

See "About effectivity and discontinuation dates" on page 247.

5 On the **History** tab, use the **History** and **Weight** check boxes to modify the history types to transfer to the successor at period end, and if the history should be weighted or not.

6 Click **OK**.

## Reporting predecessor/successor relationships

1 In Demand Forecaster, select the predecessor Product.

2 Select **Modules > Demand Forecasting > Predecessor/Successor > Report**.
The Report Predecessor/Successor Relationships dialog box is displayed.

3 On the **Report** tab, select the Channel from the **Current Channel** list.
Successor descriptions, codes, introduction dates and discontinuation dates are displayed.

4 Click the **Graph** tab.
The graph shows the chain of Channel Products that were shown in the **Report** tab, displaying the history and/or forecast from each introduction date to each discontinuation date.

5 If required, select an alternative Channel from the **Current Channel** list.

6 Click **OK** to close the dialog.

## Deleting predecessor/successor relationships

1 In Demand Forecaster, select the predecessor Product.

2 Select **Modules > Demand Forecasting > Predecessor/Successor > Modify**.
The Modify Predecessor/Successor Relationships dialog box is displayed.

3 On the **Main** tab, click the Channel/Successor item to be deleted.

4 Click **Remove**.

5 Click **OK**.

## Calculating discontinuation dates

1 In Demand Forecaster, select the desired Products and Channels.

See "About selecting Products and Channels" on page 35.

2 Select **Modules > Demand Forecasting > Discontinuation Dates**.
The Automatic Calculation of Discontinuation Dates dialog box is displayed.

3 Select the **Remove MI** check box if you want to drop all market intelligence (except T-type MI) after the calculated discontinuation date.

4 Select the **Align existing Pre/Suc dates** check box if you want to automatically set the effectivity date of the successor equal to the newly calculated discontinuation date of the current (predecessor) item.

   These dates will always be aligned when the "Update Successor Effectivity Date (CPt)" field for the predecessor is set to 1 (true), irrespective of this selection.

5 Click **OK**.
   On completion, the output screen is displayed providing details of the calculations completed and any restraints encountered.

   **Exception Views**

   The process may generate these exception views:

   - "BOM SUB AUTO DISC"
   - "FUT EFF AUTO DISC"
   - "POT OBS AUTO DISC"
   - "RETURNS AUTO DISC"

# Reports

## About forecast reports

The process of reporting is key to the usage of any planning system. The Demand Forecaster module offers a selection of standard reports to represent the most commonly reported information such as summary forecasts, stock reports and performance reports. There are also tools for Sales Budgeting and Tracking (SBT) and Sales and Operations Planner (S&OP) reporting. These facilities are totally flexible, allowing the presentation of information in any chosen periodicity or format (integers, decimals, percentages).

Exporting

There may be a need to export data from for external analysis. Data may be exported in a variety of formats to any preferred non-Infor Demand Planning systems, for example, spreadsheet packages. This feature provides an easily accessible format for analysis and reporting.

See "About importing and exporting" on page 127.

Graphical displays

Graphs may be printed directly or exported as bitmap files. The buttons that appear with report graphs are as follows:

| | |
|---|---|
| **First**, **Previous**, **Next**, **Last** | Arrow buttons allow you to view the next or previous items or the first and last items. |
| **Print** | Allows you to print the graph. |

| | |
|---|---|
|  | Allows you to view the graph in either 2D or 3D. |
| **Vertical Grid** | Vertical lines are displayed on the graph. |
| **Horizontal Grid** | Horizontal lines are displayed on the graph. |
| **Fonts** | Allows you to change the fonts. |

## Viewing a Current Forecast report

1 Select the Channel Products to report on.
See "About selecting Products and Channels" on page 35.

2 In Demand Forecaster, select **Modules > Demand Forecasting > Reports > Current Forecasts**. The Current Forecast Reports dialog box is displayed.

3 On the **General** tab, configure the following aspects of the report as required:

- the report style
- the forecast types
- the report periodicity
- the history types
- whether report totals are included
- whether report data is summarized

4 On the **Details** tab, select or type the following:

- the report length
- the scale by factor
- the group by field
- the calendar
- the weighting field
- the time-phased weighting if applicable
- whether scenarios are included

5 Click **OK**.

6 Use the **First**, **Previous**, **Next**, and **Last** buttons on the toolbar to view the first, previous, next or last item in the report.

## Viewing an MI Effectivity report

1 Select the Channel Products to report on.
See "About selecting Products and Channels" on page 35.

2 In Demand Forecaster, select **Modules > Demand Forecasting > Reports > Forecast Analysis > MI Effectivity**.
The MI Analysis - Options dialog box is displayed.
3 Select the Percentage tolerance required.
4 Select the **Display totals** check box if you want to include a grand total for the report and, if a grouping is selected, a group total for each control break.
5 Select the **Sort by improvement** check box if you want to base the sort order on the degree of MI improvement.
6 From the list, select **Ascending** or **Descending.**
7 Select a Weight field for the report if required.
8 Select a Group by field if required.
9 Type a Scale by factor if required.
10 Click **OK**.
11 Use the **First**, **Previous**, **Next**, and **Last** buttons on the toolbar to view the first, previous, next or last item in the report.

## Viewing Accuracy Data

1 Select the Channel Products to report on.
See "About selecting Products and Channels" on page 35.
2 In Demand Forecaster, select **Modules > Demand Forecasting > Reports > Accuracy**.
The Accuracy Report Options dialog box is displayed.
3 Select the table from which to select a grouping field, either Products or Channel/Products.
4 Select the field to group by from the selected table.
5 Select a Weight By field for the report if required.
6 Select the Demand Type to use, Adjusted Demand, Demand or Sales.
7 Enter a Scale By factor if required.
8 Click **OK**.
The following windows are displayed:

- "Accuracy Data reports"
- "Accuracy Histogram"
- "Accuracy Scatter Chart"

## Viewing a Demand Analysis report

1 In Demand Forecaster, select **Modules > Demand Forecasting > Period End > Demand Analysis**.
The Demand Analysis dialog box is displayed.
2 On the **Main** tab, select the following:

- History to compare
  - MTD (first forecast period)
  - MTD (to date)
  - Last Month
- History type
  - Default
  - Sales
  - Demand
  - Adjusted demand
- Options
  - Transfer NSP History
  - Sum Forecast Groups
  - Generate exception view
  - Show description

3 On the **Report** tab, select the criterion you want the exceptions reported by.
4 On the **Sort** tab select the fields to sort and weight the report by.
5 Click **OK**.
The Channel Dates Confirmation dialog box is displayed.
6 Check that the latest demand has been loaded successfully and click **OK**.

## Changing the Graph options

1 In Demand Forecaster, select **Modules > Demand Forecasting > Reports > Forecast Graph**.
The Graph Options dialog box is displayed.
2 On the **General** tab, configure the following aspects of the report as required:
- the graph style
- the forecast types
- the graph periodicity
- the history types

3 On the **Details** tab, select or type the following:
- the graph length
- the scale by factor
- the group by field
- the calendar
- the weighting field

- the time-phased weighting if applicable
- whether scenarios are included

**4** Click **OK**.

# Promotions

## About promotions

The Promotions feature is designed to assist in the task of managing the forecast for heavily promoted and frequently grouped Products.

There are three main types of promotion:

- Standard Product Promotion. Many promotions involve more than one item but have no special pack requirements.
- Product Replacement Promotion. In this case a Non-Standard Product (NSP) may be sold for a period of time instead of the standard item. This situation applies particularly in fast moving consumer goods (FMCG) companies where competition, price flash and extra content packs are regularly produced and sold. Most companies need to treat these special packs as unique item codes for production and logistical purposes.
- Special Kit Promotion. In this case a set, comprising of standard and non-standard items, is sold bundled together often in a special presentation container. Typically this is a promotional strategy used by some FMCG companies but many other industries produce special kits, for example, medical supplies, introductory offers to new customers and so on.

### Marketing group structure

The assumption has been made that a marketing group might be comprised of a parent Product, which is the Standard Product, a number of Non-Standard Products (NSPs) and Associated Standard Products (ASPs).

The NSPs are essentially the same as the parent but exist as a separate code due to slight differences in detail (10% extra, money off flashes etc.). If an NSP item is a member of an ad-hoc group it will be excluded from any changes that are spread down.

Any standard items which may be affected by a particular promotion are called Associated Standard Products (ASPs).

A Standard Product will have its own sales and demand history, as well as having a statistical forecast and the ability to include market intelligence and dependant demand. All functions within Edit Forecasts will be available for standard pack items.

A marketing group view is of great importance in controlling replacement and kit promotions and may contain:

- one NSP which is not linked to any other standard item.
- one or more NSPs linked to a parent item.
- one NSP linked to one or more ASPs.
- one or more NSPs linked to a parent item and to one or more associated items.

### History details

The demand for the Standard Product is an aggregation of its own demand and the demand from the NSPs. It is this combined demand that would normally be used to produce the statistical forecast and that would be smoothed against the aggregate forecast to revise the statistical model. The sales history of the Standard Product would consist of its own independent demand.

The parent Product's history of demand is an aggregation of its own demand and the demand from the NSPs. Its history of sales is its own independent sales.

On a monthly or weekly basis the parent and the NSPs demand are brought into the system separately using the standard Import Demand routines.

### Forecast details

The NSPs, by their very nature have no statistical forecast. The NSPs, having no statistical forecast, are not smoothed at period end.

### Preparing for a promotion

Before any marketing groups can be established, the Products that are to be the non-Standard Products must be defined. Ensure the field "Product Type (Pt)" is set to NSP (1) for each.

See "Creating marketing group views" on page 295.

## Edit Promotions

The Edit Promotions grid has the same look and feel as the Edit Grid but with increased functionality. This enables Promotional events and Promotional Market intelligence to be added to Marketing group views and Ad-hoc promotional groups. The creation and management of Ad-hoc promotional groups is also done within the grid.

To add promotional market intelligence to a marketing view, select the required marketing view and enter Edit Promotions. The marketing group view selected is displayed at the top left of the grid.

For marketing group views, the only available view of the Edit Promotions grid is All Products at selected channel.

Any Market Intelligence, profile, or Promotional event added to single or multiple periods/channel products will be of Promotional, T-type, MI and have a Promotional MI Category assigned to it.

After saving, the Market intelligence event is listed in a drop down containing all MI events that are linked to the selected marketing group. The default is New Event.

When another marketing group is selected, the list of MI events updates to events linked to the newly selected marketing group.

Previously saved MI events can be loaded by selecting an event from the list. This loads the New MI that was created in the event, which can be edited and saved back to the event.

MI events can be deleted from the database by selecting an event and selecting the x button.

Ad-hoc promotional groups can be created in the Edit Promotions grid by selecting channel products, entering the grid and selecting the view you wish to create the ad-hoc group in - for example, All Channels at selected product.

When any edits are saved, the ad-hoc group is created after specifying a name and description for the group at the prompt.

The Ad-hoc view is be displayed at the top left of the grid with any other Ad-hoc views on the database.

When another ad-hoc view is selected, the channel products in that view are loaded in the view of the grid it was created (for example, All Channels at selected product) and the list of MI events updates to events linked to the newly selected view.

Promotional events can be added to marketing groups and ad-hoc views in Edit Promotions, allowing for promotional MI to be created on a cross CP basis, and also allowing for any negative effect on related, non-promotional items. See: "Promotions Workbench" on page 292.

From Infor 11, Customer Forecast and User Data Series can be displayed in the Edit Grid and the Edit Promotions grid.

Customer forecast is the default display. In the Detail view of the grid, an extra row is displayed. The Net forecast value that is displayed in the grid equals Customer Forecast up until the end of periods of customer forecast.

Where Net forecast equals Customer forecast, edits cannot be performed to the Net Forecast or to the New MI values for these periods.

Any of the User Data Series to which the user has access can be selected via a list and displayed in any periodicity. Where editable, the User Data Series can be edited and saved back to the database. See "Edit Grid" on page 265.

# Promotions Workbench

Use the  Promotions Workbench dialog to create a promotional event, allowing for promotional MI to be created on a cross CP basis, and also allowing for any negative effect on related, non-promotional items.

The  Promotions Workbench dialog has these fields and options:

**Promotional Event**
A drop-down of any previously saved promotional events for the currently selected Marketing Group or Ad-hoc promotional group. The default is New Promotional Event.

**Delete Event**
Select the event to delete and select **Delete Event**  to delete it from the database.

**On Promotion, Off Promotion and Cannibalized tabs**
All three tabs have these options:

- **Start Date**: Prepopulated with the data of the selected period. The Start Date drop-down contains all period dates based on the current edit grid selection and periodicity.

  **Note:** You can specify a different start date on each of the three tabs.

- **Promotional Profile**: A drop-down of all promotional profiles on the database, with their graphical representation displayed underneath.

  **Note:** You can specify a different profile on each of the three tabs.

**Items, Factors, Select**
These are column headings in the left hand pane:

- Items: A list of the channel products currently displayed in the grid.
- Factors: The forecast group factor to be assigned to the channel product. Pre-defined factor=1
- Select: Select which channel products is included in the promotional event.

**Note:** If you enter the Promotions Workbench dialog with a Marketing Group view selected in the edit grid, any NSP's is selected by default in the **On Promotion** tab, the Parent of the MG View is selected by default in the **Off Promotion** tab, and any ASPs are selected by default in the **Cannibalized** tab.

If you enter with a standard selection of Channel Products, all tabs show all channel products currently displayed in the edit grid with none selected by default.

You cannot select the same channel product(s) in more than one tab.

**Uplift/Downturn**
These options are enabled or disabled according to whether the selected profile has a downturn or an upturn.

- Value: Specify a value to add to the forecast.
- Percentage of Net Forecast: Alternatively, specify a percentage of Net forecast to be applied to the selected On Promotion items.

The percentage value is the sum of the net forecast of the Channel Products selected in the tab, from the Start date, for the positive promotional periods of the selected profile.

When applying a % of Net forecast for downturn, the % value is the sum of the net forecast of the Channel Products selected in the tab, from the Start date, for the negative promotional periods of the selected profile.

**Base Split**
If multiple promotional items are selected, the New MI is spread back to the selected items in the tab based on the Base Split option selected. The options are:

- Evenly: An even split between the selected items
- Percentage of Net Forecast
- Factors: Split based on user-defined factors that can be input in the dialog. Default of 1.

If the Promotional Event is being applied to a Marketing Group view, on clicking **OK**, the user is prompted to save a description for the promotional event, which can be saved and re-selected for future promotions.

If the Promotional Event is being applied to an unsaved Ad-hoc view, on clicking **OK**, the user is prompted to save a name and description of the Ad-hoc view, followed by a description of the Promotional Event. The event can be saved and re-selected for future promotions.

The event is applied to the grid. The MI Description takes the name of the promotional event.

All further events that are applied to the grid in the same session are added to the existing event MIs.

All market intelligence that is created from a promotional event can be saved via the usual save method. Saved MI Events are different from saved Promotions workbench events:

- The saved MI events are the actual Market Intelligence that is applied to the grid.
- The saved promotions workbench is the method of applying the MI to the grid.

**Reselecting promotions workbench event**

All promotions workbench events can be reused for any future promotion.

Select the promotions workbench and select an event from the list. The listed events are linked to the marketing group or ad-hoc group currently in the grid. The event is loaded with channel product selection, profiles, dates, options, and values that are set in each of the three tabs, as per when the event was saved.

You can modify values in the three tabs. When the event, that is, the Market Intelligence, is applied back to the grid, you can save the changes for future use if required. If unsaved, the event remains unchanged in the database, but is still applied to the grid.

If, in the same session, you create a promotions workbench, reselect it and apply it back to the grid, even if you have modified or saved it, it is added to the current Market Intelligence in the grid. The current Market Intelligence is not overridden.

Reselecting a promotions workbench event can be seen as selecting a type of profile, but a more detailed one.

**Note:** You cannot apply a promotions workbench to periods where the Net Forecast equals Customer Forecast.

# Marketing Groups

## About marketing groups

Marketing group structure

The assumption has been made that a marketing group might be comprised of a parent Product, which is the Standard Product, a number of Non-Standard Products (NSPs) and Associated Standard Products (ASPs).

The NSPs are essentially the same as the parent but exist as a separate code due to slight differences in detail (10% extra, money off flashes etc.)

Any standard items which may be affected by a particular promotion are called Associated Standard Products (ASPs).

A Standard Product will have its own sales and demand history, as well as having a statistical forecast and the ability to include market intelligence and dependant demand. All functions within Edit Forecasts are available for standard pack items.

A marketing group view is of great importance in controlling replacement and kit promotions and may contain:

- one NSP which is not linked to any other standard item.
- one or more NSPs linked to a parent item.
- one NSP linked to one or more ASPs.
- one or more NSPs linked to a parent item and to one or more associated items.

### History details

The demand for the Standard Product is an aggregation of its own demand and the demand from the NSPs. It is this combined demand that would normally be used to produce the statistical forecast and that would be smoothed against the aggregate forecast to revise the statistical model. The sales history of the Standard Product would consist of its own independent demand.

The parent Product's history of demand is an aggregation of its own demand and the demand from the NSPs. Its history of sales is its own independent sales.

On a monthly or weekly basis the parent and the NSPs demand are brought into the system separately using the standard Import Demand routines.

### Forecast details

The NSPs, by their very nature have no statistical forecast.

The NSPs, having no statistical forecast, are not smoothed at period end.

See "Creating marketing group views" on page 295.

## Creating marketing group views

1. In Demand Forecaster, select **Modules > Demand Forecasting > Promotions > Marketing Group View**.
   The MG View wizard is displayed.
2. Choose to either use the Products which are currently selected or to open the Select Products dialog to re-select.

   See "About selecting Products and Channels" on page 35.
3. Click **Next**.
4. Click the Product to be used as the parent Product for the view, then click **Next**.
5. Select the Products in the Potential NSPs panel to be included in the view and click **Add** to transfer them to the Selected NSPs panel.

6 If required, type the weighting factor in the NSP Weighting column.

7 Click **Next**.

8 In the Potential ASPs panel, select the Products to be included in the view and click **Add** to transfer them to the Selected ASPs panel.

9 Select the **Define history transfer from NSPs to ASPs** check box and click **Next** to open the Define History Weightings dialog and enter the required multiplication factor.

These factors will determine how the demand history is weighted and transferred from the NSPs to any ASPs at period end.

10 Click **Next**.

11 Type a Description for the MG view.

12 Click **Finish**.

## Editing marketing group views

1 In Demand Forecaster, select **Modules > Demand Forecasting > Promotions > Marketing Group View**.
The MG View wizard is displayed.

2 Choose to either use the Products which are currently selected or to return to the Select Products dialog to re-select.

See "About selecting Products and Channels" on page 35.

3 Click **Next** if using currently selected Products or **OK** when different Products have been selected.

4 Click the parent Product of the view to be amended, then click **Next**.

5 Use the **Add** and **Remove** buttons to change the items in the Selected NSPs panel.

6 If required, type the weighting factor in the NSP Weighting column.

7 Click **Next**.

8 Use the **Add** and **Remove** buttons to change the items in the Selected ASPs panel.

9 Select the **Define history transfer from NSPs to ASPs** check box and click **Next** to open the Define History Weightings dialog and enter the required multiplication factor.

These factors determine how the demand history is weighted and transferred from the NSPs to any ASPs at period end.

10 Click **Next**.

11 Click **Finish**.

12 Click **Yes** to overwrite the existing view.

## Deleting marketing group views

1 In Demand Forecaster, select **Modules > Demand Forecasting > Promotions > Delete Marketing Groups**.
The MG View Delete dialog box is displayed.

2 Select the MG views to delete.

If more than one MG view is selected, and one or more has the MG view name the same as the NSP code, a message is displayed advising that the views should be deleted individually to avoid orphan market intelligence.

3 Select the **Remove All T-Type MI** check box if you want to delete the T-type market intelligence associated with the view.

4 Select the **Remove transferred history** check box if you want to remove any history stored against the NSPs.

5 Click **OK**.

# Promotional Profiles

## About promotional profiles

A promotional profile is the shape of a promotion over time. You can set up profiles with a name and description and can be any number of periods long up to the forecast horizon.

In Collaborate Database Administration and Demand Forecasterit is possible to create promotional profiles based on historical data. It is also possible to base a profile on the history of multiple Products. This functionality allows you to find the average profile if the promotion was run on a group of Products. The grouping is limited to Products at the same Channel. When multiple Products are selected the history is summed per period and then divided by the number of Products in the selection.

You can store profiles as monthly or weekly profiles depending on the set up of the database. In a monthly-controlled database the profiles are in monthly buckets and in a weekly-controlled database the profiles are weekly.

The profiles created are used to apply a periodic shape to the promotional quantity supplied. The promotional quantity values for each individual period are calculated by spreading the total quantity, such that that the proportion of the total quantity allocated to a given period is based upon the ratio of the period profile value to the sum of all the values in the profile.

### Example

Consider a 5 period profile shape of 5, 10, 15, 20 and 0 using a total promotional quantity uplift of 1000 units:

| Period No. | Profile | Stat. Fcst. | Calculation for Promotional Quantity | Resulting T-Type MI | Net Fcst. |
|---|---|---|---|---|---|
| 1 | 5 | 100 | (5 / (5+10+15+20)) x 1000 | 100 | 200 |
| 2 | 10 | 100 | (10 / (5+10+15+20)) x 1000 | 200 | 300 |
| 3 | 15 | 100 | (15 / (5+10+15+20)) x 1000 | 300 | 400 |
| 4 | 20 | 100 | (20 / (5+10+15+20)) x 1000 | 400 | 500 |
| 5 | 0 | 100 | (0 / (5+10+15+20)) x 1000 | 0 | 100 |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL | 50 | 500 | | 1000 | 1500 |

## Creating a promotional profile

1. In Demand Forecaster, select **Modules > Demand Forecasting > Promotions > Promotional Profiles**.
   The Promotional Profiles dialog box is displayed.
2. Click **Add**.
3. Enter the name of the new profile in the dialog displayed and click **OK**.
4. Enter a description of the new profile in the dialog displayed and click **OK**.
5. In the Promotional Profiles dialog, select **Edit**.
6. To specify the uplift for each week of the profile, click the existing value (initially all zero), type the new value (between 99.99 and -99.99) and press ENTER.
   To review the "shape" of the profile, in the Promotional Profiles dialog, click **Plot** before clicking **OK**.
7. When you have edited all the required values click **OK**.

## Editing a promotional profile

1. In Demand Forecaster, select **Modules > Demand Forecasting > Promotions > Promotional Profiles**.
   The Promotional Profiles dialog box is displayed.
2. Click the profile to change and select **Edit**.
3. To edit the uplift value for any week of the profile, click the existing value, type the new value (between 99.99 and -99.99) and press ENTER.
   To review the "shape" of the profile, in the Promotional Profiles dialog, click **Plot** before clicking **OK**.
4. When you have edited all the required values click **OK**.

## Applying a promotional profile

## Deleting promotional profiles

1. In Demand Forecaster, select **Modules > Demand Forecasting > Promotions > Promotional Profiles**.
   The Promotional Profiles dialog box is displayed.
2. Click the profile you want to delete.
3. Click **Delete**, then click **Yes** to confirm.
4. Click **OK** to close the dialog box.

# Variance Estimates

## About variance estimates

In order to develop an inventory policy based on a forecasted future requirement, the probable accuracy of the forecast needs to be established. This accuracy is expressed as a standard deviation calculated from past performance. In cases where a forecast is generated without history, the standard deviation must be derived independently.

It has been well established that in every Product range there is a variance estimate that describes the general relationship between the standard deviation and the average level of forecast. As the average monthly forecast increases, so does the standard deviation. This is not a direct or linear relationship, as the proportion that the standard deviation represents of the average forecast decreases as the level of the forecast increases. The relationship can be seen as a linear relationship if a graph is plotted with the standard deviation on the vertical axis, on a logarithmic scale, whilst the average monthly forecast is plotted on the horizontal axis, again on a logarithmic scale.

The Variance Law is a function that allows a standard deviation to be obtained at a given level. The function may be created by considering the level and standard deviation for Channel Products that have known levels and standard deviations and then fitting a straight line through them to create a function of the form y=mx+c (the values of the level and standard deviation are logged). Using the value of the known level (x) a sensible value for the unknown standard deviation (y) can be calculated.

In use, the variance estimate has proved to be very robust, however, it has been observed that different industries and inventory types tend to have significantly different relationships. Two important facts have been observed through the use of variance estimates in various industries:

- The exponent (for standard deviation) is generally less than 1. This reflects the fact that the relative (percentage) error in forecasting demand for fast-moving parts tends to be smaller than the same error in forecasting slower moving parts.
- The actual error for any parts with the same level of forecast can vary dramatically. This emphasizes the fact that the variance estimate should normally only be used to give an estimated starting position for the standard deviation, and that this should be revised with respect to actual sales to find the true level of error for each Channel Product.

Demand Forecaster makes provision for:

- Holding any number of named variance estimate relationships. These must be stored by name/Channel.
- Calculating a variance estimate (and saving as a named relationship) from any set of items by a defined Channel. This will enable businesses to create a variance estimate for any of the various inventory types in stock.
- The manual input and saving as a named relationship of a variance estimate.
- The facility to choose a variance estimate to use when a forecast is created without running a model through history. This will happen for instance where the user is creating a model using the Alternate forecast function.

## Adding a variance estimate

1. Select a range of Products and Channels to use to establish a new variance estimate.
   See "About selecting Products and Channels" on page 35.
2. In Demand Forecaster, select **Modules > Demand Forecasting > Variance Estimate**.
   The Current Variance Estimates window is displayed.
3. Right-click in the table area and select **Add Variance Estimate** from the displayed options.
   The Variance Estimate Details dialog box is displayed.
4. Type a name for the new variance estimate in the **Description** edit box.
5. Select from the **Channel ID** list box the Channel at which the new Variance Estimate is to be used.
6. If known, enter values in the **Estimate Coefficient** and the **Estimate Exponent** edit boxes.
7. If you want the system to calculate these values, leave the edit boxes blank and click **OK** to display the Current Variance Estimate window. Right-click the newly created row and click **Calculate**.
   The Variance Estimate Scatter Diagram window is displayed. The Coefficient and Exponent are displayed in boxes at the bottom of the graph.
8. Click **OK**.
9. Close the Current Variance Estimate window, which now includes details of the newly created variance estimate.

## Applying a variance estimate

1. Apply an Alternate Forecast to the chosen Channel Product.
   See "Applying an alternate forecast" on page 243.
2. In the **Detail** tab of the Alternate Forecast dialog, select **Variance Estimate**.
3. Select the required variance estimate from the adjacent list box.
4. Click **OK**.
5. Select **File > Save**.

## Calculating a variance estimate

1. Select a range of Products/Channels to use to establish a new variance estimate.
   See "About selecting Products and Channels" on page 35.
2. In Demand Forecaster, select **Modules > Demand Forecasting > Variance Estimate**.
   See "Adding a variance estimate" on page 300.
   The Current Variance Estimates window is displayed, showing the variance estimates that have been created earlier.
3. Right-click in the row containing the variance estimate you want to calculate, then click **Calculate** on the shortcut menu.

A warning message indicates if the number of items having levels and standard deviations above zero is less than 50. The purpose of this message is to inform you that the end results of the calculation could be inaccurate because of the low number of items over which the variance estimate would be established.

a Click **Yes** to continue.

b If the number of items having levels and standard deviations above zero is less than 10, a warning to that effect is given and in this case, click **OK** to acknowledge the message. The process is stopped because of insufficient data.

Provided that sufficient valid data points are available, the Variance Estimate Scatter Diagram window is displayed. This is a visual representation of the calculation to establish a coefficient and exponent for a set of Products. The diagram presented shows a point on a graph for each Channel Product selected. The graph is constructed using logarithmic scales for both the forecast level (horizontal) and Standard deviation (vertical Scale). A regression line through the scatter points is the line from which the coefficient and exponent have been derived. The Coefficient and Exponent are displayed in boxes at the bottom of the graph.

4 Click **OK**.

5 Close the Current Variance Estimate window, which now includes the new values.

## Editing a variance estimate

1 In Demand Forecaster, select **Modules > Demand Forecasting > Variance Estimate**.
The Current Variance Estimates window is displayed.

2 Left click the row to edit.

3 Right-click in the table area and select **Edit**.
The Variance Estimate Details dialog box is displayed.

4 Over type the new values in the **Estimate Coefficient** and the **Estimate Exponent** edit boxes.

5 Click **OK**.
A warning message that the name/Channel combination exists is displayed.

6 Click **Yes**.

7 Close the Current Variance Estimate window, which now includes the new values.

## Deleting a variance estimate

1 In Demand Forecaster, select **Modules > Demand Forecasting > Variance Estimate**.
The Current Variance Estimates window is displayed.

2 Left-click the row to delete.

3 Right-click in the table area and select **Remove**.

4 Right-click in the table area and select **Save**.

5 Close the Current Variance Estimate window.

**Note:** You cannot delete the Dummy variance estimate.

# Causal Modelling

## About causal modeling

Warning: Causal modeling is a powerful technique. Its use may cause unexpected changes to the forecast model. You should use it with care and, if necessary, with the assistance of Infor Demand Planning consultancy support.

Causal modeling is performed as part of the statistical forecasting routine. Its purpose is to provide an additional forecasting facility by the introduction of the ability to regress a number of independent variables against a dependent variable. A regression model is one that relates changes in history to factors other than time and predicts changes in sales levels with respect to that factor.

Sensibly used, causal factors improve the forecast accuracy of a Product and, by reducing its standard deviation, reduce the recommended safety stock for a fixed service level.

The dependent variable is the demand pattern of a Channel Product. The independent variables may be other Channel Products and/or other variables. Independent variables should be observable events in history which explain some variability in past sales and have predictability in the future. They may be qualitative or quantitative.

Take care that factors which are not predictable are not used as independent variables. Such factors, because of their possible past correlation, serve only to reduce the standard deviation of a forecast without adding to its real accuracy. A principle consequence of this would be to incorrectly reduce the recommended safety stock for the product. An example of such an incorrect independent variable is temperature.

As all statistical modeling is carried out at monthly level, this functionality will only be allowed in the monthly view, whether in a monthly-controlled or weekly-controlled database.

You may save up to 7 independent variables against the dependent variable. Live Product types which may be dependent variables are:

- 0 - Standard
- 8 - Permanent forecast groups

Slow Moving Products (SMPs) and Scenario Products cannot be used as independent variables.

Allowable data series for use as independent variables are:

- History/forecasts associated with Channel Products as specified above. Note that history masking will not be effective, all history is included for independent variable purposes.
- Time phased weightings containing external variables.

Both types must have a minimum of 2 years history and forecast to the horizon

The implementation of causal modeling follows the traditional DLM lines. The DLM is already the sum of independent components. For example, Forecast = Trend + Seasonality. A Causal component may be added to the formula. For example, Forecast = Trend + Seasonality + Causality.

Independent variables can only be applied to the dependent variable in Edit Forecasts mode. It is a matter for your discretion whether or not to retain them.

See "About independent variables selection messages" on page 307 and "About causal factors" on page 303.

# About causal factors

The following explains the calculation behind causal factors. By means of simple examples the relationship between the dependent variable and the independent variable may be followed.

The dependent variable is so called because of its possible dependence on another variable. If it is suspected that the demand for this Channel Product may, in part, be dependent upon an external measurable factor, this factor could be used as an independent variable.

## Base case

In the following example, the demand for a Product is a steady 10 units per period. It is however subject to apparently random, large increases in demand to 100 units. The random nature of these "peaks" of demand is lost in a normal forecast. The peaks are either ignored as "outliers" or treated as lumpy demand and averaged when the forecast is created:

Outliers

| Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| History | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 10 | 10 | 100 | 10 | 10 |
| Forecast | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

In the above example the two 100 unit demands have been ignored by the forecast as "outliers". The forecast has been based on the remaining periods and set at a level 10 units. The normal demand pattern has been maintained but the possible future additional demand has been lost.

Lumpy demand

| Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| History | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 10 | 10 | 100 | 10 | 10 |
| Forecast | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |

In this case the history period has been treated as "lumpy", no seasonal element has been calculated and the forecast has been set at the average monthly demand of 25 units. In this case the possible total demand has been forecast but the normal demand pattern has been lost.

## Causal factor

In the above example, consider the possibility that the peaks in demand are not random but based on a measurable and predictable external influence. This may be, for example, a customer promotion. If

the presence of the customer promotion is identified as a 1 and the absence of the promotion as a 0 the following historical demand pattern may result.

| History Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| History | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 10 | 10 | 100 | 10 | 10 |
| Promotion | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |

Note that the timing of the promotion is aligned to the peaks in demand. If the promotion data is now used as an independent variable influencing the forecast model of the product the following forecast will result.

| Fcst Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Promotion | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Forecast | 10 | 10 | 100 | 10 | 10 | 100 | 10 | 10 | 10 | 100 | 10 | 10 |

In this case, the future dates of the promotions have been used to supplement the previous historical demand of the product. The combination of these factors results in a forecast which predicts an increase in demand to the historical peak levels whenever a promotion is to be held. The periods between retain the forecast at the steady, normal demand level.

The forecast was considerably improved by the addition of an independent variable. The full picture is:

| Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 100 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| History | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 10 | 10 | 100 | 10 | 10 |
| Promo (History) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | | | | | | | | | | | | |
| Promo (Fcst) | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Forecast | 10 | 10 | 100 | 10 | 10 | 100 | 10 | 10 | 10 | 100 | 10 | 10 |

## Causal factor lag

Consider a situation where the promotion pattern does not correspond with the peaks of demand.

| History Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| History | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 10 | 10 | 100 | 10 | 10 |
| Promotion | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |

In this case, if the promotions data was used as an independent variable, no direct relationship would be established with the demand data for the dependent variable.

The forecast would be unchanged. For example (lumpy demand):

| Fcst Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Promotion | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Forecast | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |

However, re-consider the historical data and note that the promotion precedes the peak demand by two periods in each case.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| History Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| History | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 10 | 10 | 100 | 10 | 10 |
| Promotion | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |

This situation could arise if the customer used existing stocks to supply the promotion and re-orders afterwards. Independent Variables may be applied to a dependent variable with a specified lag. In the above example, the correlation is re-established with a lag of 2 and the following forecast would result.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fcst Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Promotion | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Forecast | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 100 | 10 | 10 | 10 | 100 |

Note that the peaks of demand have now been correctly forecast 2 periods ahead of the promotional event. This now models the historical situation. A full picture is:

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| History | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 10 | 10 | 100 | 10 | 10 |
| Promo (Hist) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | |
| Promo (Fcst) | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Forecast | 10 | 10 | 10 | 10 | 100 | 10 | 10 | 100 | 10 | 10 | 10 | 100 |

## Additional information

The regression data used in the model fitting is centred data. This means that the independent variable data has been treated by calculating the mean of the history and forecast and then deducting the mean from all data points. This is done to negate an effect called "confounding".

When generating forecasts, the validity of independent variables will be examined. If a Channel Product is encountered that has an invalid causal model, for example, an independent variable has been changed to a Slow Moving Product after being selected as an independent variable, the Channel Product will be put into the exception view "CAUSAL MODEL INVALID", a Channel Product where the causal model is invalid.

In the case of an invalid causal model exception, no model is fitted to the Channel Product (dependent variable) and any existing statistical model should be assumed to be invalid. This Channel Product should be examined in Edit Forecasts.

When generating forecasts, the selected Channel Products are ordered in such a way so that those with a causal model are processed last. This is so that if there are any dependent variables selected whose independent variables are also selected, the dependent variable uses the up to date forecast for the independent variable.

If independent variables are selected but their corresponding dependent variables are not, the statistical model for the dependent variable will not be updated.

During a period end roll forward, if a causal model is deemed invalid the statistical model is rolled forward as normal and the Channel Product is put into the exception view "CAUSAL MODEL INVALID", a Channel Product encountered during roll forward where the causal model is invalid.

All messages triggered while you are operating in the Causal Modelling dialog are sent to the Message area on that dialog box. It is advisable to check this area after each action. Messages are not cleared until replaced by a subsequent message. An audible tone indicates that a new message has been posted.

## Applying independent variables

Causal modeling is a technique performed as part of the statistical forecasting routine. Its purpose is to provide an additional forecasting facility by the introduction of the ability to regress a number of independent variables against a dependent variable.

See "About causal modeling" on page 302.

1. In Demand Forecaster, select the desired Product and Channel.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
3. Select **Model > Causal Modelling**.
   The Potential Independent Variables dialog box is displayed.
4. Select the range of items from which independent variables may be selected.
5. Click **Next**. The Causal Modelling dialog box is displayed.
6. To choose a Channel Product potential independent variable, click **CP Potential Independent Variables** then select a Product and a Channel from the lists.
7. To choose a time phased weighting potential independent variable, click **TPW Potential Independent Variables** then choose **System**, **Product** or **Channel Product TPW** and select the TPW from the displayed list.
8. Transfer the selected independent variables to the Causal Factors - Variable and Lag Selection panel by clicking to highlight and select then clicking **Add Selection**.
   Checks are carried out to determine whether the selected Channel Product and/or TPW are suitable to be used as an independent variable. If not, information to this effect is displayed in the Messages panel. Click the independent variable selected and click **Remove Selection** to cancel the selection.
   See "About independent variables selection messages" on page 307.
9. If required, enter a Lag number in the column to the left of the selected independent variable to cause an offset between the independent variable data and the dependent variable.

This lag may vary from zero (no offset) to a maximum figure such that there are enough time periods to match the dependent variable's length after the lag has been taken into account. This must still allow for at least 2 years worth of dependent variable history to be used. Negative lag is not supported.

**10** Click **View Data** to display a graph of the dependent variable and all the selected independent variables.

The trace beyond the Now line shows the forecast for the Independent variables only. As indicated in the text of the window, the scale used reflects the values of the dependent variable. The values of the independent variable are adjusted when displayed on this scale.

**11** Click **Back** to close the window and return to the Causal Modelling dialog box.

**12** Click **Fit Model** to calculate a new forecast model incorporating the effects of all the independent variables selected.

**13** Click **View Fit** to display a graph, which shows the original history of the dependent variable together with the Original Fit and the New Fit. The Original Fit is the model relating to the selected Channel Product before the addition of the new independent variables. The New Fit includes all the selected independent variables.

**14** Click **Back** to close the window and return to the Causal Modelling dialog box.

**15** Click **OK** if you are happy with the forecast created.

**16** Select **File > Save**.

## About independent variables selection messages

As independent variables are selected, messages may be displayed which indicate various features of the independent variables selection. The following is a complete list of these messages together with an explanation for each:

| Message | Explanation |
|---|---|
| "No independent variable selection has been made as the product is the same as the dependent variable product" | The Channel Product selected to be the independent variable is the same as the Channel Product used as the current dependent variable. No selection is added. |
| "The potential independent variable already has a causal model associated with it so cannot be used" | A Channel Product has been selected as an independent variable which itself has a causal relationship as part of its forecast model. The use of such a Channel Product as an independent variable is not allowed. No selection is added. |
| "No independent variable selection has been made" | If this message is displayed and a selection has been made, a system error has occurred. There has been a general failure in the Product, Channel, and TPW list boxes. Contact Infor Demand Planning technical support for further advice. |
| "The lag cannot be negative. Please enter an integer greater than or equal to 0" | A negative value has been entered in the Lag column of the selected independent variables. This relationship is not supported by the system. A positive value in this column causes the system to relate a dependent variable event to an independent variable event that occurred earlier. |

| | |
|---|---|
| "The history for the dependent variable has been shortened to match the independent variable history length" | The history length of the selected independent variable is shorter than that of the current dependent variable. In order to fit a causal relationship the system reduces the effective history length of the dependent variable by setting the history marker at a position such that the history length used in the model matches the available history for the independent variable. If the selected independent variable is confirmed the system prevents the history marker being subsequently moved to an earlier date. |
| "The history for the proposed independent variable has been shortened to match the independent variable history length" | The history length of the proposed independent variable is longer than that of the current dependent variable. In order to fit a causal relationship the system reduces the history length of the independent variable such that the history length used in the model matches the available history for the dependent variable. |
| "The history for the proposed independent variable is not long enough. It needs to be at least 2 years long" | The history length of the proposed independent variable is less than the 2 years required by the system to calculate a causal relationship. It is therefore invalid and no selection is added. |
| "You have not fitted a model to this selection of independent variables. Please do so before continuing" | The View fit selection has been made before Fit Model. No model is available and View Fitcannot be used. Click Fit Model to proceed. |
| "7 independent variables is the maximum allowed due to database restrictions. Please reduce your selection to 7 or less and refit the model" | A maximum of 7 independent variables may be included in the model calculation. If more are selected and Fit Model clicked this message is displayed. Select each independent variable to remove to reduce the selected number to 7 and click the **Remove Selection** button for each selection before proceeding. |
| "There have been duplicate independent variables added. You must remove the duplicates or ensure the lag value is different before continuing" | The same independent variable has been selected more than once. When Fit Model is clicked this message is displayed. Select each duplicated independent variable and click the **Remove Selection** button for each selection before proceeding. |
| "Product type or status of independent variable is not correct. It should be of STANDARD type and live status. Independent variable not added" | The system has detected that a Product type other than standard or a dead product has been selected as an independent variable. The selection is not valid and is not added to the selected independent variable list. |
| "Independent variable forecast is too short. See Help" | The independent variable forecast is not as long as that for the dependent variable. This is an abnormal situation. All forecasts should always be out to the forecast horizon. |
| "Demand calendar of independent variable does not match the dependent variable. See Help" | The demand calendar is allocated at Channel level. If the demand calendar for the independent variable differs from that allocated to the dependent variable a causal link cannot be established and the independent variable is rejected. |

| | |
|---|---|
| "Independent variable is an SMP. This is not allowed. See Help" | The system has detected that a Slow Moving Product (SMP) has been selected as an independent variable. SMPs cannot be used as independent variables and is not added to the selected independent variable list. |
| "Invalid Lag value - the independent variable must have at least 2 years of history" | The usable history length of an independent variable must be at least 2 years. A lagvalue has the effect of reducing the useable history length by the length of the lag. If this reduction causes the useable history to fall below the 2 year minimum period the lag value is rejected. |
| "The lag cannot be non-integer. Please enter an integer greater than or equal to 0" | Only positive whole numbers may be used as lag values. Decimal values are not supported by the system and the lag value is rounded down to the next whole number. |

# Interpolation Vectors

## About interpolation vectors

Interpolation vectors are of two types:

- Month-to-weeks, used to derive weekly forecasts from a monthly forecast.
- Week-to-days, used to derive daily forecasts from a weekly forecast.

Note that interpolation vectors are only applied to forecast data, and never to historical data. If weekly or daily history is required, it must be imported separately.

Each interpolation vector must be associated with a named demand calendar. The demand calendar must be of the 4-4-5 or 13 equal periods type (because only these types have an integer number of weeks in every month), and must be applied to at least one Channel.

See "About demand calendars" on page 170.

### What's in an interpolation vector?

An interpolation vector consists of a set of one or more default and date-specific period vectors.

- Default period vectors

The default period vectors are automatically included in every new interpolation vector. The default vectors for a month-to-weeks interpolation vector are:

| | 1 | 2 | 3 | 4 | 5 | 6 | Total |
|---|---|---|---|---|---|---|---|
| Default 4 Week | 0.25 | 0.25 | 0.25 | 0.25 | | | 1.0 |
| Default 5 Week | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | | 1.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Default 6 Week | 0.15 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 1.0 |

The default vector for a week-to-days interpolation vector is:

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Total |
|---|---|---|---|---|---|---|---|---|
| Default 7 Day | 0.16 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 1.0 |

- Date-specific period vectors

As their name suggests, within an interpolation vector you can add your own period vectors for particular months (in a month-to-weeks interpolation vector) or weeks (in a week-to-days interpolation vector). For example, April (in which Easter usually falls) probably has a different demand spread than December (in which Christmas falls).

Periods that do not have their own date-specific vectors use the appropriate default vectors instead.

A Channel Product can have only one associated interpolation vector. If a Channel Product has no specific interpolation vector, Infor Demand Planning uses the appropriate default vectors instead.

See "Example of a month-to-weeks interpolation vector".

### How are interpolation vectors defined?

There are two ways to define interpolation vectors:

- In Database Administration, you can define each interpolation vector manually and apply it to one or more Channel Products.

See "Applying an interpolation vector to a Channel Product" on page 187.

- In Demand Forecaster, you can select a temporary forecast group (TFG) of Channel Products and have Infor Demand Planning automatically calculate an interpolation vector for them from their combined histories.

See "About the automatic calculation of period vectors".

If you edit an interpolation vector, this change may not be immediately apparent to other Infor Demand Planning users because some data is cached locally. Users may have to log off from Infor Demand Planning and then log on again to see the changed vector.

## Creating an interpolation vector

1. In Demand Forecaster, select the Channel Products to include in the temporary forecast group (TFG).

   See "About selecting Products and Channels" on page 35.

2. Select the **Group** check box on the toolbar.
3. Select **Modules > Demand Forecasting > Edit Forecasts**.
4. Select **Model > Automatic Calculation of Interpolation Vectors**.

The first Automatic calculation of month to week interpolation vectors dialog box is displayed.

5 Click **Create a new interpolation vector** and click **Next**.
A second Automatic calculation of month to week interpolation vectors dialog box is displayed. At first, the new interpolation vector is unnamed and contains only the three default 4-week, 5-week and 6-week vectors.

6 Type a Description for the new interpolation vector.

7 Click **Create date-specific vector**.
The Create date-specific period vector dialog box is displayed.

8 From the **Date** list box, select the period end date of the forecast period to which this vector relates.

9 Type a Description for the period vector.

10 Click **Generate period vector**.
The Select dates to generate from dialog box is displayed.

11 Select the historical periods from which you want to calculate the new period vector. To select all available historical periods, click **Select All**.
Infor Demand Planning ignores any selected periods that do not contain the same number of weeks as the period specified at step 8. Infor Demand Planning calculates the period vector as you select the periods.

12 When you are satisfied, click **OK** to return to the Create date-specific period vector dialog box.

13 If necessary, you can edit the generated values of the period vector in the Values boxes.

14 Click **OK** to return to the Automatic creation of month to week interpolation vectors dialog box.

15 Repeat steps 7 to 14 until you have added all the required period vectors to this interpolation vector.

16 Click **OK**.
You are asked whether you want to apply the new interpolation vector to the Channel Products in the TFG.

17 Click **Yes** to create and apply the interpolation vector; click **No** to create it but not apply it.

**Note:**

- All of the selected Channel Products must have at least 52 weeks of adjusted demand history.
- You can also, if required, edit the values of the default vectors in the interpolation vector before saving it.

## Editing an interpolation vector

1 In Demand Forecaster, select the Channel Products to include in the temporary forecast group (TFG).

See "About selecting Products and Channels" on page 35.

2 Select the **Group** check box on the toolbar.

3 Select **Modules > Demand Forecasting > Edit Forecasts**.

4 Select **Model > Automatic Calculation of Interpolation Vectors**.
The first Automatic calculation of month to week interpolation vectors dialog box is displayed.

5 Click **Update an existing interpolation vector**, select the interpolation vector you want to edit, then click **Next**.
A second Automatic calculation of month to week interpolation vectors dialog box is displayed, showing the default and period vectors of the chosen interpolation vector.

6 To rename the interpolation vector, edit the description in the **Description** box.

7 To create a new period vector, click **Create date-specific vector**.
You can specify the values of this vector directly, or generate values from the combined histories of the Channel Products in the TFG.

8 To edit an existing default or period vector, select the vector and click **Edit selected vector**.
You can change the description and any of the vector's values. You can edit the values directly, or generate new values from the combined histories of the Channel Products in the TFG.

9 To delete a period vector, select the vector and click **Delete selected vector**.

10 Repeat steps 7 to 9 until you are satisfied.

11 Click **OK**.
You are asked whether you want to apply the edited interpolation vector to the Channel Products in the TFG.

12 Click **Yes** to save and apply the interpolation vector. Alternatively, click **No** to save it but not apply it to the TFG.
In the latter case, the changes affect only the Channel Products to which the interpolation vector is already applied.

# Force Model

## About forcing a model

The Demand Forecaster module gives you the facility to force a forecast model down from an aggregate Channel to the lower Channels in your Channel matrix. The function takes the statistical model defined at the selected upper level aggregate Channel and forces the model and forecast down to all lower level Channels in the Channel matrix.

Because this facility has the ability to affect the forecast of a large number of Channel Products, it requires the necessary level of access privileges to gain access to the function.

Running the process will remove all previous statistical model information from any of the target Channels, including step changes, growth damping factors and causal model information. The process will then add a new statistical model that will be a scaled down version of the model held at the aggregate Channel. The statistical forecast from the aggregate level will also be scaled down and stored at the subordinate Channels.

**Note:**

- This function will only force a model down a Channel structure. Where there is a folded Channel structure no attempt will be made to sum models up through different arms of a folded V type structure.

## Forcing the model

1 In Demand Forecaster, select **Modules > Demand Forecasting > Force Model**.
The Force model wizard is displayed.

2 Confirm that you want to force the current selection of Products then click **Next** or re-select different Products and click **Next**, then **OK** when selected.

See "About selecting Products and Channels" on page 35.

3 Click the aggregate Channel to force from.

4 Choose to use existing DLM parameters or to define new ones.

See "About parameter sensitivity" on page 222.

5 Choose to scale the variance from the aggregate Channel or select a variance estimate from the list.

See "About variance estimates" on page 299.

6 To delete any existing market intelligence at the lower level Channel Products, select the **Remove MI from target CPs** check box.

7 To force down existing effectivity or discontinuation dates from the aggregate Channel, select the **Force down effectivity / discon dates** check box.

8 Click **Next**.

9 If you chose to define new DLM parameters, select the new Discount factor code from the list and type values for the following:

- Maximum model terms (integer between 2 and 14 inclusive)
- Level shift inflation factor (between 0 and 99.9 inclusive)
- Level shift threshold (between 0.001 and 1 inclusive)
- Confidence for seasonality (between 0 and 100 inclusive)
- Confidence for causal factors (between 0 and 100 inclusive)
-

10 Click **Next**.

11 Choose to use predefined forcing factors or define temporary ones.

12 Select the Channel matrix to use from the list.

See "About Channel matrices" on page 78.

13 If you wish to save the factors defined, select the **Save temporary factors** check box. The factors are saved in the field, "Forecast Forcing Factor (CPt)" for all the processed Channel Products at the lower levels.

14 If you have selected Define temporary factors, type a Factor against each subordinate Channel.

15 Click **Finish**.

# Sales and Operations Planner

## About S&&OP plans and budgets

Budgets may be assembled and production plans and actuals posted to the database within the Replenishment Planner module.

Sales & Operations Planner must first be configured before these options become available.

See "Configuring Sales and Operations Planner" on page 202.

In addition, S&OP functions must be enabled for the relevant Channel Products.

See "Enabling Channel Products for S&OP and SBT" on page 204.

## Posting sales plans

1. In Demand Forecaster, select the Channel Products for which you want to post sales plans.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Sales & Operations Planner > Post Plans**.
   The Post Plans dialog box is displayed.
3. In the Plan panel, select the plans you wish to post:
   - S&OP Sales Plan 101 (net forecast including customer forecast)
   - S&OP Sales Plan 102 (DRP requirements including dependent demand)
   - S&OP Sales Plan 103 (statistical forecast)
   - S&OP Sales Plan 104 (total demand: 101 + 102)
4. In the Post panel, choose to either insert new or update existing plans in the S&OP Sales Plans table (SOP_SALES_PLANS), or insert temporary plans in the S&OP Temporary Sales Plans table (SOP_SALES_TMP).
5. Click **OK**.
   See "About S&&OP plans and budgets" on page 314.

   **Note:** If you want to store the net forecast without the customer forecast, ensure customer forecasts are disabled before posting the plans. To do this, set **Periods Of Customer Forecast (CPt)** to zero for the relevant Channel Products. See "Periods Of Customer Forecast (CPt)".

## Making a sales budget

1. In Demand Forecaster, select the Channel Products for which you want to create a budget.

See "About selecting Products and Channels" on page 35.

2 Select **Modules > Sales & Operations Planner > Make Budget**.
The Make Budget dialog box is displayed.

3 Under Post Budgets For, specify whether you want to create a budget for this year, next year, or both.

4 Select the budget name and the plan type for each budget from the **Post Budgets As** and **Post Plan Type** list boxes and click **Add Budget**.

Up to four budgets are allowed.

5 Click **OK**.

**Note:**

- It is possible to store all four plan types to separate budget rows, or store a single plan over four revisions. Any of these budgets can then be reported.
- Budgets may also be imported using the normal import routines in the Database Administration module.

See "About S&&OP plans and budgets" on page 314.

## Posting sales actuals

1 In Demand Forecaster, select the Channel Products for which you want to post sales actuals.

See "About selecting Products and Channels" on page 35.

2 Select **Modules > Sales & Operations Planner > Post Actuals**.
The Post Actuals dialog box is displayed.

3 In the Post panel, select the actuals to be posted.

Shipments can be posted prior to the period end roll but adjusted demand can only be posted after the period end roll.

4 Click **OK**.

See "About S&&OP plans and budgets" on page 314.

# Period End

## Period end stages

For databases using Sales and Operations functionality, period end is split into three stages. These stages are:

### Pre-roll S&OP process

- Post DRP requirements
- Post requirements plans
- Post actual shipments
- Post production to date
- Post inventory actuals

### Main period-end process

- Roll the database forward

### Post-roll S&OP process

- Post sales actuals
- Post sales plans
- Post inventory plans

## About the pre-roll S&OP process

The timing of posting data during an S&OP process is critical. Because period end processing is rarely run at the physical month end, some of the S&OP data would be out of date and therefore inaccurate. Data that needs to be updated prior to running period end at the actual month end date is listed below.

This data can be split into two:

- Data that can be populated automatically as part of the pre-roll S&OP processing routine:
- DRP requirements including dependant demand if the database is set to store DRP (SOP_SALES_PLANS type 102).
- Requirements plans (SOP_REQS_PLANS Type 101).

This means that Channel Products using DRP and/or dependent requirements can be reported immediately after period end.

- Data that must be populated using import routines or interfaces:
- Actual shipments ("Open Ship (CPt)").
- Production to date ("Production This Period (CPt)").
- Inventory actuals ("Opening Stock (CPt)" and "Due In Stock (CPt)").

Prior to rolling the database forward, the shipment, requirements and inventory actuals for the period must be posted to the S&OP tables. Before this is done, however, it is essential to have imported the latest shipments from the source Channel to the "Open Ship (CPt)" fields, actual production for source

Channels and shipment receipts for subordinate Channels that are passing up requirements to the "Production This Period (CPt)" field and the latest stock position for all Channels must also be posted to the "Opening Stock (CPt)" and "Due In Stock (CPt)" fields.

The DRP shipment values in the "Open Ship (CPt)" field are posted to SOP_SALES_BDATS Type 304 for each Channel Product where the "Store SOP Data (CPt)" field is set to 1 (true) and "S&OP Data Stored (St)" is set to 2, 3, 4 or 5.

The values in the "Production This Period (CPt)" field are posted to the Requirements actuals (SOP_REQ_BDATS type 301) for each Channel Product where the "Store SOP Data (CPt)" field is set to 1 (true) and the "S&OP Data Stored (St)" is set to 2 or 3.

The values in the "Opening Stock (CPt)" and "Due In Stock (CPt)" fields are posted to the Inventory table (SOP_INV_BDATS Type 301) for each Channel Product where the "Store SOP Data (CPt)" field is set to 1 (true) and "S&OP Data Stored (St)" is set to 2 or 3.

For each Channel Product where the "Store SOP Data (CPt)" field is set to 1 (true) and "S&OP Data Stored (St)" is set to 2, 3, 4 or 5, actual shipment values are copied from "Open Ship (CPt)" to SOP_SALES_BDATS Type 304.

During the period end process, the "Open Ship (CPt)" and "Production This Period (CPt)" fields are zeroed for all Channel Products in order to have a starting point of zero for the new period. The "Opening Stock (CPt)" and "Due In Stock (CPt)" fields are not changed.

**Note:**

- Actuals, plans and budgets for both sales and requirements can be posted manually in the Replenishment Planner and Demand Forecaster modules.

# About rolling the database forward

## Pre-roll checks

Before the period end process starts, Infor Demand Planning checks that:

- History is available at the Channels that should store history.
- The SBT and/or S&OP tables (if in use) have been rolled forward for the last month.
- All calendars are extended far enough forwards to deal with another month of forecast.
- All interpolation factors are extended far enough forwards to deal with another month of forecast.

If the history is not yet available, or the SBT/S&OP tables have not been rolled forward for the last month or any of the calendars or interpolation percentages are not set far enough into the future the forecast roll is aborted and an appropriate message displayed.

## Period end roll

All non-steward users are locked out when a master client starts a period end roll. The Locked Out fields of the User List table are set to 1. When the roll has completed, successfully or not the fields are set back to zero.

The history tables are moved back one period and any ‘excess’ history is archived. Excess history is history that exceeds the value in the following system fields appropriate to each periodicity:

- "Monthly History Retained (Months) (St)"
- "Weekly History Retained (Weeks) (St)"
- "Daily History Retained (Days) (St)"

The "Date Demand Last Updated (Ct)" field is set to the month end date for the month to be rolled into history. The date used is the month end date accessed from the current demand calendar, stored in "Demand Calendar Code (Ct)".

The system checks if the above date is the last in the fiscal year and, if so, runs year end processes to update SBT tables. Additionally, "End Of Current Financial Year (Ct)" is set to the next fiscal year end date and "Current Period Fiscal (Ct)" is set to zero.

Where "Date Demand Last Updated (Ct)" is not the last in the fiscal year, "Current Period Fiscal (Ct)" is incremented by one.

If sufficient data is not available to roll future forecast periods then the "Forecast Revision Possible (Ct)" field is re-set to zero and the process ended. Otherwise, each item is processed and rolled forward through one month. A series of exception views are created and those from the previous month end are deleted.

Live items are checked to determine to which Product type they have been assigned. If they are standard items a further check establishes if they are parents of a marketing group. This enables the relevant sub-process to be run.

Once the last item on the database has been processed a sequence of sub-processes are run to deal with successor/predecessor history sequences, then forecast group items, and finally to populate the SBT tables. The Open History table is then purged of all data prior to the end of the last month of history and the Channel Product field, "Adjusted Monthly Demand (CPt)" set to null for all Channel Products. Any daily, monthly or complete weekly history data with dates equal to or earlier than the month end date just processed are removed. Any incomplete weekly data are adjusted so that the value left in the Open History table only reflects the new first forecast month. Month end roll summary and error reports are produced, and the database unlocked.

Depending on the status and type of Channel Products in the database, the following sub-processes are carried out:

## Standard Items

This sub-process is used for normal forecasting or SMP items. It is not used for dead items, UFPs, NSPs, parents of marketing group views or forecasting group items.

A check establishes which forecast calculation code is set up in the "Forecast Calculation Code (CPt)" field. This check establishes if there is a statistical model to be smoothed. If the value is 3 or more, the Channel Product uses a user defined forecast routine. If the value is 1 (do not forecast) or 2 (create initial forecast but do not smooth) then no smoothing is required.

A check determines if the Channel Product would be potentially better treated as an SMP. This is the case if the number of months with 0 or less demand (from the history row defined by Channel Products table field, "Forecast History Row (CPt)" in the last year (including the new monthly history being rolled) exceed the value of the "Minimum Periods For SMP (CPt)" field. If this is the case, the Channel Product

is appended to an exception view ("POSSIBLE SMP"), in which the situation may be reviewed. The Channel Product continues to be processed as a normal item.

The forecast information is passed to the Bayesian Time Series (BATS) modeling function. The forecast is smoothed and the model information used to create a new forecast for the whole of the forecast horizon, based on the model coefficients of level, growth and seasonality. Any existing growth damping factors are applied to the model. Changes to level or growthas indicated by an entry in the "Future Change Level Or Growth (CPt)" field are applied.

The two Channel Products table fields, "Start Period To Freeze Net Forecast (CPt)" and "End Period To Freeze Net Forecast (CPt)" are checked as entries in these fields indicate that there are forecast periods in which the forecast must remain frozen. If so, the net forecast in the periods defined by the fields are adjusted with N-type MI so that it remains unchanged.

## Dead items

A dead item is one that no longer carries a current forecast. It has been left on the database with its history still visible so it can be used to help build profiles and to provide accurate summations of history. The only period end processes undertaken with dead items are to ensure that various Product and Channel Products table fields have settings appropriate to dead items, and as with all other Product types, Sales and Operations Planner fields are populated and rolled in the normal way.

## Unspecified Forecasting Products

UFPs are normally new Products with no demand history and therefore no statistical forecast. However, they can hold market intelligence and customer forecasts. The period end processing of UFPs involves storing any customer forecasts, setting up sensible defaults in the table fields, rolling the forecast horizon, removing any statistical forecasts currently held for the UFP and rippling the forecast through the Channel structure.

## Slow Moving Products

If there is any monthly demand in the row defined by the Channel Products table field, "Forecast History Row (CPt)" and if the Channel Product has a code of 1 in Channel Products table field, "SMP Code (CPt)", then a check is carried out to establish if the Channel Product might be better forecasted as a normal Channel Product. If so the Channel Product is appended to an exception view "POSSIBLE NORMAL".

For SMPs with demand in the last month, the forecast information is passed to BATS and the SMP forecast routine carried out. The information is received back from BATS and where indicated, the Channel Product added to the exception views "OUTLIERS" and "TRACKING". The required table fields are updated.

If there is no demand in the month being smoothed, the Channel Product is tested to see if the current string of zero demands is greater than 5 forecast periods, and equal to or greater than the longest previous string of consecutive zero demand periods. If so the Channel Product is appended to the exception view "SMP LONG GAP". This list may assist a possible decision to delete the Channel Product.

The forecast for SMPs cannot contain step changes. All SMPs are tested as part of the period end routine to establish if there are any future changes in level registered for the item in the step change table. If so, they are removed, and "Future Change Level Or Growth (CPt)" is set to false.

The two Channel Products table fields, "Start Period To Freeze Net Forecast (CPt)" and "End Period To Freeze Net Forecast (CPt)" are checked. Entries in these fields indicate that there are forecast periods in which the forecast must remain frozen. If so, the net forecast in the periods defined by the fields are adjusted with N-type MI so that it remains unchanged.

If the "Discontinuation Type (CPt)" denotes an automatically calculated date, any forecast that extends beyond the calculated discontinuation date is removed. If "Automatically Update Successor (CPt)" is true, then the effectivity date of a valid successor is set equal to the discontinuation date of the current Channel Product.

## Non-Standard Products

Non-Standard Products (NSPs) are items, which do not have a statistical forecast. An NSP may be a member of a promotional group, in which case it is directly related to a standard parent item or it may be a promotional item, which has no direct or obvious parent. This structure is provided to forecast items with short sales lives purely using market intelligence.

Since they do not have a statistical forecast, they are not smoothed through BATS or carry future changes in level or growth. There is no requirement for freezing the net forecast and no facility to set up successor/predecessor products is provided. There is no option to store customer forecasts for NSP items.

At period end, the rolling process:

- Moves any history to the History table from the Open History table and Channel Product field, "Adjusted Monthly Demand (CPt)".
- Moves any TPW values from the first monthly forecast period to the new last period of history.
- Rolls the forecast horizon.
- Sets any statistical forecasts to zero.
- Optionally, rolls forward any over or undersold vales to the following forecast periods and produces NSP exception views.
- Ripples the forecasts through the Channel structure.
- Sets up the relevant table fields for NSPs.

Where the Channel Products table field, "Roll Forward NSP Forecast (CPt)" switch is on, any over or under sell in a month with a forecast is rolled forward into the next few forecast periods to adjust the MI held in those future periods.

If there is no further future T-type MI with the same identifier then any remaining MI, because of an undersell, is placed in the next forecast month. In this case any negative MI carryover because of an oversell is lost, as the MI may not be negative.

Where there is a positive carry over and there are future months with the correct MI (same identifier) then all the MI numbers in these future periods are adjusted proportionally to the current MI (same identifier) value held for those months. For example, consider what should happen with a carry forward of 34 units to be spread across three months holding forecasts of 100, 50 and 20.

The new forecast for each month = Original MI qty for month + ((Carry over qty / sum of all future MI) x Original MI qty for month). Therefore:

The new MI for future month 1 = 100 + ((34/170) x 100) = 120

The new MI for future month 2 = 50 + ((34/170) x 50) = 60

The new MI for future month 3 = 20 + ((34/170) x 20) = 24

This process has inflated the original sum of future MI from 170 to (120 + 60 +24) 204, which is 34 units greater This is the value to be carried over.

Where there is a negative carry over because of an oversell, and there are future months with MI with the same identifier then the last of these months is reduced by the carry over quantity. The MI value in the last month is reduced to zero but no further. Any further required reductions can be made to the next previous month again with the limit that it can only be reduced to zero, and so on.

## Marketing group parent items

The process to roll period end for a marketing group parent item is similar to the process for a standard item. The parent item is usually a normally forecasted item, but there is the chance that it could be set up as a SMP.

A marketing group parent item, however, can not be a dead item, a UFP, an NSP or a forecasting group item. The main difference is the need to aggregate the demand from the NSPs which are part of the marketing group view, to compare with the aggregate forecast across the group.

The net MI across the marketing group view at each Channel is calculated as follows:

Parent MI + ∑ from each NSP belonging to the marketing group view NSP MI x Products table field, "NSP Weighting Factor (Pt)".

This aggregated MI is subtracted from the aggregated adjusted demand calculated for the parent item to give a net demand, which is used to smooth against the statistical forecast in BATS.

When the Channel Products table fields, "Forecast Last Period (CPt)", "Market Intelligence Last Period (CPt)" and "Demand Last Period (CPt)" are populated the values entered for the parent item are the aggregated values for the whole marketing group view.

## Forecast Group Products

A forecast group item has forecast and history constructed from a defined group of normal items. This sub-process is run once the last of the individual items has been rolled. Each of the forecast groups is treated individually. The Channels where history should be stored in the History table are identified from the Channel matrix, referenced by the Products table field, "Channel Matrix Code (Pt)", row 2 of the matrix is "Yes". The required history types at these Channels are then calculated by extracting the history stored in the equivalent history type at that Channel for the member items of the group (or from the Channels defined by row 13 of the Channel matrix for the member item which are used to provide the aggregate history to that Channel). This extracted history is multiplied by the relevant weighting factor and summed with the history from the other member items to give the required total for the group item.

Once the last member item has been processed and all the group item history has been calculated, then the value for Channel Product fields, "Adjusted Monthly Demand (CPt)", and "Demand Last Period

(CPt)" are set up as the value in the last period of adjusted demand history, for the Channels which store history. These values are aggregated to the Channels, which do not store history.

From this point onwards the forecast group item is processed as a standard item, except for the sub-process to transfer history, which is not run.

**Note:** The fields normally updated during the period end roll are not updated if the Channel Product has an invalid statistical model. The offending Channel Product is included in the "INVALID STAT" exception view.

## About the post-roll S&OP process

The following are automatically updated during the post-roll:

- Sales actuals (SOP_SALES_BDATS Type 301) ) previously imported prior to the period end for forecasting analysis using the import routines or interfaces.
- Sales plans. Net, stat and total, if the database is set to store these (SOP_SALES_PLANS Types 101, 103 and 104).
- Inventory plans. Based on changes to the forecast together with requirements figures posted during the pre-roll S&OP process (SOP_INV_PLANS type 101).

Sales actuals for the current period are set to zero at the beginning of the roll and re-populated, in case sales actuals have been populated prior to the roll.

**Note:**

- The above values can be posted manually in the Replenishment Planner and Demand Forecaster modules.

See "Manually posting S&OP data".

## Period end procedures

These are the functions regularly performed at period end:

- Import Product and Channel Product files
- Import the latest demand and/or sales
- Review the Demand Analysis report
- Edit adjusted demand as required
- Import the latest time-phased weightings
- Backup the database
- If S&OP has been activated, run the pre-roll S&OP process. The following are posted:

- DRP requirements
- Requirements plans
- Actual shipments
- Production to date
- Inventory actuals
- Roll the database forward (main period-end process)
- If S&OP has been activated, run the post-roll S&OP process. The following are posted:
- Sales actuals
- Sales Plans
- Inventory plans
- Review any exception views created
- Review the Accuracy Data report
- Review and evaluate the Market Intelligence Effectivity report

These functions are performed using the Demand Forecaster (DF), Replenishment Planner (RP) and Database Administration (DBA) modules.

See "Configuring Sales and Operations Planner" on page 202.

## Rolling the database forward (master)

In order to run period end, you must be a steward. More than one user may carry out the roll forward simultaneously, acting as a slave client to the master client. By starting a slave client roll, the database is segmented into areas and the month end roll is subsequently processed faster.

A check is performed to see if another client has already begun the roll, and assuming the current session is the start of the process an information box advises that the current session will become the master client.

Before starting this process you must backup the database.

1. In Demand Forecaster, select **Modules > Demand Forecasting > Period End > Roll Forward**.
2. Click **OK**.
3. Click **Yes** only if you have backed up your database.
   The Period End Stages dialog box is displayed.
4. Select the stage or stages to be run in this session. The stages must be run in the sequence displayed:
   - Pre-roll S&OP process
   - Main period-end process
   - Post-roll S&OP process

5 Click **OK**.
The Infor Demand Planning - Client:1 (Master) dialog box is displayed.

6 Click **OK** on completion.

**Note:** When a master client starts a period end roll, all non-steward users are locked out of Infor Demand Planning until the process has completed, successfully or not.

## Rolling the database forward (slave)

In order to run period end, you must be a steward. More than one user may carry out the roll forward simultaneously, acting as a slave client to the master client. By starting a slave client roll, the database is segmented into areas and the month end roll is subsequently processed faster.

A check is performed to see if another client has already began the roll, and if so, an information box advises that the current session will become a slave client to the pre-existing master client.

Before starting this process you must backup the database.

1 In Demand Forecaster, select **Modules > Demand Forecasting > Period End > Roll Forward**.

2 Click **Yes** only if you have backed up your database.
The Infor Demand Planning - Client:X (Slave) dialog box is displayed.

3 Click **OK** on completion.

## Period end exception views

Following the completion of the period end roll, a number of exception views are created. These views highlight Channel Products that may need intervention and should be prioritized for review, as each anomaly found could be having a negative impact on forecast performance and safety stock levels. Reviewing these exceptions on an ongoing basis will help ensure a higher quality statistical forecast.

The possible exception views are:

| Exception view | Meaning | Action required |
|---|---|---|
| "ALL TIME SUPPLY" | A Channel Product where the new statistical model trends to zero within the monthly forecast horizon | Consider re-fitting over a different history length or applying a growth damping factor |
| "BAD NSP SS CODE" | A Non-Standard Product with an invalid safety stock code. The code will have been reset to 6 (fixed quantity) and safety stock performance level will have been set to zero | Ensure that the safety stock performance level is set to the required value |

| | | |
|---|---|---|
| "BAD SUCCESSOR CP" | A Product's successor does not exist at a Channel | Either break the predecessor successor link or add the required successor Channel Product to the database |
| "CAUSAL MODEL INVALID" | A Channel Product encountered where the causal model is invalid | Either correct or remove the causal relationship |
| "CHANNEL MATRIX ERROR" | A Channel Product with an invalid Channel matrix | Change the Channel vector settings to be logically consistent |
| "DEAD WITH HISTORY" | A dead item with history for current month in Open History table or in Channel Products table (adjusted monthly demand) | Review whether Product should still be classed as dead or if a forecast should be reinstated. |
| "DO NOT SMOOTH" | A normal Channel Product (not a dead item, an NSP or a UFP) which is not smoothed at month end because the value of the "Forecast Calculation Code (CPt)" field is set to 1 (do not forecast) or 2 (initialize forecast but do not smooth) | Confirm that the Channel Product does not require smoothing |
| "FCST HOR SHORT" | Number of days stock cover, based on the monthly net forecast, exceed the (monthly) forecast horizon | Either reduce the number or days or extend the forecast horizon |
| "FROZEN MI" | A Channel Product with N-type MI | Ensure that the MI is still valid |
| "HISTORY AFTER DISCON" | A Channel Product where history has been imported after the defined discontinuation date | Ensure that the forecast should have been discontinued and reinstate if necessary |
| "HISTORY PRIOR TO EFF" | A Channel Product where history has been imported prior to the defined introduction date | Review the effectivity date and pull forward if necessary |
| "INVALID DATE" | One or more dates seem to be incorrect for this Channel Product | Check dates in the calendar |
| "INVALID PREDECESSOR" | Invalid predecessor for this successor | Break relationship or if required, set up a valid predecessor relationship |
| "INVALID SMP" | SMP Channel Product has more than one model coefficient: smoothing as a normal item | Re-fit model as either a normal or SMP Product as required |

| | | |
|---|---|---|
| "INVALID SMP CODE" | A normal Channel Product (not a dead item, an NSP or a UFP) was smoothed as an SMP item but there was an invalid value in the "SMP Code (CPt)" field | Change the SMP Code (CPt) to a valid code and re-fit the model |
| "INVALID SS CODE" | A Channel Product which has an invalid value in the "Safety Stock Strategy (CPt)" field. No inventory fields updated | Update with a valid code and re-computed safety stock |
| "INVALID STAT" | A Channel Product with an invalid statistical model | Re-fit the statistical model |
| "INVALID TPSS CODE" | Invalid value in the Time-phased "Time-phased Safety Stock Code (CPt)" field | Update with a valid code |
| "NO MODEL" | A normal Channel Product (not a dead item, an NSP or a UFP) which is allowed to be smoothed but cannot be processed as there is no forecast model | Review and create a forecast model if required or set "Forecast Calculation Code (CPt)" to 1 |
| "NO PFG PARENT CP" | A Channel Product which is a member of a PFG, but the PFG Product does not exist at this Channel | Either remove the Channel Product from the PFG or add the Channel to the PFG Product |
| "NOT CHECKED IN" | Channel Products checked out to the OFW but have not been checked back in | Follow up and rectify for next forecasting cycle |
| "NSP ACTIVITY" | An NSP with a non-zero history or forecast in the rolled month | Review the NSP forecast and demand |
| "NSP CONSUMED" | An NSP where the promotional event MI has been rolled and been totally consumed by demand | Review the promotional MI and increase in the future if necessary |
| "NSP EXTEND HORIZON" | An NSP where the promotional event MI has been rolled forward into a new month which previously held no MI for this event | Ensure that the promotional MI is still valid |
| "NSP MI ROLLED" | An NSP with a positive forecast in the rolled month, which has had later months MI adjusted to cope with any over or under-sell in the rolled month | Review MI for future months |

| | | |
|---|---|---|
| "NSP NEG VALUE" | An NSP where demand and or forecast is negative whilst the other value is zero or negative in the rolled month | Review to see if non zero or negatives are valid |
| "NSP NO FORECAST" | An NSP with a positive demand value but zero or negative forecast in the rolled month. Early or late sales outside of the planned promotional period will cause this condition | Review the promotional sales and consider amending future promotional activity |
| "NSP NO HISTORY" | An NSP with a positive forecast but zero or negative demand in the rolled month, this is a typical situation where the start of a promotion has been delayed but the forecast has not been corrected | Review the forecast and correct if necessary |
| "NSP WITH DEMAND" | An NSP with a positive demand value in the rolled month | Review promotional activity |
| "NSP WITH FORECAST" | An NSP with a positive forecast in the rolled month | Review promotional forecast |
| "OHS OVER MAX" | On hand stock exceeds the maximum storage capacity | For review by inventory analysts |
| "OHS OVER SHELF" | On hand stock exceeds the shelf life | For review by inventory analysts |
| "OUTLIERS" | A Channel Product where outliers have been identified during the forecast roll | Review to understand if it is a one-off (ideally edit) or investigate amending the forecast |
| "PFG NO MEMBERS" | The PFG(s) had no members and were not processed | Either add members or consider dropping PFG |
| "POSSIBLE NORMAL" | A Channel Product with the "SMP Code (CPt)" set to 1 (forecast as an SMP but review for normal status) where demand in the last year is sufficient to consider moving to normal status | Change the code to 0 and re-fit model |
| "POSSIBLE SMP" | A Channel Product with the Channel Product field, "SMP Code (CPt)" set to 0 (forecast using normal full BATS process) which should be considered for moving to SMP status | Change the code to 1 and re-fit model |

| | | |
|---|---|---|
| "SMP LONG GAP" | An SMP with long gap in history (period since the last demand is greater than 5 months and is greater than or equal to the longest gap seen in this Channel Product's history) | Review Product and consider discontinuing |
| "SPREAD MI" | A Channel Product with S-type MI | Ensure that the MI is still valid |
| "TPSS LIMIT" | Safety stock exceeds defined limits | Review limit to ensure service levels can still be achieved |
| "TPW CP ROLL ERR" | A Channel Product time-phased weighting has failed to roll | Review the TPWs for the Channel Product |
| "TRACKING" | A Channel Product where a tracking signal has been generated during the smoothing process and the forecast has been automatically smoothed using the system defined fast smoothing settings | Review models and re-fit |
| "UFP WITH HISTORY" | A UFP with current history reported. History for current month in Open History table or in the "Adjusted Monthly Demand (CPt)" field | Find out why |
| "USER ROLLED" | A standard Channel Product which uses a customer defined forecasting routine for smoothing at month end | Check that this setting is correct |

# Viewing a Demand Analysis report

1 In Demand Forecaster, select **Modules > Demand Forecasting > Period End > Demand Analysis**. The Demand Analysis dialog box is displayed.

2 On the **Main** tab, select the following:

- History to compare
  - MTD (first forecast period)
  - MTD (to date)
  - Last Month
- History type
  - Default

    - Sales
    - Demand
    - Adjusted demand
- Options
    - Transfer NSP History
    - Sum Forecast Groups
    - Generate exception view
    - Show description

3 On the **Report** tab, select the criterion you want the exceptions reported by.
4 On the **Sort** tab select the fields to sort and weight the report by.
5 Click **OK**.
The Channel Dates Confirmation dialog box is displayed.
6 Check that the latest demand has been loaded successfully and click **OK**.

## Viewing Accuracy Data

1 Select the Channel Products to report on.
See "About selecting Products and Channels" on page 35.
2 In Demand Forecaster, select **Modules > Demand Forecasting > Reports > Accuracy**.
The Accuracy Report Options dialog box is displayed.
3 Select the table from which to select a grouping field, either Products or Channel/Products.
4 Select the field to group by from the selected table.
5 Select a Weight By field for the report if required.
6 Select the Demand Type to use, Adjusted Demand, Demand or Sales.
7 Enter a Scale By factor if required.
8 Click **OK**.
The following windows are displayed:
    - "Accuracy Data reports"
    - "Accuracy Histogram"
    - "Accuracy Scatter Chart"

## Changing Accuracy Histogram defaults

It is possible to change the number of standard deviations to use when defining Accuracy levels.

1 In Demand Forecaster, view Accuracy Data.

See "Viewing Accuracy Data" on page 288.

2 Select **Window > Accuracy Histogram**.

3 Select **Tools > Options**.
The Properties dialog box is displayed.

4 Type the new accuracy levels and click **OK**.

**Note:** Illogical values are not accepted. The threshold for Red must be greater than the upper limit for Orange and the threshold for Green lower than the lower limit for Orange.

## Viewing an MI Effectivity report

1 Select the Channel Products to report on.
See "About selecting Products and Channels" on page 35.

2 In Demand Forecaster, select **Modules > Demand Forecasting > Reports > Forecast Analysis > MI Effectivity**.
The MI Analysis - Options dialog box is displayed.

3 Select the Percentage tolerance required.

4 Select the **Display totals** check box if you want to include a grand total for the report and, if a grouping is selected, a group total for each control break.

5 Select the **Sort by improvement** check box if you want to base the sort order on the degree of MI improvement.

6 From the list, select **Ascending** or **Descending.**

7 Select a Weight field for the report if required.

8 Select a Group by field if required.

9 Type a Scale by factor if required.

10 Click **OK**.

11 Use the **First**, **Previous**, **Next**, and **Last** buttons on the toolbar to view the first, previous, next or last item in the report.

# ASClient

## About ASClient

ASClient allows access to the application server functionality from the command line. There are three batch functions (also called methods) provided by the application server:

- Balance, which will balance forecasts throughout the Channel structure

- Forecast_Ahead, which will regenerate the forecast
- Generate_Forecast. which will refit the model and regenerate the forecast

To use ASClient you must decide which of the above methods you wish to call and how you intend to select the items to process. Use the method as an option when running ASClient, for example:

```
asclient /METHOD generate_forecast
```

There are three ways to select the items to process:

- By Channel Product Reference numbers
- By Product codes
- By SQL filters

## About the configuration file

This is the default configuration file, generated when installing Infor Demand Planning Client. Ensure the *<db_server>* and *<port>* values are valid:

mle-asclient-settings.xml

*<?xml version="1.0" encoding="utf-8" ?>*

*<host>http://localhost</host>*

*<port>35950</port>*

*<db_username>M_LINCS</db_username>*

*<db_password>M_LINCS</db_password>*

*<db_server>xe</db_server>*

*<selection_type>cp_refs</selection_type>*

*<api_method>balance</api-method>*

*<!-- interval determines how often progress is written to the log (seconds) -->*

*<mark_interval>1</mark_interval>*

*<!-- items that could not be processed are written to invalid_log_file -->*

*<invalid_log_file>asinvalid.log</invalid_log_file>*

*<!-- log detail level (LOG, FATAL, ERROR, INFO, WARN, INFO, DEBUG or TRACE) -->*

*<log_level>ERROR</log_level>*

*<filters>*

*<product_filter>products.prod_type <>9</product_filter>*

*<channel_filter></channel_filter>*

*<chanprod_filter></chanprod_filter>*

*</filters>*

*<product_codes>*

*<item>609-08L</item>*

*<item>032-83K</item>*

*</product_codes>*

*<cp_refs>*

*<item>1</item>*

*</cp_refs>*

See "Example of a configuration file" on page 338.

## Getting started

**1** The Application Server must be running in order for ASClient to function. To check if it is running, type the following address (or similar) in your browser:

`http://127.0.0.1:35950/`

Note that the IP address and port number may differ from this example, depending on the location the service is installed and the port number it is configured to use. Replace with your details as appropriate.

If the Application Server is running you will see the message "Infor Application Server is operational".

**2** It can be started in two ways:

- as a service,
- from DOS.

a **To run as a service**, start a DOS session by selecting click **Start > Run**, typing **cmd** in the **Open** list box, and typing the following command:

`C:\Program Files\Infor\DP6.5\dp>dp_as.exe -install`

(depending on the version number)

b Select **Start > Settings > Control Panel**.

c Double-click **Administrative Tools**.

d Double-click **Services**.
The Services dialog box is displayed, listing the services available on your machine. You should now see **Infor Demand Planning Service** in the list.

e In the Services dialog, select **Demand Planning AppServer 6.5** and do one of the following:

- Click the **Start Service** button.
- Click **Start** on the **Action** menu.
- Click **Start the service**.

To set the service to start automatically, right-click **Infor Demand Planning Service**, select **Properties** and select **Automatic** from the **Startup type** list box.

a **To start from DOS**, start a DOS session by selecting **Start > Run** and typing **cmd** in the **Open** list box.

b Type the following command:

```
C:\Program Files\Infor\DP6.5\dp>dp_as.exe -console
```

(depending on the version number)

## Configuring ASClient

After deciding which method to run and on which items, ASClient can be configured to perform the processing. Configuration is done via a configuration file `mle-asclient-settings.xml` and also via the command line. Note that ASClient values from the command line will override the values in the configuration file.

See "Example of a configuration file" on page 338.

To run ASClient, type `asclient /[OPTION]` at the DOS prompt. Be sure to type a space between `asclient` and `/[OPTION]`. If an option is not typed here, ASClient will use the details in the xml file.

The command line options are as follows:

- `/HELP` - show command line help
- `/LOG FILENAME` - set log file name (default is **asclient.log**)
- `/DBUSERNAME USERNAME` - set database user name
- `/DBPASSWORD PASSWORD` - set database password
- `/DBSERVER SERVER` - set database server name (Oracle TNS)
- `/METHOD METHOD` - set the API call method. Valid values are:
  - **balance**
  - **generate_forecast**
  - **forecast_ahead**
- `/SELECTIONTYPE SELECTIONTYPE` - set the item selection method. Valid values are:
  - **cp_refs**
  - **product_codes**
  - **filters**
- `/HOST URL` - host of the application server e.g. **http://localhost**
- `/PORT PORTNUMBER` - port of the application server (typically **35950**)
- `/CANCEL REQUESTID` - cancel a request
- `/NOPROMPT` - disable prompting the user before starting to process
- `/NOVALIDATION` - disable validating settings using database
- `/SHOWOPTIONS` - display options before starting to process

- /VERSION - asclient version

Although the above options are self explanatory, the following may need some explanation:

- /CANCEL REQUESTID

  When ASClient makes a request to the application server, the request itself is given a number called the request ID. The request ID is shown In this example:

```
C:\>asclient
asclient v6.5
Copyright 2012 Infor. All rights reserved.
Using settings file: C:\Documents and Settings\<USERNAME>\Infor\Demand Planning\6.5\mle-asclient-settings.xml
Continue y/N?
Fit options not found - using defaults
Calling Generate Forecast using filter selection
Request ID 1
14:42:59 - 0% done
14:43:00 - 0% done
14:43:01 - 0% done
14:43:02 - 0% done
14:43:03 - 41% done
14:43:04 - 41% done
14:43:04 - 100% done
Finished
```

  If after starting ASClient, you wish to cancel the request but have been disconnected from the application server, then the /CANCEL option can be used along with the correct Request ID to cancel the call:

```
C:\>asclient  /cancel 11
asclient v6.5
Copyright 2012 Infor. All rights reserved.
Command line options:
CANCEL : 11
Using settings file: C:\Documents and Settings\<USERNAME>\Infor\Demand Planning\6.5\mle-asclient-settings.xml
Trying to cancel request 11
Request cancelled successfully
```

- /NOPROMPT

  Start the process without prompting the user to continue.

- /NOVALIDATION

Skip the validation step. Since there are many configuration parameters, ASClient tries to validate as much as possible before calling the application server. This requires ASClient to have direct access to the DB server. If ASClient doesn't have access to the same DB the application server has access to then this facility may need to be disabled, in which case you should use this option.

- `/SHOWOPTIONS`
- Prints out all the options ASClient will use to call the application server.

**Item Selection**

- **CP Refs**

  Should be included in the configuration file as follows:

  ```
  <cp_refs>
   <item>1</item>
   <item>2</item>
    <item>3</item> ....and so on.
  </cp_refs>
  ```

- **Product Codes**

  Should be included in the configuration file as follows:

  ```
  <product_codes>
  <item>609-08L</item>
   <item>032-83K</item>
  <item>065-39Y</item>
  <item>073-61S</item>
  </product_codes>
  ```

- **Filters**

  Should be included in the configuration file as follows:

  ```
  <filters>
  <product_filter>enter Product filter here</product_filter>
  <channel_filter>enter Channel filter here</channel_filter>
  <chanprod_filter>enter Channel Product filter here</chanprod_filter>
  </filters>
  ```

  A Product filter is based on Product table fields, a Channel filter is based on Channel table fields and a Channel Product filter is based on Channel Product table fields.

  Each constraint includes three elements:

  - A field from the Product or Channel Product or Channel table
  - A constant value with which the field value is compared
  - An operator that specifies the relationship between the field value and the constant value:

| | |
|---|---|
| = | Equal |
| > | Greater than |

| | |
|---|---|
| < | Less than |
| >= | Greater than or equal |
| <= | Less than or equal |
| <>or != | Not equal |

The following example shows a Product filter selecting Products with a Product Type not equal (**<>**) to "9".

```
<product_filter>products.prod_type &lt;&gt;9</product_filter>
```

**Methods**

- **Balance**

  The Balance section only applies if **balance** is set as the `<api_method>`. No other options are required. Balancing through a Channel matrix is the process where changes at a Channel are passed through the sequence of linked Channels. The controls for this procedure are contained within the Channel behaviors, which hold information relating to individual Channels. They permit or deny history, forecast or requirements data to be passed to or accepted from other Channels in the matrix.

- **Forecast Ahead**

  The Forecast Ahead section only applies if **forecast_ahead** is set as the `<api_method>`. No other options are required. The forecast is regenerated using the existing forecast model.

- **Generate Forecast**

  The Generate Forecast section only applies if **generate_forecast** is set as the `<api_method>`. If the **<**generate_forecast**>** section is missing then the default is the default options used by Generate Forecast in the Demand Forecaster module of Infor Demand Planning.

  Other generate_forecast options are:

  - `<fit_history_type>` - Enter the type of history to use: 1 for Sales 2 for Customer demand 3 for Adjusted demand 4 for History exclusion mask
  - `<clear_mi>` - Enter true to remove all existing market intelligence
  - `<clear_future_changes>` - Enter true to remove any future changes
  - `<recalc_history_start_date>` - Enter true to calculate the forecast from the first non-zero history value
  - `<recalc_annual_forecast>` - Enter true to recalculate the annual forecast figures beyond the monthly forecast horizon
  - `<recalc_safety_stock>` - Enter true to recalculate the safety stocks
  - `<remove_causal_factors>` - Enter true to remove all independent variables applied using the causal modeling process

  Enter the following parameters if you want to use different values from those of the underlying Channel Products table fields.

  - `<forecast_calc_code>` - Enter a valid forecast calculation code from the Forecast Calculation Formulae table

- `<model_start_date>` - Enter the starting date (yyyy-mm-dd) for history to be used to calculate the new forecast model
- `<growth_damping_start_date>` - Enter the date (yyyy-mm-dd) when you want the growth rate damping factor to start from
- `<growth_damping_end_date>` - Enter the date (yyyy-mm-dd) when you want the growth rate damping factor to end
- `<growth_damping_factor>` - Enter a valid factor that will control the way that the growth damping factor is applied
- `<level_inflation_factor>` - Enter a valid level inflation factor that is applied to the current standard deviation estimate
- `<level_shift_threshold>` - Enter a multiplication factor to be applied to the current standard deviation estimate
- `<allow_negative_forecast>` - Enter true if you want to allow the forecast to become negative
- `<conf_for_seasonality>` - Enter the level of significance which determines whether seasonal coefficients are included in the forecast model
- `<introduction_date>` - Enter the date (yyyy-mm-dd) for the introduction of a new Product
- `<discontinuation_date>` - Enter the discontinuation date (yyyy-mm-dd)
- `<min_sparse_periods>` - Enter the minimum number of sparse periods to define slow moving Products
- `<max_short_periods>` - Enter the maximum number of periods to define short history Products
- `<max_model_terms>` - Enter the maximum number of coefficients that should be used in calculating a statistical model Enter the following parameters if you want to use different values from those stored in the System table.
- `<scale_inflation_factor>` - Enter a factor that is used to develop an alternative model to monitor the increase in the estimate of variance.
- `<scale_bayes_factor>` - Enter the minimum value that the variance Bayes factor can be allowed to be before a tracking signal is activated
- `<run_length_limit>` - Enter a value defining the number of monthly periods that are monitored for significant shifts in the level and/or the variance
- `<save_changes>` - Enter true to save any changes made to the above System parameters back to the System table
- `<mask_type>` - Can be one of the following:
  - `OPTIONS` - use the mask given in the **<mask>** section
  - `DB` - read the mask from the DB
  - `COMBINE` - merge the mask given in **<mask>** and the one from the DB

Generate Forecast will initialize using the default settings so that if you only want to change the introduction date then you only need to set the **<**introduction_date**>** in the configuration file; all other options are set to the default values.

# Example of a configuration file

This is an example of a typical configuration file, annotated where necessary. In this example, Generate Forecast functionality is applied to items selected by Channel Product Reference Number:

```
<?xml version="1.0" encoding="utf-8" ?>
<host>http://localhost</host>
<port>35950</port>
<db_username>M_LINCS</db_username>
<db_password>M_LINCS</db_password>
<db_server>xe</db_server>
<selection_type>cp_refs</selection_type>
<!-- which method on the application server to call -->
<api_method>generate_forecast</api-method>
<!-- interval determines how often progress is written to the log (seconds) -->
<mark_interval>1</mark_interval>
<!-- items that could not be processed are written to invalid_log_file -->
<invalid_log_file>asinvalid.log</invalid_log_file>
<!-- log detail level (LOG, FATAL, ERROR, INFO, WARN, INFO, DEBUG or TRACE) -->
<log_level>ERROR</log_level>
<!-- which selection type to use to select the items to process -->
<!-- can be either cp_refs, product_codes or filters -->
<selection_type>cp_refs</selection_type>
<filters>
    <product_filter>products.prod_type &lt;&gt;9</product_filter>
    <channel_filter></channel_filter>
    <chanprod_filter></chanprod_filter>
</filters>
<product_codes>
    <item>609-08L</item>
    <item>032-83K</item>
    <item>065-39Y</item>
    <item>073-61S</item>
    <item>100-77D</item>
```

```
</product_codes>
<cp_refs>
    <item>1</item>
    <item>2</item>
    <item>3</item>
    <item>4</item>
    <item>5</item>
    <item>6</item>
    <item>7</item>
    <item>8</item>
    <item>9</item>
    <item>10</item>
</cp_refs>
<!-- generate forecast options - these relate directly to the options -->
<!-- shown in the Generate Forecast dialog box shown in DP -->
<!-- dates should be in YYYY-MM-DD format -->
<generate_forecast>
    <fit_history_type>3</fit_history_type>
    <clear_mi>true</clear_mi>
    <clear_future_changes>true</clear_future_changes>
    <recalc_history_start_date>false</recalc_history_start_date>
    <recalc_annual_forecast>false </recalc_annual_forecast>
    <recalc_safety_stock>false </recalc_safety_stock>
    <remove_causal_factors>false</remove_causal_factors>
    <forecast_calc_code_>0</forecast_calc_code>
    <model_start_date>2008-07-01</model_start_date>
    <growth_damping_start_date_>2008-07-01</growth_damping_start_date>
    <growth_damping_end_date_>2008-07-01</growth_damping_end_date>
    <growth_damping_factor>0.3</growth_damping_factor>
    <level_inflation_factor_>3.5</level_inflation_factor>
    <level_shift_threshold_>0.135</level_shift_threshold>
    <allow_negative_forecast>true</allow_negative_forecast>
```

```
    <conf_for_seasonality>95</conf_for_seasonality>
    <introduction_date_>2008-17-01</introduction_date>
    <discontinuation_date_>2008-07-01</discontinuation_date>
    <min_sparse_periods>6</min_sparse_periods>
    <max_short_periods>6</max_short_periods>
    <max_model_terms>14</max_model_terms>
    <scale_inflation_factor>20</scale_inflation_factor>
    <scale_bayes_factor>0.3</scale_bayes_factor>
    <run_length_limit>4</run_length_limit>
    <save_changes>false</save_changes>
    <mask_type>options</mask_type>
    <mask>
       <item>1</item>
       <item>0</item>
       <item>1</item>
       <item>1</item>
    </mask>
    <use_commit>true</use_commit>
</generate_forecast>
```

# User Data Series

## About User Data series

User Data Series (UDS) can be used to store simple or calculated values for custom requirements and are useful for, for example, track stock-outs in history, back-orders, DIFOT violations, store (scan) sales comparatives to Warehouse sales.

Existing data and weightings on the database can be used to create a UDS, or UDS can be manually input, depending on the requirements.

UDS are created and managed from within Database Administration. Whether a UDS is editable is specified in User Data Series Preferences.

To which users UDS are available is also specified in User Data Series Preferences.

Editable UDS can be edited directly by over-typing in the Table or Fiscal windows, or can have another row of data copied or added to them from the Table window. Non-editable UDS are display only.

In the Table window, selecting a UDS and right-clicking displays options to Copy to UDS, Add to UDS and Display/Do not display the UDS on the graph.

Selecting any row of data in the Table window and right-clicking displays additional options to Copy to UDS and Add to UDS, enabling existing Channel Product data to be stored in a UDS.

If the **Display** option has been specified for a UDS in User Data Series Preferences, it will automatically display on the Graph. Select 'Display/Do not display UDS on Graph'

UDS are accessible in the Fiscal window by selecting **UDS Edit** from the drop down on the main toolbar and selecting a UDS from the list.

The selected UDS is displayed in the Fiscal window where, if editable, it can be edited as required.

You can edit single periods or Totals, which will spread the Total value to the individual periods in that year, based on their previous values.

UDS calculations are created and managed from within Database Administration. Calculations can be run in both Database Administration and in Demand Forecaster on selected Channel Products.

# Demand Sensing

## About Demand Sensing

Demand Sensing provides true 'Sense & Respond' capability giving better visibility of daily, weekly, and month to date actual sales for current period.

New Exceptions to alert of real-time sales behavior changes.

Automatically evaluate new exceptions;

- "Demand Sensing - High"
- "Demand Sensing - Low"

Enhancement to Demand Analysis Report with new Channel Product parameters for Demand Sensing tolerance percentages.

Default new Data Series for recording Sales to Date.

Demand Sensing Channel Product parameters can be set within Edit Forecasts, Data Window or from the Channel Products table in Database Administration.

Whether an item is flagged as sensing high or low demand depends on the Demand Sensing Parameters and tolerances defined. For example a % sales filter with a tolerance of 30% may flag an item as Sensing Low Demand but a percentage of 50% does not sense low demand.

The sensing is based on Live data. The live data values are displayed on a read-only basis for information purposes.

The Channel Product Demand Sensing parameters can be used when running the Demand Analysis report by selecting the CP Settings option in the **Report** tab when setting up the report.

Items flagged in the report are those identified as having significant differences between current demand and the most recent forecast based on the comparison criteria of the Channel Product Demand Sensing Parameters.

# Inventory Planner

6

## About Inventory Planner

The Inventory Planner module provides three functions:

- ABC analysis

You can classify items according to their relative importance to your business, typically determined by the monetary value of their annual forecast demand. You can do this either interactively or automatically (that is, in "batch mode").

- Simulating and calculating safety stock

You can specify a safety stock strategy for one or more items, and have Infor Demand Planning calculate the optimum safety stock to fulfil that strategy. You can simulate the effects of different strategies and examine the trade-off between investment in stock and various measures of customer service. Alternatively, if you already know what strategy you want, you can apply it and calculate safety stocks directly (that is, in "batch mode"). The calculation of safety stock includes the calculation of the re-order point.

- Calculating economic order quantities

You can have Infor Demand Planning calculate economic order quantities for one or more items, balancing the costs of holding stock against the costs of raising procurement or production orders. You can then, if you wish, make each item’s preferred lot quantity equal to the economic order quantity.

**Note:**

- In earlier releases, Inventory Planner was known as both Strategic Inventory Planning and Inventory Optimizer.

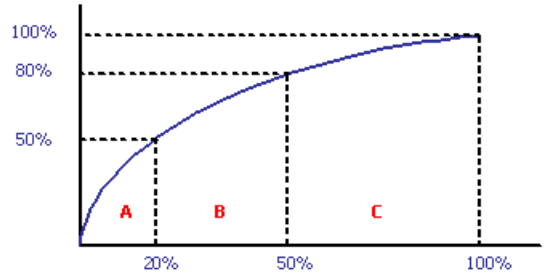
# ABC Analysis

## About ABC analysis

An ABC analysis classifies Products or Channel Products according to their annual forecast. The annual forecast is usually weighted by a monetary value, such as standard cost, selling price or margin, but you can choose any other static weighting.

See "About static weightings" on page 107.

Class A items are typically those with the highest weighted annual forecast, Class B items are those with lesser forecast, and so on. (In fact, Infor Demand Planning supports class labels of up to three characters, so you could have classes labeled TOP, MID and LOW. Class Z is reserved.)




As shown in this diagram, an ABC analysis demonstrates that Pareto's Law applies; that is, a relatively small percentage of the total number of items (X-axis) accounts for a relatively large percentage of the annual value (Y-axis).

Once you have defined the classes and applied them, you can devise inventory optimization strategies that relate to the relative importance of each item.

## More about ABC analysis

You can choose to set ABC breakpoints interactively, on the basis of an ABC Classification report, or automatically, according to parameters you specify in advance.

You can classify only live Standard Products; that is, Normal Products and Slow-Moving Products.

### Classify items at the Product or Channel Product level

You can choose to classify items either at the Product level (in other words, the same classification at all Channels) or at the Channel Product level (potentially different classifications at different Channels). Your choice depends on the details of your business.

If you decide to classify at the Product level, you should be careful which Channels you choose to determine the total annual forecast. If you choose a mixture of aggregate and node Channels, the

annual forecast may be inflated by double-counting. (This cannot happen when classifying at the Channel Product level.)

### Two measures of annual forecast

Annual forecast can be measured in either of two ways:

- Next year's forecast

The total net forecast over the next 12 or 13 periods. This is the default measure.

- Annualised forecast

A simple forward projection of the current level and growth over the next 12 or 13 periods, ignoring market intelligence, effectivity and discontinuation dates, and the forecast horizon. If growth is strongly negative, this can result in a negative annual forecast.

Whether 12 or 13 periods are used depends on the demand calendar applied at each Channel.

### Weighting the annual forecast

Static weightings can be based on Product or Channel Products table fields. If you are classifying by Product but select a CP-based weighting, Infor Demand Planning calculates an average weighting across the selected Channels.

See "Example of an average weighting".

### Where the classification is stored

By default, when classifying at the Product level the result is stored in the "ABC Class (Pt)" field, and when classifying at the Channel Product level the result is stored in the "Inventory Classification (CPt)" field.

However, you may instead choose any suitable user-defined field of the Product or Channel Products table in which to store the classification.

See "About user-defined fields" on page 88.

**Note:**

- Alternatively, you can of course import ABC classifications directly into the Product or Channel Products table.

# Interactive Analysis

## Classifying items interactively

**1** Generate an ABC Classification report.

See "Generating an ABC Classification report" on page 347.

2 Define the ABC breakpoints, or add classifications directly to selected items.
See "Defining ABC breakpoints" on page 349 and "Adding an ABC classification" on page 350.

3 Save the new ABC classes.
See "Saving new ABC classes" on page 350.

## ABC Classification Report

### About the ABC Classification report

The ABC Classification report enables you to classify selected Products or Channel Products, by listing them in decreasing order of their weighted annual forecasts. You can then set breakpoints that define the class boundaries, and assign labels to these classes. The report has a "toolbar" on page 347 (described below) to help you with these tasks.

The report shows, for each item, the following information:

| Column | Meaning |
|---|---|
| Sequence | Rank order of this item. |
| New Class | The new ABC class assigned to this item in this session. |
| Current Class | The item's current ABC class as recorded in the database. |
| Product Code | The Product code. |
| Product Description | The name or description of the Product. |
| Channel ID | The Channel ID. This column is present only when classifying by Channel Product. |
| Channel Name | The name or description of the Channel. This column is present only when classifying by Channel Product. |
| Weighting | The static weighting factor used for this item. If you are classifying by Product but select a CPt-based weighting, Infor Demand Planning calculates an average weighting across the selected Channels.<br>See "Example of an average weighting". |
| Forecast | The item's annual forecast (either next year's forecast or the annualized forecast). |
| Weighted Forecast | The item's annual forecast multiplied by the static weighting factor. |
| Cumulative Weighted Forecast | The sum of the weighted annual forecasts of this item and all items of higher rank. |
| Percentage Of Forecast | Weighted annual forecast for this item expressed as a percentage of the total weighted annual forecast of all selected items. |
| Cumulative Percentage Of Forecast | The weighted annual forecasts of this item and all items of higher rank, expressed as a percentage of the total weighted annual forecast of all selected items. |

## ABC Classification toolbar

| Button | Function |
|---|---|
| **Save** | **File > Save**<br>Saves the new ABC classes assigned in this session. |
| **Reset Breakpoints** | **Edit > Reset Breakpoints**<br>Removes all the ABC breakpoints defined in this session. |
| **Insert Breakpoint** | **Edit > Insert Breakpoint**<br>Enables you to define a new ABC breakpoint. |
| **Alter Scaling** | **Edit > Alter Scaling**<br>Enables you to change the scaling of the ABC Classification report. |
| **Alter Weighting** | **Edit > Alter Weighting**<br>Enables you to change the weighting of the ABC Classification report. |
| **Summary Report** | **View > Summary Report**<br>Generates an ABC Classification Summary report. |

### Generating an ABC Classification report

1. In Inventory Planner, select the Products you want to classify, and the Channels from which you want to calculate annual forecast.

   See "About selecting Products and Channels" on page 35.

   The Products that are not live Standard Products are removed from your selection.
2. Select **Modules > Inventory Planner > ABC Classification**.
   The ABC Classification dialog box is displayed.
3. Specify whether you want the selected items to be classified at the Product level or the Channel Product level, and whether you want the class stored in the default field or a user-defined field.
4. Click **Interactive Mode**, then click **OK**.
5. If you decided to classify at the Product level, but have selected aggregate and node Channels, Infor Demand Planning warns you that the annual forecast is totaled across all these Channels; click **OK** if you want to continue.
6. If you decided to store the class in a user-defined field, the Select User Field dialog box is displayed, where you can select the field you want; click **OK** to continue.
   The Inventory Classification Options dialog box is displayed.
7. Specify whether you want to classify items by Next year's forecast or the Annualized forecast.
8. Under Items to display, type or select the number of items you want to view in the ABC Classification report.
9. Optionally, in the **Scale by** box, type the factor by which you want to scale the annual forecast and weighted annual forecast figures in the ABC Classification report.
10. Optionally, in the **Weight by** box, select a static weighting by which to weight the annual forecast.
11. Click **OK**.

The ABC Classification window appears, showing an ABC Classification report. The report lists selected items in decreasing order of their weighted annual forecast.

**Note:** To change the appearance of the report, select **Tools > Fonts**.

### Scaling the ABC Classification report

When using the ABC Classification report, you can change the scaling of the annual forecast and weighted annual forecast values to make them easier to read.

1 Select **Edit > Alter Scaling**.

If you have already specified some new classes, Infor Demand Planning warns you that these will be removed. Click **OK** to continue.

The Alter Scale Factor dialog box is displayed, showing the current scale factor.

2 Type the factor by which you want to scale the values in the report.

**Note:** Another method is to right-click anywhere in the ABC Classification report and then click **Change Scaling Factor** on the shortcut menu.

### Weighting the ABC Classification report

When using the ABC Classification report, you can change the weighting used for the weighted annual forecast values.

1 Select **Edit > Alter Weighting**.

If you have already specified some new classes, Infor Demand Planning warns you that these will be removed. Click **OK** to continue.

The Inventory Classification Options dialog box is displayed, but only the **Weight by** box is available.

2 Select a static weighting by which to weight the annual forecast.

**Note:**

- Another method is to right-click anywhere in the ABC Classification report and then click **Change Weighting Factor** on the shortcut menu.
- Static weightings are defined in the Database Administration module.

### About the ABC Classification Summary report

You can generate an ABC Classification Summary report for either the new classes defined in this session, or the current classes in the database. The report shows how many of the selected items there are in each class.

The classes are listed in alphabetical order. The report shows, for each class:

| Column | Meaning |
|---|---|
| Classification | The class label, or "Undefined" for unclassified items. |
| Number of Items | The number of selected items in this class. |

| | |
|---|---|
| Cumulative Number of Items | The number of selected items in this class and all preceding classes. |
| Total Annualized Forecast | The total annual forecast of all the items in this class. |
| Total Weighted Annualized Forecast | The total weighted annual forecast of all the items in this class. |
| Cumulative Total Weighted Annualized Forecast | The total weighted annual forecast of all the items in this class and all preceding classes. |
| Percent Total Weighted Annualized Forecast | The total weighted annual forecast of all the items in this class, expressed as a percentage of the total weighted annual forecast of all selected items. |
| Cumulative Percent Total Weighted Annualized Forecast | The total weighted annual forecast of all the items in this class and all preceding classes, expressed as a percentage of the total weighted annual forecast of all selected items. |

#### Generating an ABC Classification Summary report

1. Select **View > Summary Report**.
2. Click **Yes** to view the report for the newly-defined classes or **No** to view the report for the current classes.
   The Classification Summary window appears, showing the ABC Classification Summary report.

   **Note:** To change the appearance of the report, select **Tools > Fonts**.

## ABC Breakpoints

#### Defining ABC breakpoints

When using an ABC Classification report, you can define new breakpoints interactively. At first, all the items in the report are newly unclassified, although the report also shows their current classes.

1. Select **Edit > Insert Breakpoint**.
   The Enter Value and Classification dialog box is displayed.
2. In the Select items where weighted forecast is greater than or equal box, type the weighted annual forecast value at which you want to insert a breakpoint.
3. In the **Classification** label box, type a label for the class (up to three characters).

   If you have used this label for a class you have already defined, Infor Demand Planning asks you to confirm that you really want to use it again.

   All the items that have a weighted annual forecast greater than or equal to the specified value are given the new classification.
4. Repeat as required.

### Removing ABC breakpoints

When using the ABC Classification report, you can remove any breakpoints you have defined and return to the initial state in which all the items are newly unclassified.

Select **Edit > Reset Breakpoints**.

## ABC Classifications

### Adding an ABC classification

When using an ABC Classification report, you can specify the ABC class of one or more selected items.

1. Select one or more items in the ABC Classification report. The items do not have to be next to each other.
2. Right-click any one of the selected items, and on the shortcut menu click **Add Classification**. The Enter Classification dialog box is displayed.
3. Type a class label for the items (up to three characters).

### Renaming an ABC classification

You can rename any new ABC class shown in an ABC Classification report.

1. Select **Edit > Rename Classification**.
   The Rename Classification dialog box is displayed.
2. In the **Current Classification Label** box, select the class you want to rename.
3. In the **New Classification Label** box, type a new class label (up to three characters).

   **Note:** Another method is to right-click any item in the ABC Classification report that has the class you want to rename, and then click **Rename Classification** on the shortcut menu.

### Removing ABC classifications

When using the ABC Classification report, you can remove any new classifications you have defined and return to the initial state in which all the items are newly unclassified.

Right-click anywhere in the ABC Classification report and then click **Reset Classifications** on the shortcut menu.

## Saving ABC Classes

### Saving new ABC classes

1. Select **File > Save**.
   The Enter Classification dialog box is displayed.
2. Type a label for the unclassified items (up to three characters).

By default, the label U is used.

**Note:**

- Another method is to right-click anywhere in the ABC Classification report and then click **Save Inventory Classes** on the shortcut menu.
- The new classes are saved to either the Products table or the Channel Products table, depending on your choice when you generated the ABC Classification report.

# Batch Analysis

## Classifying items automatically

1. In Inventory Planner, select the Products you want to classify, and the Channels from which you want to calculate annual forecast.

   See "About selecting Products and Channels" on page 35.

   Infor Demand Planning removes from your selection any Products that are not live Standard Products.
2. Select **Modules > Inventory Planner > ABC Classification**.
   The ABC Classification dialog box is displayed.
3. Specify whether you want the selected items to be classified at the Product level or the Channel Product level, and whether you want the class stored in the default field or a user-defined field.
4. Click **Batch Mode**, then click **OK**.
5. If you decided to classify at the Product level, but have selected aggregate and node Channels, Infor Demand Planning warns you that the annual forecast is totaled across all these Channels; click **OK** if you want to continue.
6. If you decided to store the class in a user-defined field, the Select User Field dialog box is displayed, where you can select the field you want; click **OK** to continue.
   The Inventory Classification Options dialog box is displayed.
7. On the **Classifications** tab, specify this information:
   - Specify whether you want to classify items by next year's forecast or the annualized forecast.
   - Type a label for the unclassified items (up to three characters). By default, the label U is used.
   - Optionally, select a static weighting by which to weight the annual forecast.
8. On the **Set Breakpoints** tab, select either **Cumulative % of Forecast** or **Value**.
9. Specify the ABC class labels and the associated breakpoint values.
10. Click **OK** to apply the breakpoints to the selected Channel Products.
    An ABC Classification dialog box is displayed, showing the progress of the re-classification.

    An Output pane appears, showing the number of CPs processed and whether any exception views were generated:
    - "DATA CHANGED"
    - "INCOMPLETE ABC"

When the process is complete, Infor Demand Planning updates the database with the new classifications.

**Note:**

- Infor Demand Planning ensures that each breakpoint has a valid class label and a non-zero value, but it does not ensure that they are mutually consistent.
- To close the Output pane, select **View > Output**.

# Safety Stock

## About safety stock

The purpose of maintaining safety stock is to counteract variability in demand. If demand exceeds forecast, it can lead to shortages and lower customer service levels. Clearly, the more safety stock is carried, the lower the probability of shortages. On the other hand, more safety stock implies a greater investment, with consequent opportunity costs.

The optimal amount of safety stock is the minimum quantity needed to achieve a required service level.

### Safety stock strategies

Inventory Planner enables you to choose between seven different safety stock strategies and calculate the optimal safety stock.

The advanced strategies offered by Infor Demand Planning use a computed safety factor (k) and the standard deviation of forecast errors over the lead time (s) to calculate a statistical safety stock that makes allowance for the accuracy of the forecast. Other, simpler strategies either do not compute a safety factor (but simply take it as given) or make no allowance for the accuracy of the forecast.

Safety stock strategies can be selected independently for different items or collections of items. For example, you can apply a different strategy according to each item's ABC classification.

Each strategy is characterized by a required performance level. Strategies and their performance levels should be reviewed periodically to ensure that they continue to match your business objectives.

### Re-order point

In Infor Demand Planning, the basis for replenishing stocks is to compare the available stock after each transaction with the re-order point (ROP). For most products, the ROP is the forecast of demand during the re-supply lead time, plus the safety stock at the end of the lead time (including, optionally, some allowance for contingency stock). The calculation of safety stock includes the calculation of the re-order point.

### Time-phased safety stock

Inventory Planner calculates the average safety stock needed to provide the required service level for the year ahead.

If demand is seasonal, the actual service level achieved at any point during the year can be expected to be below average in periods of high demand, and above average in periods of low demand. However, it is possible to achieve a constant service level throughout the year by using time-phased safety stocks (TPSS).

## About time-phased safety stocks and Inventory Planner

The safety stock calculations produce an annual average safety stock quantity. But to achieve a constant level of service throughout the year, it may be necessary to vary the safety stock so that more than the average is available during periods of high demand, and less than the average is available during periods of low demand.

There are three different ways of interpreting "demand" in this context:

- The net forecast (that is, statistical forecast plus market intelligence, including the customer forecast where applicable)
- DRP requirements (that is, outgoing orders to supply other Channels)
- Either net forecast or DRP requirements, plus dependent (BOM) requirements

It is important to understand that Inventory Planner does not calculate a full schedule of TPSS values for the year ahead. That function is performed by Replenishment Planner. Instead, Inventory Planner converts the annual average safety stock into a number of days' cover (plus contingency) and calculates a single TPSS value appropriate for the end of the re-supply lead time. This value is based solely on the net forecast, not DRP or dependent requirements.

## About the Current Weeks of Supply report

The Current Weeks of Supply report categorizes the selected Channel Products according to how many weeks of supply are covered by their respective current safety stocks.

The report is presented as a table, with columns for each week of cover (0-1, 1-2, 2-3, and so on) up to a maximum of 25-26. If some Channel Products have more than 26 weeks' cover, they are grouped together under a >26 column. The final column is a Total column.

The rows of the table are as follows:

| Row | Meaning |
|---|---|
| Count | The number of the selected Channel Products with the same weeks' cover. |

| | |
|---|---|
| Total Safety Stock | The total units of current safety stock for these Channel Products.<br>å "Annual Average Safety Stock (CPt)" |
| Weekly Sales | The total units of current sales.<br>å ("Estimated Annual Usage (CPt)" / 52) |
| Total Safety Stock Value | The total value of current safety stock, at standard cost.<br>å ("Annual Average Safety Stock (CPt)"´ "Cost Price (CPt)") |
| Weekly Sales Value | The total value of current sales at standard cost.<br>å (("Estimated Annual Usage (CPt)" / 52) ´ "Cost Price (CPt)") |
| Total Safety Stock Weight | The total of current safety stock multiplied by the weighting identified in the Safety Stock Simulation toolbar. This row is present only if the weighting is not Units or Standard Cost.<br>å ("Annual Average Safety Stock (CPt)"´ weighting) |
| Weekly Sales Weight | The total of current sales multiplied by the weighting identified in the Safety Stock Simulation toolbar. This row is present only if the weighting is not Units or Standard Cost.<br>å (("Estimated Annual Usage (CPt)" / 52) ´ weighting) |
| Limit | Indicates by an asterisk (*) if the current safety stock or the theoretical on-hand stock is limited by shelf life, storage capacity, or minimum/maximum limits for any one of these Channel Products.<br>The limitations are governed by the following fields:<br>"Shelf Life (CPt)"<br>"Maximum Storage Capacity (CPt)"<br>"Minimum Time-phased Safety Stock Days (CPt)"<br>"Minimum Time-phased Safety Stock Units (CPt)"<br>"Maximum Time-phased Safety Stock Days (CPt)"<br>"Maximum Time-phased Safety Stock Units (CPt)" |

**Note:**

- Contingency stock is ignored.
- The Standard Cost static weighting is typically based on the "Cost Price (CPt)" field.

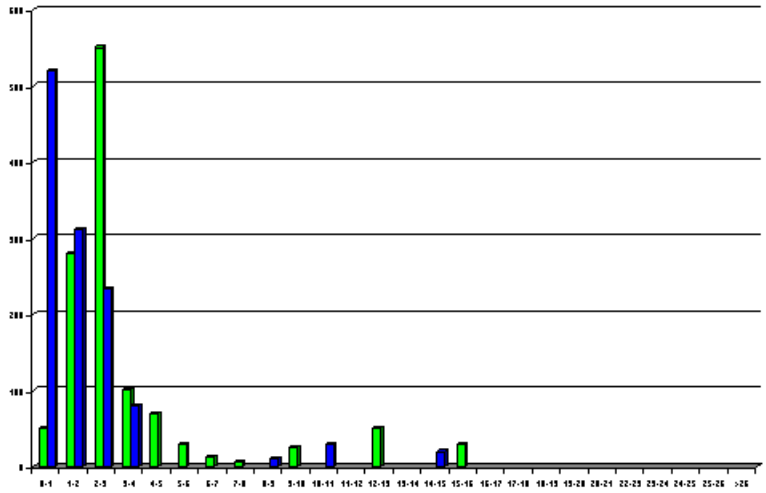
## About the Weeks Forward Cover histogram

The Weeks Forward Cover histogram shows both current and simulated data, taken from the Count row of the Current Weeks of Supply report and the Safety Stock Simulation Weeks of Supply report.

The x-axis of the histogram shows weeks' cover starting at 0-1, 1-2, 2-3, and so on up to 25-26 and (if necessary) >26.

The y-axis shows how many of the selected Channel Products share the same number of weeks of supply. The current distribution is shown by green bars, the simulated distribution by blue bars.

You can double-click a bar to display the underlying data. You can click and drag in the plot area to display crosshairs that can make it easier to read the axes.



# Safety Stock Strategies

## About the safety stock strategies

"Key to the safety stock formulae" key to formulae "1" on page 356|"2" on page 356|"3" on page 356|"4" on page 356|"5" on page 357|"6" on page 357|"7" on page 357

Inventory Planner provides seven different safety stock strategies, each being configured by specifying a required performance level:

- 1: Specified Service Level by Itemks
- 2: Specified Number of Safety Factors
- 3: Service Level by Order Fill ks
- 4: Minimise Shortage Occurrencesks
- 5: Days Supply
- 6: Nominated Average Safety Stock Quantity
- 7: Anticipated Years Between Shortagesks

The strategies marked with the symbol ks denote those that depend on a computed safety factor (represented by k) and the accuracy of the forecast (represented by s, the standard deviation of forecast errors over the lead time). The other strategies either do not compute a safety factor (k is merely specified) or make no allowance for the accuracy of the forecast.

Strategies 3, 4 and 7 are intended to be applied to groups of items. The specified performance level may be achievable for the group as a whole, but not necessarily for individual items within the group. For this reason, these strategies are described as having "dependent" performance levels.

### Strategy 1: Specified Service Level by Item

Performance level: Fraction of annual demand to be filled from stock

Formula: ss = (k ´s) where E(k) = ((1 – PL) ´ q)/s

Under this strategy, a performance level of 0.97 means that, over the course of a year, for any given item, 97% of the demand that occurs between placing a replenishment order and its arrival should be immediately satisfied from stock. Items with less accurate forecasts or higher replenishment frequencies tend to be allocated more safety stock than others.

This strategy is recommended where inventory is used to protect customer service, for example in a distribution depot.

### Strategy 2: Specified Number of Safety Factors

Performance level: Number of standard deviations

Formula: ss = (k ´s) where k = PL

Under this strategy, rather than let Infor Demand Planning compute a safety factor, you can specify it directly via the performance level. Thus a performance level of 2.0 means that the average safety stock for a given item is twice the standard deviation of forecast errors over the lead time.

This strategy is most often used for slow-moving items. The service levels achievable with this strategy are usually lower than those with the Specified Service Level by Item strategy.

### Strategy 3: Service Level by Order Fill

Performance level: Marginal cost of increasing the probability of completely filling orders

Formula: ss = (k ´s) where F(k) = (v ´ q)/((P/100) ´ PL)

This strategy aims to maximize the proportion of orders that are completely satisfied from stock for a group of items that typically appear together on orders. (However, the strategy assumes that the probability that any one item is on an order is independent of the inclusion of any other item.) The performance level is not a precise quantity, although it represents a monetary value. You are encouraged to simulate the effects of various performance levels.

Although this strategy is appropriate when very high levels of order fill are required, it is not often used because of the practical difficulty in determining the probability that any given item will be on an order. When it is used, it tends to recommend higher stock levels for the items that appear most frequently on orders.

### Strategy 4: Minimise Shortage Occurrences

Performance level: Imputed marginal cost of a shortage

Formula: ss = (k ´s) where p(k) = (r ´ v ´s)/((365/D) ´ PL)

This strategy aims to minimize the number of shortages for a group of items. The performance level is not a precise quantity but is proportional to the cost of each additional shortage. You are encouraged to simulate the effects of various performance levels.

This strategy is appropriate for items that can be swiftly expedited through the manufacturing or procurement process. In a plant location, this strategy gives low inventory and high customer service to distribution depots. As a result, the strategy tends to recommend higher stocks of inexpensive, slow-moving items and lower stocks of fast-moving items.

### Strategy 5: Days Supply

Performance level: Number of days of supply

Formula: ss = (PL ´ S)/365

Under this strategy, a performance level of 14 means that, for any given item, Infor Demand Planning computes enough safety stock to cover 14 days' demand, based on that item's annual forecast demand. (If time-phased safety stocks are used, the actual quantity in any given period may vary.)

This strategy is not often used because it makes no allowance for varying patterns of demand between items and it cannot guarantee a minimum service level. It is provided to allow you to compare it with more sophisticated strategies.

### Strategy 6: Nominated Average Safety Stock Quantity

Performance level: Stock quantity

Formula: ss = (PL)

Under this strategy, a performance level of 750 means that, for any given item, Infor Demand Planning assumes that on average 750 units are to be held as safety stock. (If time-phased safety stocks are used, the actual quantity in any given period may vary.)

This strategy is appropriate only for items where inventory optimization is either impossible or inefficient. For example, you might use this strategy for an item with infrequent demand, or one in decline for which you want to control the safety stock manually.

### Strategy 7: Anticipated Years Between Shortages

Performance level: Number of years

Formula: ss = (k ´s) where F(k) = 1/((365/D) ´ PL)

Under this strategy, a performance level of 3 means that, for a selected group of items, Infor Demand Planning computes enough safety stock for each item to provide, on average, one shortage every three years. Remember, however, that this dependent performance level applies to the group and may not be achieved for individual items within the group. The performance level should not be taken too literally.

Larger safety stocks are allocated to items that are replenished with high frequency, irrespective of how expensive they are.

## Changing the safety stock strategy

You can change the safety stock strategy for one or more Channel Products in either of two ways:

- by applying a safety stock simulation
- by editing the Channel Product database table and recalculating the inventory fields

**By applying a safety stock simulation**

1. In Inventory Planner, generate a safety stock simulation.
   See "Generating a safety stock simulation" on page 360.
2. Select the strategy you want to simulate.
   See "Selecting the safety stock strategy" on page 361.
3. Experiment with changing the performance level.
   See "Specifying performance levels" on page 361.
4. When you are satisfied, apply the simulated strategy at the required performance level.
   See "Applying a safety stock simulation" on page 370.

**By editing the database**

1. In Database Administration, select the required Channel Products and edit the **SS Strategy** and **SS Performance Level** fields of the Channel Products table. (Both fields are included in the Inventory Planner report.)
   See "Editing the Channel Products table" on page 116.
2. In Inventory Planner, recalculate the inventory fields using the chosen strategy and performance level.
   See "Recalculating inventory fields" on page 375.

# Safety Stock Simulations

## About safety stock simulations

Safety stock simulations allow you to investigate the effects of changing the safety stock strategy, the performance level, and some of the data by which the current safety stock is calculated. You can evaluate a simulation by comparing it with the current strategy.

You can do this for individual Channel Products or groups of Channel Products. However, all the Products must be either Normal Products or Slow-Moving Products.

You can then decide, on the basis of your simulations, to apply a new strategy or a different performance level to the selected Channel Products.

### The elements of a safety stock simulation

When you generate a safety stock simulation, three special windows and a new toolbar appear:

"About the Safety Stock Simulation Exchange window" on page 363  Safety Stock Simulation Exchange window

"About the Safety Stock Simulation Data window" on page 363  Safety Stock Simulation Data window

"About the Safety Stock Simulation Status window" on page 365  Safety Stock Simulation Status window

"Safety Stock Simulation toolbar"  Safety Stock Simulation toolbar

### Other reports and graphs

Optionally, you can view other reports and charts to help you evaluate various strategies.

"About the Safety Stock Simulation Detail report" on page 366  Simulation Detail report

"About the Exchange Curve graphs" on page 369  Simulation Exchange Curve graphs

"About the Weeks Cover report" on page 368  Weeks Cover report

## About the buttons used in Safety Stock Simulation

The following buttons are displayed when using the Safety Stock Simulation functionality in the Inventory Planner module:

| Button | Function |
|---|---|
| **Data Window** | Opens the Safety Stock Simulation Data window.<br>See "About the Safety Stock Simulation Data window" on page 363. |
| **Current Status** | Opens the Safety Stock Simulation Status window.<br>See "About the Safety Stock Simulation Status window" on page 365. |
| **Exchange Analysis** | Opens the Safety Stock Simulation Exchange window.<br>See "About the Safety Stock Simulation Exchange window" on page 363. |
| **Plot** | Opens the Safety Stock Simulation Plot window.<br>See "About the Exchange Curve graphs" on page 369. |
| **Change Log Window** | Opens the Safety Stock Simulation New Log window.<br>See "Viewing a change log" on page 362. |
| **Detail report** | Opens the Safety Stock Simulation dialog before displaying the Safety Stock Simulation Detail Report window.<br>See "Viewing a Safety Stock Simulation Detail report" on page 368. |

| | |
|---|---|
| **Weeks cover** | Opens the Safety Stock Simulation dialog before displaying the Safety Stock Simulation Weeks of Supply Report, the Current Weeks of Supply Report and the Weeks Forward Cover Histogram.<br>See "Viewing a Weeks Cover report" on page 368. |
| **Reload** | Reloads the originally-selected Channel Products into the safety stock simulation.<br>See "Reloading the Channel Products" on page 370. |
| **Save changes** | Opens the Safety Stock Simulation dialog before saving the changes you have made in this session.<br>See "Applying a safety stock simulation" on page 370. |

## Generating

### Generating a safety stock simulation

1 In Inventory Planner, select the Channel Products for which you want to simulate the effect of applying various safety stock strategies.

See "About selecting Products and Channels" on page 35.

2 Select **Modules > Inventory Planner > Safety Stock Simulation**.
The Safety Stock Simulation Options dialog box is displayed.

3 Optionally, in the **Weight by** box, select a static weighting by which to weight the simulation.

4 Optionally, in the **Scale by** box, type the factor by which you want to scale the simulation.

5 Select the **Analyse non-stocked items** check box if you want to include Products that are not stocked at the selected Channels, for example, to see if it would be worth while stocking them after all.

6 Under Include in Analysis, specify whether you want to include Normal Products, Slow-Moving Products, or both, in the simulation.

7 Click **OK**.
These three safety stock simulation windows are displayed by default:

- Safety Stock Simulation Exchange. See "About the Safety Stock Simulation Exchange window" on page 363.
- Safety Stock Simulation Data. See "About the Safety Stock Simulation Data window" on page 363.
- Safety Stock Simulation Status. See "About the Safety Stock Simulation Status window" on page 365.

**Note:**

- You can change the safety stock simulation options so that not all of these windows are displayed by default.
- The easiest way to move between the windows is to use these toolbar buttons:

  **Safety Stock Simulation Exchange Window**, **Safety Stock Simulation Data Window**, **Safety Stock Simulation Status Window**

- To close all the simulation windows at once, select **Window > Close All**.

### Changing the safety stock simulation options

You can change the safety stock simulation options after generating a simulation. The changed options apply to the simulations you generate from then onwards.

1. Select either the Safety Stock Simulation Exchange or the Safety Stock Simulation Status window.
2. Select **Tools > Options**.
   The Safety Stock Simulation Options dialog box is displayed.
3. Specify whether you want the Safety Stock Simulation Data and Safety Stock Simulation Status windows to appear by default when a new safety stock simulation is generated.
4. Under Default Values, select the safety stock strategy, and the upper and lower bounds of its performance level, that are to be applied by default when a new safety stock simulation is generated.
5. Select the **Include Line Fill and Order Fill** check box to include two additional rows in the Safety Stock Simulation Exchange window.

   These rows express the expected service level in terms of the percentage of orders and lines (of orders) filled.

   **Note:**

   - The Safety Stock Simulation Exchange window always appears by default.
   - To add the additional Line Fill and Order Fill rows to the Safety Stock Simulation Exchange window, you must either recalculate the simulation or reload the Channel Products.

### Selecting the safety stock strategy

While working on a safety stock simulation, you can change the simulated strategy.

On the Safety Stock Simulation toolbar, select the required safety stock strategy.
The content of the Safety Stock Simulation Exchange window is updated automatically.

### Specifying performance levels

You can vary the effect of a simulated safety stock strategy by specifying a range of performance levels and a particular level within that range.

By using the toolbar

1. In the **Lower** and **Upper** boxes on the Safety Stock Simulation toolbar, type the upper and lower bounds of the desired range.
2. Select **Tools > Recalculate**.
   The content of the Safety Stock Simulation Exchange window is updated.

By using the Safety Stock Simulation Exchange window

Click the ◧ and ◨ buttons at the top of the Safety Stock Simulation Exchange window to increase and decrease the lower, upper and mid-range performance levels in incremental steps.
The content of the Safety Stock Simulation Exchange window is updated automatically.

### Recalculating a safety stock simulation

You can force Inventory Planner to recalculate the safety stock simulation.

1. Select either the Safety Stock Simulation Exchange or the Safety Stock Simulation Status window.
2. Select **Tools > Recalculate**.
   The simulated strategy, and the upper and lower performance levels, are as specified in the Safety Stock Simulation toolbar.

### Viewing a change log

While working on a safety stock simulation, you can view a log of the significant changes you have made in this session.

On the Inventory Planner toolbar, click the **Change Log Window** button.
The Safety Stock Simulation Log Of Changes window appears, showing any changes you have made to editable parameters in the Safety Stock Simulation Data window.

### Weighting & Scaling

Weighting the safety stock simulation

While working on a safety stock simulation, you can change its weighting.

In the box to the right of the **Scale By** box on the Safety Stock Simulation toolbar, select the required static weighting.

**Note:** Time-phased weightings are not available.

The contents of the Safety Stock Simulation Exchange, Safety Stock Simulation Data and Safety Stock Simulation Plot windows are updated automatically.

Scaling the safety stock simulation

While working on a safety stock simulation, you can change its scaling.

1. In the **Scale By** box on the Safety Stock Simulation toolbar, type the required scale factor.
2. Select **Tools > Recalculate**.
   The contents of the Safety Stock Simulation Exchange and Safety Stock Simulation Status windows are updated automatically.

   **Note:** This does not affect the Safety Stock Simulation Data window.

Changing the scaling in the Safety Stock Simulation Data window

1. Select the Safety Stock Simulation Data window.
2. Either double-click or right-click in the header of any editable column.
3. Type the new scale factor in the edit box.

   **Note:** Changing this factor does not affect the data in any other safety stock simulation window, or the data stored in the database.

4. Click **OK**.

**Simulation Windows**

About the Safety Stock Simulation Exchange window

The Safety Stock Simulation Exchange window enables you to view the effect of varying the performance level of the simulated strategy.

Apart from the strategy and the performance level, all the data used to calculate the simulated safety stock is taken from the Safety Stock Simulation Data window.

You can independently change lower, upper and mid-range performance levels by using the ◧ and ◨ buttons at the top of the window. The effects of the changed performance levels are shown immediately in the window, in comparison with each other and the current strategy.

The following table describes how the effects are reported:

| | |
|---|---|
| Performance Level | Lower, mid-range and upper performance levels. |
| Safety Stock by: | The calculated safety stock, expressed by value, by weighting (if any), by units, by the average number of days' cover it represents, and by the value of that cover.<br>See "Calculating simulated safety stock". |
| Annual Shortages by: | Using the calculated safety stock, the expected annual shortages (stock-outs), expressed by value, by weighting, by units, and by the number of such occurrences.<br>See "Calculating simulated annual shortages". |
| Service Levels by: | Using the calculated safety stock, the expected percentage service levels, expressed by value, by weighting, by units and (optionally) by orders filled and lines filled.<br>See "Calculating simulated service levels". |

The Order Fill and Line Fill service levels are not shown by default. You need to enable them by changing the safety stock simulation options.

See "Changing the safety stock simulation options" on page 361.

Whenever the safety stock simulation is recalculated, or the selected Channel Products are reloaded, the content of the Safety Stock Simulation Exchange window is updated by appending a new simulation. You can view the effects of the previous simulations merely by scrolling back the window.

**Note:** Weighted values are shown only if the weighting identified in the Safety Stock Simulation toolbar is other than Units or Standard Cost. The Standard Cost weighting is typically based on the "Cost Price (CPt)" field.

About the Safety Stock Simulation Data window

The Safety Stock Simulation Data window shows, for each selected Channel Product, the data used to calculate its current safety stock.

The data is presented in a table, with one row for each Channel Product. The table is sorted first by Product and then by Channel.

## Editable columns

Some of the columns are editable, so that you can see the effect of changing the data in the simulation. However, none of the changes you make in this window are ever saved to the database; Infor Demand Planning reminds you of this the first time you edit data during a session.

The editable columns have a headings with a white background; non-editable columns have headings with a dark grey background. To edit a cell in an editable column, double-click the cell, type a new value, then press ENTER.

## Shaded rows

A completely shaded row means that the corresponding Channel Product has an incomplete set of data and so cannot participate in the simulation. However, you may be able to edit the data in this window to make it eligible. (To see the effect of such a change, you must close the window then re-open it.)

A Channel Product cannot be simulated if any of the following Channel Product fields are null or zero:

- "Lead Time (CPt)"
- "Stocked Product (CPt)"
- "Increment (CPt)"
- "Preferred Lot Quantity (CPt)"
- "Safety Stock Strategy (CPt)"
- "Safety Stock Performance Level (CPt)"
- "Replenishment Period (CPt)"
- "Working Stock Calculate From Replenishment Period Or Lot Quantity (CPt)"
- "Cost Price (CPt)"

In addition to these required fields, a Channel Product also cannot be simulated if "Chance Customer Order (CPt)" is greater than 100.

Finally, a row is also shaded if no statistical forecast exists for the Channel Product. In this case, there is nothing you can do in Inventory Planner to make it eligible.

## What's shown in the window?

| Column | Editable? | Required? |
|---|---|---|
| Product Code | No | No |
| Channel Code | No | No |
| Unit or Weighting | Yes | No |
| Estimated Annual Usage | Yes | No |
| Estimated Annual Usage (Weighted) | | |

| | | |
|---|---|---|
| Lead Time | Yes | Yes |
| Standard Deviation | Yes | No |
| Standard Deviation Across LT | No | No |
| Standard Deviation Across LT (Weighted) | | |
| Replenishment Period | Yes | No |
| Preferred Lot Quantity | Yes | Yes |
| Cost Price * | Yes | Yes |
| Current Strategy | No | Yes |
| Current Performance Level | No | Yes |
| Safety Factor | No | No |
| Average Safety Stock | No | No |
| Stocked Item | No | Yes |
| SMP Code | No | No |
| Weight/Unit | No | No |
| Cube/Unit | No | No |
| % Chance of being on order | Yes | £ 100% |
| Average Quantity Per Order Line | Yes | No |
| Carrying Charge % | No | No |
| Days Cover | No | No |

About the Safety Stock Simulation Status window

The Safety Stock Simulation Status window shows the current total estimated annual usage, service levels and inventory investments (safety stock and working stock) for the selected Channel Products.

Because this is current data, the contents of this window do not change during a simulation, except when you change the scaling or, of course, if you decide to apply the simulated strategy.

The data is presented in three sections.

### Stock/Service Current Status

| | |
|---|---|
| Number Of Products | The number of Products selected. |
| Number Of Channels | The number of Channels selected. |
| Number Of CPs | The number of Channel Products selected. |
| Number Of Normal Products | The number of Normal Products selected. |
| Number Of SMPs | The number of Slow-Moving Products selected. |

| | |
|---|---|
| Total Estimated Annual Usage Units | The sum of the "Estimated Annual Usage (CPt)" for the selected Channel Products. |
| Total Estimated Annual Usage by Standard Cost | The sum of "Estimated Annual Usage (CPt)"× "Cost Price (CPt)". |
| Total Estimated Annual Usage by Weight Unit | The sum of "Estimated Annual Usage (CPt)"× "Weight/Unit (Pt)". |
| Total Estimated Annual Usage by Cube Unit | The sum of "Estimated Annual Usage (CPt)"× "Cube/Unit (Pt)". |

## Customer Service

This section shows calculations of customer service levels, assuming current stock levels and forecast consumption.

| | |
|---|---|
| By Number of Shortages | Shortages expressed as a percentage (units supplied from stock / total requirements) and as a number of shortages over a year.<br>See "Calculating the number of shortages". |
| By Value of Backorders | Backorders expressed as a percentage (orders supplied from stock / total orders) and as a value of the backorders at standard cost over a year.<br>See "Calculating the value of backorders". |

## Inventory Investment

This section shows three stock categories, each expressed in units, the value of those units (at cost price), the average weeks' cover represented by that stock and the value of the average weeks cover.

| | |
|---|---|
| Safety Stock | The total calculated safety stock at the end of the lead time.<br>See "Calculating the inventory investment in safety stock". |
| Working Stock | The total calculated working stock (half of the preferred lot quantity for each Channel Product).<br>See "Calculating the inventory investment in working stock". |
| Theoretical Stock On Hand | The safety stock plus the working stock. |

#### Simulation Reports and Exchange Curves

About the Safety Stock Simulation Detail report

The Safety Stock Simulation Detail Report shows the detailed effects of the simulated strategy at a particular performance level.

The data is presented in a table, with a row for each Channel Product. The table is sorted first by Product and then by Channel.

| Column | Meaning |
|---|---|
| Product Code | The Product code. |
| Channel Code | The Channel code. |
| Std dev across lt | The standard deviation of forecast errors over the lead time.<br>"Standard Deviation Covering The Re-supply Lead Time (CPt)". |
| Annualised usage | The projected forecast for the next twelve months, ignoring discontinuation dates, forecast horizons or market intelligence.<br>"Estimated Annual Usage (CPt)". |
| Lots per year | The number of replenishment lots in a year.<br>"Estimated Annual Usage (CPt)" divided by "Preferred Lot Quantity (CPt)". |
| Current safety stocks - units | The current level of safety stock, prior to this simulation.<br>"Safety Stock Units (CPt)". |
| Simulated safety stocks - units | The safety stock recommended by this simulation (depends on the strategy and the performance level). |
| Current safety stocks - weeks cover | The number of weeks cover with current safety stock, given the annualized usage.<br>"Safety Stock Units (CPt)" multiplied by 52 divided by the "Estimated Annual Usage (CPt)". |
| Simulated safety stocks - weeks cover | The number of weeks cover with simulated safety stock, given the annualized usage. |
| Current safety stocks - value | The value of the current safety stock at standard cost.<br>"Safety Stock Units (CPt)" multiplied by "Cost Price (CPt)". |
| Simulated safety stocks - value | The value of the simulated safety stock at cost price. |
| Current safety stocks - by weighting | The current safety stock, weighted as specified in the toolbar. This column appears only if the weighting is other than Units or Standard Cost.<br>"Safety Stock Units (CPt)" multiplied by the weighting identified in the Safety Stock Simulation toolbar. |
| Simulated safety stocks - by weighting | The simulated safety stock, weighted as specified in the toolbar. This column appears only if the weighting is other than Units or Standard Cost. |
| % change | The percentage by which the simulated safety stock exceeds the current safety stock. |
| Current limited by | Indicates whether the current safety stock is limited by shelf life, storage capacity or minimum/maximum limits. |
| Simulated limited by | Indicates whether the simulated safety stock is limited by shelf life, storage capacity or minimum/maximum limits. |

**Note:**

- The Standard Cost static weighting is typically based on the "Cost Price (CPt)" field.

### Viewing a Safety Stock Simulation Detail report

While working on a safety stock simulation, you can view a Safety Stock Simulation Detail report.

1. Select either the Safety Stock Simulation Exchange or the Safety Stock Simulation Status window.
2. Select **Reports > Detail Report**.
   The Safety Stock Simulation dialog box is displayed.
3. Type or select a particular performance level for the strategy being simulated, then click **OK**.
   The report appears in a Safety Stock Simulation Detail Report window.

   **Note:** To change the appearance of the report, select **Tools > Fonts**.

### About the Weeks Cover report

The Weeks Cover report categorizes the selected Channel Products according to how many weeks of supply are covered by their respective current safety stocks. The Channel Products' current safety stocks are compared with those recommended by the simulated strategy at a particular performance level.

The report consists of three parts, displayed in three separate windows:

- Current Weeks of Supply report

This report relates to the Channel Products' current safety stocks.

See "About the Current Weeks of Supply report" on page 353.

- Safety Stock Simulation Weeks of Supply report

This report relates to the simulated strategy at a particular performance level.

See "About the Safety Stock Simulation Weeks of Supply report".

- Weeks Forward Cover histogram

This graph compares the current and simulated positions.

See "About the Weeks Forward Cover histogram" on page 354.

### Viewing a Weeks Cover report

While working on a safety stock simulation, you can view a Safety Stock Simulation Detail report.

1. Select either the Safety Stock Simulation Exchange or the Safety Stock Simulation Status window.
2. Select **Reports > Weeks Cover Report**.
   The Safety Stock Simulation dialog box is displayed.
3. Type or select a particular performance level for the strategy being simulated, then click **OK**.
   The report appears in three parts, in three separate windows:
   - Current Weeks of Supply report. See "About the Current Weeks of Supply report" on page 353.

- Safety Stock Simulation Weeks of Supply report. See "About the Safety Stock Simulation Weeks of Supply report".
- Weeks Forward Cover histogram. See "About the Weeks Forward Cover histogram" on page 354.

About the Exchange Curve graphs

When investigating a safety stock simulation, you can view three types of exchange curve graphs. An exchange curve shows, for the simulated strategy identified in the Safety Stock Simulation toolbar, the trade-off between the investment in stock and the performance achievable.

The three types of exchange curve are:

- Backorders vs. Stock Investment

The quantity of backordered stock that can be expected in a year for a given quantity of safety stock.

- Shortages vs. Stock Investment

The quantity of shortages that can be expected in a year for a given quantity of safety stock.

- Stock Investment vs. Service Level

The quantity of safety stock needed to secure a given service level (defined as the percentage of estimated annual usage that is not shortages).

In each case, Infor Demand Planning plots the curve for twenty different performance levels between the upper and lower bounds shown in the Safety Stock Simulation toolbar.

Each graph also shows the current trade-off as an intersecting pair of red lines. If one or both of the current values are off the chart, red arrows indicate the direction along the axes to where they are located.

Viewing a Backorders vs. Stock Investment graph

On the Inventory Planner toolbar, click **Plot**.
The Safety Stock Simulation Plot window appears showing a Backorders vs. Stock Investment graph.

Viewing a Shortages vs. Stock Investment graph

1. On the Inventory Planner toolbar, click **Plot**.
   The Safety Stock Simulation Plot window appears showing a Backorders vs. Stock Investment graph.
2. On the Safety Stock Simulation Plot toolbar, click the **Shortages vs. Stock Investment** button.
   The Safety Stock Simulation Plot window changes to show a Shortages vs. Stock Investment graph.

Viewing a Stock Investment vs. Service Level graph

1. On the Inventory Planner toolbar, click **Plot**.
   The Safety Stock Simulation Plot window appears showing a Backorders vs. Stock Investment graph.
2. On the Safety Stock Simulation Plot toolbar, click the **Stock Investment vs. Service Level** button.

The Safety Stock Simulation Plot window changes to show a Stock Investment vs. Service Level graph.

## Applying

### Applying a safety stock simulation

When you are satisfied with the result of a safety stock simulation, you can apply the strategy that is identified in the Safety Stock Simulation toolbar to the selected Channel Products.

1. Select either the Safety Stock Simulation Exchange or the Safety Stock Simulation Status window.
2. Select **File > Save**.
   The Safety Stock Simulation dialog box is displayed.
3. Type or select a particular performance level for this strategy, then click **OK**.
4. Click **OK** to acknowledge the completion of the process.
   The Output pane shows this information:
   - The number of Channel Products processed, and the number successfully updated
   - The safety stock strategy, and its performance level
   - Whether any exception views were generated

   **Note:**
   - The parameters used for the calculation of safety stock are those currently stored in the database, not the (possibly edited) parameters in the Safety Stock Simulation Data window.
   - To close the Output pane, select **View > Output**.

### Reloading the Channel Products

You can force Inventory Planner to reload the originally-selected Channel Products into the safety stock simulation.

Select **Tools > Reload**.
The simulated strategy, and the upper and lower performance levels, are as specified in the Safety Stock Simulation toolbar.

# Safety Stock Calculations

## About the safety stock calculations

This topic summarizes the calculation of the following inventory fields:

"Estimated Annual Usage (CPt)" on page 371 Estimated Annual Usage (CPt)

"Preferred Lot Quantity (CPt) or Replenishment Period (CPt)" on page 371 Preferred Lot Quantity (CPt) or Replenishment Period (CPt)

"Standard Deviation Covering The Re-supply Lead Time (CPt)" on page 372 Standard Deviation Covering The Re-supply Lead Time (CPt)

"Safety Factor (CPt)" on page 372 Safety Factor (CPt)

"Annual Average Safety Stock (CPt)" on page 372 Annual Average Safety Stock (CPt)

"Days Cover (CPt)" on page 372 Days Cover (CPt)

"Safety Stock Units (CPt)" on page 373 Safety Stock Units (CPt)

"Re-order Point (CPt)" on page 373 Re-order Point (CPt)

"Theoretical Stock On Hand (CPt)" on page 374 Theoretical Stock On Hand (CPt)

In this topic, all fields are in the Channel Products table, apart from the number of "Forecast Periods Per Year (St)".

## Estimated Annual Usage (CPt)

If the Channel Product's forecast is positive for the whole of the next year, the estimated annual usage is either

Estimated Annual Usage = ( Level * 12 ) + ( Growth * 78 )

or

Estimated Annual Usage = ( Level * 13 ) + ( Growth * 91 )

depending on whether Forecast Periods Per Year (St) is 12 or 13. This is a simple forward projection of the current level and growth over the next year, ignoring market intelligence, effectivity and discontinuation dates, and the forecast horizon.

If the forecast becomes negative during the next year, then the estimated annual usage is calculated by averaging the trends for the periods that are positive, and then extrapolating this over the whole year:

Estimated Annual Usage = { ( Level ´ N ) + ( Growth ´ (1 + 2 + 3 + … + N ) ) } ´ ( Forecast Periods Per Year / N )

where N is the number of consecutive positive periods. The estimated annual usage is constrained to be no less than 1.

See "Calculating estimated annual usage".

Back to top: "About the safety stock calculations" on page 370

## Preferred Lot Quantity (CPt) or Replenishment Period (CPt)

If Working Stock Calculated From Replenishment Period Or Lot Quantity (CPt) = 0, then

Replenishment Period = ( 365 ´ Preferred Lot Quantity ) / Estimated Annual Usage

If Working Stock Calculated From Replenishment Period Or Lot Quantity (CPt) = 1, then

Preferred Lot Quantity = Estimated Annual Usage ´ ( Replenishment Period / 365 )

Back to top: "About the safety stock calculations" on page 370

### Standard Deviation Covering The Re-supply Lead Time (CPt)

Standard Deviation Covering The Re-supply Lead Time = Standard Deviation ´Ö { Forecast Periods Per Year ´ ( Lead Time / 365 ) }

Back to top: "About the safety stock calculations" on page 370

### Safety Factor (CPt)

The safety factor, often represented by the letter k, depends on the chosen safety stock strategy and performance level.

See "About the safety stock strategies" on page 355.

For Strategy 2: Specified Number of Safety Factors, the safety factor is simply the specified performance level:

Safety Factor = Safety Stock Performance Level

For other strategies that use a safety factor, the details of the calculation are beyond the scope of this help file. For further information, refer to your Infor Demand Planning consultant.

Back to top: "About the safety stock calculations" on page 370

### Annual Average Safety Stock (CPt)

The calculation of the annual average safety stock depends on the strategy.

For Strategy 5: Days Supply

Annual Average Safety Stock = ( Estimated Annual Usage /365 ) ´ Safety Stock Performance Level

For Strategy 6: Nominated Average Safety Stock Quantity

Annual Average Safety Stock = Safety Stock Performance Level

For all other strategies

Annual Average Safety Stock = Standard Deviation Covering The Re-supply Lead Time ´ Safety Factor

Back to top: "About the safety stock calculations" on page 370

### Days Cover (CPt)

For Strategy 5: Days Supply

Days Cover = Safety Stock Performance Level + Contingency Stock

For all other strategies

Days Cover = ( Annual Average Safety Stock ´ 365 / Estimated Annual Usage ) + Contingency Stock

However, if the safety stock is time-phased, Days Cover (CPt) may be constrained as follows:

Days Cover £ Monthly Forecast Horizon - Lead Time + 2

Days Cover ³ Minimum Time-phased Safety Stock Days

Days Cover £ Maximum Time-phased Safety Stock Days

CPs that are constrained by these limits are listed in the FCST HOR SHORT or TPSS LIMIT exception view, as appropriate.

Back to top: "About the safety stock calculations" on page 370

### Safety Stock Units (CPt)

If the safety stock is not time-phased, it is given by:

Safety Stock Units = Annual Average Safety Stock + NF(Lead Time + Contingency Stock) - NF(Lead Time)

where NF(x) is the net forecast for the next x days.

Note that, solely for the purpose of this calculation:

Contingency Stock £ Monthly Forecast Horizon - Lead Time + 2

CPs that are constrained by this limit are listed in the FCST HOR SHORT exception view.

If the safety stock is time-phased, the safety stock is the net forecast (that is, statistical forecast plus market intelligence, including customer forecast where applicable) for the number of days cover after the lead time.

Safety Stock Units = NF(Lead Time + Days Cover) – NF(Lead Time)

However, this value may be constrained as follows:

Safety Stock Units ³ Minimum Time-phased Safety Stock Units

Safety Stock Units £ Maximum Time-phased Safety Stock Units

CPs that are constrained by these limits are listed in the TPSS LIMIT exception view.

Back to top: "About the safety stock calculations" on page 370

### Re-order Point (CPt)

For a Normal Product, or for a Slow-Moving Product for which SMP Re-order Point Code (CPt) is 1, the re-order point is simply the net forecast over the lead time, plus the safety stock.

Re-order Point = NF(Lead Time) + Safety Stock Units

For a Slow-Moving Product for which SMP Re-order Point Code (CPt) is 0, the re-order point is given by the greater of:

Re-order Point = NF(Lead Time) + Safety Stock Units

or

Re-order Point = { SMP Average Event ´ INTEGER[ 1 + ( active days ´ Forecast Periods Per Year ´ SMP Chance Of Monthly Event / 365 ) ] } + Safety Stock Units

where active days is the number of active days in the lead time, taking into account the effectivity and discontinuation dates (if any).

For SMPs that have added market intelligence, the safety stock strategy must be Strategy 5: Days Supply.

Back to top: "About the safety stock calculations" on page 370

### Theoretical Stock On Hand (CPt)

The theoretical stock on hand is calculated as the annual average safety stock, plus the average working stock, plus contingency stock.

Theoretical Stock On Hand = Annual Average Safety Stock + ( Preferred Lot Quantity/2 ) + ( Contingency Stock × ( Estimated Annual Usage/365 ))

The maximum expected on-hand stock is the annual average safety stock plus the preferred lot quantity plus the annual average contingency stock. If this value exceeds the Maximum Storage Capacity (CPt), the CP is added to an OHS OVER MAX exception view; if it exceeds the Shelf Life (CPt), the CP is added to an OHS OVER SHELF exception view. (Alternatively, the current user may simply be warned of these conditions.)

Back to top: "About the safety stock calculations" on page 370

## Data used in safety stock calculations

### Channel Products table fields

The information required for calculating safety stock depends on the safety stock strategy. The following table shows, for each of the seven strategies, the Channel Products table fields involved in the calculations.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| "Annual Average Safety Stock (CPt)" | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| "Annualised Forecast (CPt)" | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| "Carrying Charge (CPt)" | | | | Yes | | | |
| "Contingency Stock (CPt)" | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| "Cost Price (CPt)" | | | Yes | Yes | | | |
| "Estimated Annual Usage (CPt)" | Yes | | | | Yes | | |
| "Lead Time (CPt)" | Yes | Yes | Yes | Yes | | | Yes |
| "Preferred Lot Quantity (CPt)" | | | Yes | | | | |
| "Replenishment Period (CPt)" | Yes | | | Yes | | | Yes |
| "Safety Stock Units (CPt)" | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| "Safety Stock Performance Level (CPt)" | Yes | Yes | | Yes | Yes | Yes | Yes |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| "Safety Stock Strategy (CPt)" | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| "Standard Deviation (CPt)" | Yes | Yes | Yes | Yes | | | Yes |
| "Standard Deviation Covering The Re-supply Lead Time (CPt)" | Yes | Yes | Yes | Yes | | | Yes |
| "Chance Customer Order (CPt)" | | | | Yes | | | |

## Updating inventory fields

You may need to update the database fields used in the safety stock calculations to ensure that they contain up-to-date data. Essentially, all the safety stock and re-order point calculations are re-done, except for the safety factor k, stored in "Safety Factor (CPt)".

Usually, these fields are kept up to date automatically, for example as part of the period end process, or as a consequence of changing the net forecast in the Demand Forecaster module. Occasionally, however, you may need to update the fields manually; for example, if you import net forecast changes from outside Infor Demand Planning.

1 In Inventory Planner, select the Channel Products to be updated.
See "About selecting Products and Channels" on page 35.
Infor Demand Planning automatically excludes ineligible or invalid CPs from your selection.
2 Select **Modules > Inventory Planner > Update Inventory Fields**.
3 Click **OK** to acknowledge the completion of the process.
An Output pane appears, showing the number of Channel Products updated, and whether any exception views were generated:
   - "DATA CHANGED"
   - "FCST HOR SHORT"
   - "INVALID SS DAT"
   - "INVALID TPSS CODE"
   - "OHS OVER MAX"
   - "OHS OVER SHELF"
   - "TPSS LIMIT"

   **Note:** To close the Output pane, select **View > Output**.

## Recalculating inventory fields

The difference between this function and merely updating the inventory fields is that in this case the safety factor k is also recalculated.

1 In Inventory Planner, select the Channel Products for which you want to calculate safety stocks.
See "About selecting Products and Channels" on page 35.
Infor Demand Planning automatically excludes ineligible or invalid CPs from your selection.

2 Select **Modules > Inventory Planner > Recalculate SIPS Fields**.
The Recalculate SIPS dialog box is displayed.

3 Clear the **Include Scenarios** check box if you want to exclude any selected Scenario Products.

4 Select the **Save Unprocessed Items** check box to ensure that, if you cancel the process before it completes, or if it is interrupted for some other reason, the Channel Products that are not processed are included in an INCOMPLETE SIPS exception view.

5 Click **OK** to start the calculation.
An Output pane appears, showing the number of CPs processed and whether any exception views were generated:

- "DATA CHANGED"
- "INCOMPLETE SIPS"
- "INVALID SS DAT"
- "NO SIPS CALCS"

When the process is complete, Infor Demand Planning updates the database with the new safety stocks.

**Note:**

- For Channel Products that use safety stock strategy 3: Service Level By Order Fill, or 4: Minimise Shortage Occurrences, you should first determine meaningful performance levels by manually applying safety stock simulations. Subsequently, you can recalculate the safety stocks with this function.
- To close the Output pane, select **View > Output**.

## Ineligible and Invalid CPs

### About ineligible items excluded from the safety stock calculations

The following classes of Products are excluded from the safety stock calculations:

- Forecast Group Products

Each FGP is a placeholder for a group of related Products. They have no safety stock of their own.

- Unspecified Forecast Products

UFPs are not fully operational items, so they do not need safety stock.

- Returns Products

Returns Products are returned to the stocking location; there is no reason to stock against shortages or calculate safety stocks.

- Products that are dead

However, dead Products are included in safety stock simulations.

- Products that are not stocked at a particular Channel

However, non-stocked Products can optionally be included in safety stock simulations.

- Products that are not forecast, but which attempt to use safety stock strategies that rely on the forecast error

The following safety stock strategies use the standard deviation of forecast errors over the re-supply lead time:

- 1: Specified Service Level by Item
- 2: Specified Number of Safety Factors
- 3: Service Level by Order Fill
- 4: Minimise Shortage Occurrences
- 7: Anticipated Years Between Shortages

But for items where "Forecast Calculation Code (CPt)"= 1, there is no forecast, and so no forecast error.

For each of these excluded items, Infor Demand Planning resets the strategy to 6: Nominated Average Safety Stock Quantity, and sets the relevant Channel Products table fields to zero (apart from the "Estimated Annual Usage (CPt)", which is set to 1).

**About invalid items excluded from the safety stock calculations**

The following table shows, for each safety stock strategy, the invalid data that prevents a safety stock being calculated.

| Strategy | Invalid Data |
|---|---|
| All strategies | SMP Code Î {1,2} and SMP ROP Code Ï {0,1}<br>Working Stock Calculated From Replenishment Period Or Lot Quantity = 0 and Preferred Lot Quantity £ 0<br>Working Stock Calculated From Replenishment Period Or Lot Quantity = 1 and Replenishment Period £ 0<br>Time-phased Safety Stock Code Ï {1,2,3,4,5}<br>Safety Stock Strategy Ï {1,2,3,4,5,6,7} |
| 1: Specified Service Level by Item | Safety Stock Performance Level < 0<br>Safety Stock Performance Level ³ 1 |
| 2: Specified Number of Safety Factors | Cost Price £ 0 or Chance Customer Order £ 0<br>Safety Stock Performance Level £ 0 |
| 3: Service Level by Order Fill | Cost Price £ 0 or Carrying Charge £ 0<br>Safety Stock Performance Level £ 0 |

| | |
|---|---|
| 4: Minimise Shortage Occurrences | Safety Stock Performance Level £ 0 |
| 5: Days Supply | Lead Time £ 0<br>Standard Deviation £ 0<br>Safety Stock Performance Level < 0 |
| 6: Nominated Average Safety Stock Quantity | Lead Time £ 0<br>Standard Deviation £ 0<br>Safety Stock Performance Level < 0 |
| 7: Anticipated Years Between Shortages | Safety Stock Performance Level £ 0 |

**Note:**

- All fields are within the Channel Products table.

# Economic Order Quantities

## About economic order quantities

The economic order quantity (EOQ) is the quantity at which the combined cost of an order is at a minimum. The combined cost consists of:

- stock holding costs (that rise with increasing order size)
- costs of raising procurement or production orders (that fall with reduced numbers of orders)

Having calculated the EOQ you can, if you wish, make each item's preferred lot quantity equal to the EOQ.

See "About the EOQ calculation" on page 379.

See "About the constraints on the EOQ" on page 379.

See "About the assumptions underlying the EOQ calculation" on page 379.

**Note:**

- You cannot calculate EOQs for Returns Products, Forecast Group Products, Unspecified Forecast Products or dead Products.

## About the EOQ calculation

The formula used for the calculation of the EOQ is:

Q = √((2*A*S) / (r*v))

Q = "EOQ (CPt)"

A = "Set-up Cost (CPt)"

S = "Estimated Annual Usage (CPt)"

r = "Carrying Charge (CPt)"

v = "Cost Price (CPt)"

If any of the calculation fields are zero or negative for a particular Channel Product then Infor Demand Planning sets EOQ (CPt) to 1 and adds that Channel Product to the "EOQ CALC INVALID" exception view.

## About the constraints on the EOQ

Infor Demand Planning automatically adjusts the calculated EOQ to fulfil to the following constraints:

- The EOQ must be no less than the "Minimum Lot Quantity (CPt)" and the "Minimum Days Supply (CPt)".
- The EOQ must be no greater than the "Maximum Storage Capacity (CPt)" and the "Maximum Days Supply (CPt)".
- If the minimum constraint is greater than the maximum constraint, the maximum constraint takes preference and the EOQ can be less than the minimum.
- The EOQ quantity is always rounded up to the nearest increment (regardless of the above constraints) using the value of "Increment (CPt)".

If any of the constraint fields are zero for a Channel Product, its EOQ is unconstrained.

## About the assumptions underlying the EOQ calculation

You should be careful about how you interpret the EOQ as the model is based on a number of important assumptions:

- The carrying charge is constant. While this assumption might be correct for factors such as the funds invested in stocks, other costs might increase discontinuously as stock levels increase. For example, additional staff might be hired as inventory reaches certain levels. Conversely, if stocks decline, it may be that casual labor can be downsized once stocks fall to a certain critical level.
- The average stock balance is equal to half of the order quantity. If a constant amount of stock is not used per day, this assumption will be incorrect; seasonal and cyclical factors can produce uneven usage over time.

- Safety stocks can be ignored. This rests on the assumption that safety stocks remain the same irrespective of the order size. However, the amount of safety stock is probably not independent of the order quantity as relatively larger safety stocks are likely to be associated with smaller order quantities.

## Calculating EOQs

1 In Inventory Planner, select the Channel Products for which you want to calculate economic order quantities.

See "About selecting Products and Channels" on page 35.

2 Select **Modules > Inventory Planner > Economic Order Quantities > Calculate**.
The Economic Order Quantity Options dialog box is displayed.

3 Select the **Analyse non-stocked items** check box if you want to include Products that are not stocked at the selected Channels.

4 Under Include in Analysis, specify whether you want to include Normal Products, Slow-Moving Products, or Scenario Products in the calculation.

5 Click **OK**.

The Output pane shows this information:

- When the EOQ calculation began and ended
- The number of Channel Products processed
- Whether any exception views were generated

See "EOQ exception views" on page 381.

**Note:**

- To close the Output pane, select **View > Output**.
- If exception views are generated, they overwrite any existing views of the same name.

## Making the preferred lot quantity equal to the EOQ

Infor Demand Planning typically refers to an item’s preferred lot quantity when generating a schedule of orders for that item. It can therefore be sensible to set the preferred lot quantity equal to the economic order quantity. Both of these values are held in the Channel Products table.

In Database Administration, select the required Channel Products and copy the EOQ column to the Preferred Lot Quantity column of the Channel Products table. (Both fields are included in the Inventory Planner report.)

See "Editing the Channel Products table" on page 116.

# EOQ exception views

The following exception views can be generated by the EOQ calculation:

- "NO EOQ DEAD"
- "NO EOQ UFP"
- "NO EOQ PFG"
- "NO EOQ RETURNS"
- "EOQ NOT COMPLETE"
- "EOQ BELOW MIN LT QTY"
- "EOQ BELOW MIN DY SUP"
- "EOQ ABOVE MAX CAP"
- "EOQ ABOVE MAX DY"
- "EOQ MIN ABOVE MAX"
- "EOQ CALC INVALID"

**Note:**

- If exception views are generated, they overwrite any existing views of the same name.

# Replenishment Planner

7

## About Replenishment Planner

The central concept of the Infor Demand Planning Replenishment Planner module is that requirements are unified across all stocking locations, and upward through all Channels of distribution, to enable production to be planned on a realistic basis of stock status and requirements at each location. The stock available at the source is distributed to replenish the depots in a balanced way to achieve the maximum possible sales service level.

For example, the forecast at lower level depots is used to generate an order on the top level plant by comparing the forecast requirements with the stock on hand and the safety stock target. The orders are passed to the plant where they are aggregated and further orders created by comparing the depot requirements with the plant's stock on hand and safety stock target. Orders may be created for internal or external supply.

Orders generated by Infor Demand Planning are recommended; they may be accepted or edited and confirmed as open (firm). Shipment instructions from the plant to the depots are generated to attempt to meet their requirements from the available stock at the plant.

### Order creation

Orders are created starting at the lowest level of the Channel matrix. Each Channel has a series of orders created which can be used by the Channel above as requirements if the Channel behaviors are set accordingly.

The lowest level obtains its requirements from the forecast at that level. This is obtained directly from the Net Forecast table. Existing stock variations from target are taken in to account when calculating requirements from the forecast. Actual stock levels, including stock in transit and current open orders are compared to targets, which may include (time-phased) safety stock, contingency stock and stock target overrides. The calculated orders based on the above are passed to the next level in the Channel structure.

At each subsequent higher level the same process occurs, except that the requirements from below are orders instead of the forecast.

### Reports

A series of reports are available, designed to provide a view of the orders in progress, the forecast demand and the resulting stock movements at various levels within the matrix. Key reports are:

- Order Viewer. A generic report that is accessed independently and by drilling down in other reports. It looks like a spreadsheet and displays data selected from the Orders table. Some of this data is editable. Orders are displayed for any Products and Channels in the current selection.
- Critical Report. Checks for order lines which are either late and need expediting, or early and need to be deferred. The report operates on the currently-selected Products and Channels.
- Stock Report. Displays the stock position by Channel for the selected Products. Stock is displayed against forecast sales and separated into status levels in order to provide information regarding stock over or under supply. The information can also be displayed graphically.
- Stock Re-balancing. Lists all Channel Products scheduled for commitment. It indicates the quantity, value, weight and cubic volume in addition to each order's due date and release date. Within the report, you can distinguish orders for distribution from a Channel and orders for receipt at a Channel.
- To be Committed Report. Shows the location of stock excesses and shortages, and highlights situations where it may be beneficial to move stock to a Channel from somewhere other than the primary source.

### Balanced allocation

The aim of balanced allocation is firstly to ensure that, given enough stock, product is distributed from a source to its lower level Channels in the most cost effective manner.

See "About balanced allocation" on page 390.

# About the Supplier Selection screen

The Supplier Selection screen not only displays a list of suppliers a particular user is authorized to buy from, it also shows additional information to help the buyer decide which supplier to use.

Using the normal item selection method in Infor Demand Planning, you select Products and Channels and then the function you want to use. This is fine for a demand or inventory planner but it is not ideal for a buyer. Buyers needs to see a list of suppliers that they are able to buy from, select one from the list, and then have Infor Demand Planning select the items that this vendor is the primary supplier for.

In order to further enhance the usability of the Replenishment Planner module for users responsible for purchasing, the "select on sign-on" functionality has been extended to include the Supplier Selection screen as a default sign-on option. When selected, (default sign-on = "SUPPLIER"), the user is automatically presented with the Supplier Selection screen directly after logging in to a database.

See "Editing a user" on page 63.

In addition to having the Supplier Selection screen display automatically as a sign-on default, you are able to access the screen whilst logged in to the Replenishment Planner module by selecting File and Supplier Selection or clicking the icon on the main toolbar.

Screen Layout

The Supplier Selection screen is displayed in a grid format showing those suppliers and assortments associated with the current user, the number of associated items and the number of those associated items that have "active" orders. The following columns are always displayed:

| Column name | Description |
|---|---|
| Supplier Code | System generated code, unique for each supplier. |
| Assortment Code | Unique code allocated to the assortment. An assortment is any Channel Product grouping, as defined within your implementation, which is linked to suppliers using the Supplier Assortment function. Each Channel Product can be assigned to an assortment using the "Assortment Code (CPt)" field. |
| Buyer Group Code | Only displayed if the current user is associated with more than one buyer group. |
| Items | Number of Channel Products existing at this assortment. |
| Active Items | Number of Channel Products existing at this assortment, with recommended orders due in the current review cycle. |

The rest of the columns displayed in the grid are the ones defined as available to particular users in the Database Administration module.

See "Configuring the Supplier Select screen" on page 194.

**Item Selection**

Channel Product selections can be made in two ways:

- By selecting the row(s) of the required supplier/assortment, and then clicking the **Go To** button. This will retrieve all relevant Channel Products, the number of which are shown in the Items column, regardless of the existence of any recommended orders placed on that supplier.
- By clicking on the in-cell button within the Items or Active Items column. Selecting Items will load all the Channel Products that exist at the selected supplier/assortment; effectively replicating the selection of a single row above. Selecting Active Items will load those items that exist at the selected supplier/assortment and have a recommended order placed on the selected supplier and due within the defined review cycle. It is not necessary to select the **Go To** button when selecting items using this method.

**Note:** When the Notes field is selected to be displayed, the grid displays a command button rather than actual text. Clicking the **ellipsis** button will display the Supplier Notes dialog allowing you to view existing notes and append new text as required.

Address Data

When an address code field is selected to be displayed, the grid displays a command button rather than actual text. Clicking the **ellipsis** button will display the Address Data dialog showing all address details for the selected code.

**Go To** button

Will open the user’s default "Go To" destination screen, as defined in the Maintain Users dialog in the Database Administration module. The Supplier Selection screen remains open to allow you to make

further selections, if necessary. If no rows are selected or the selected rows have an Items count of zero, then the button is disabled.

**Close** button

Closes the screen leaving the current Channel Products selection unchanged.

# Supply/Receiving Calendars

## About receiving calendars

Receiving calendars show whether a resource or facility is available or unavailable on that day, for each day of the year.

This kind of calendar is applied to Channel Products, by editing the **Receiving Calendar Code (CPt)** fields. You can create as many calendars as you need.

A Channel Product's receiving calendar typically shows when the item can be accepted or put away.

See "About rough cut capacity planning" on page 443.

## Creating a receiving calendar

1. In Replenishment Planner, select **Edit > Calendars**.
   The Open Calendar dialog box is displayed, listing the existing calendars.
2. Click **Add**.
   The Calendar Definitions dialog box is displayed.
3. In the **Name** box, type a name for the new calendar.
4. In the **Year** box, type or select a year in the new calendar.
5. In the Show Calendar by: panel, select the day that each week starts in the Week starts on box.
6. To specify which days of the year are unavailable or available, do any of the following:
   - Select a weekly recurring pattern in the Recurring pattern for: panel and click **Apply**.
   - Right-click in the calendar grid and click **Unavailable**, **Available** or **Toggle** on the shortcut menu. In the Date Range dialog, type the start and end of a range of dates and click **OK**.
   - Right-click a row header when the cursor changes to ➡ or a column header when the cursor changes to ⬇ and then click **Unavailable**, **Available** or **Toggle** on the shortcut menu.
7. If the calendar is to be used for rough cut capacity planning (RCCP), in the View Calendar by: panel, click **Work Units**. To specify the work units for one or more days, do either of the following:

- Select the required month, click the individual cell you want to edit, type the new value, then click outside the cell.
- Select a weekly recurring pattern in the Recurring pattern for: panel, type a value in the **Work Units** box, and click **Apply**. The values are applied to all the months in the selected year.

See "About rough cut capacity planning" on page 443.

8 Click **OK** to save the details to the database and return to the Open Calendar dialog, which now includes the new calendar.

9 Click **Close**.

## Editing a receiving calendar

1 In Replenishment Planner, select **Edit > Calendars**.
The Open Calendar dialog box is displayed, listing the existing calendars.

2 Click the calendar to be edited and click **Edit**.
The Calendar Definitions dialog appears showing the details of the selected calendar.

3 Make the necessary changes and click **OK** to save them to the database and return to the Open Calendar dialog.

4 Click **Close**.

## Copying a receiving calendar

1 In Replenishment Planner, select **Edit > Calendars**.
The Open Calendar dialog box is displayed, listing the existing calendars.

2 Click the calendar to be copied and click **Copy**.

3 Click **Yes** to confirm.
A new calendar appears in the Defined Calendars panel with a description consisting of the name of the copied calendar prefixed by "Copy of".

4 Click **Edit** if you want to rename or otherwise edit the new calendar.

## Deleting a receiving calendar

1 In Replenishment Planner, select **Edit > Calendars**.
The Open Calendar dialog box is displayed, listing the existing calendars.

2 Click the calendar to be deleted and click **Delete**.

3 Click **Yes** to confirm.

4 Click **Close**.

# Forecasts

## About forecast requirements

In the Replenishment Planner (RP) module, the requirements used to generate orders at each Channel level are those which are passed up from lower levels in the matrix. Channels at the bottom of the matrix use their forecast and pass requirements up as orders according to their Channel behaviors.

The forecast used by Infor Demand Planning to calculate requirements and orders is generated by the Demand Forecaster (DF) module. To use this forecast in RP, the Net Forecast table must be updated. This can be done in either DF or RP.

See "Updating the Net Forecast table" on page 388.

## Updating the Net Forecast table

The forecast used to calculate requirements schedules is generated in the Infor Demand Planning Demand Forecaster module. To use this forecast in Replenishment Planner, the Net Forecast table must be updated. This can be done in either Demand Forecaster or Replenishment Planner.

1. In Replenishment Planner, select the required Channel Products.
   See "About selecting Products and Channels" on page 35.
2. Select **Batch > Load Forecasts from Demand Planning**.
   The Load Forecasts From Demand Planning dialog box is displayed.
3. Select the types of Product to include.
   See "About Products" on page 33.
4. Choose to:
   - **Update Table**. This option is not available if the existing Net Forecast table is for a month other than the current one (normally this would be last month's data).
   - **Overwrite Table**. The data from the existing Net Forecast table (usually last month's) is deleted and new data assembled.
5. Select the periodicity required, **Monthly**, **Weekly** or **Daily**.
   - If you choose to report the data in weekly periods and weekly history is stored on the database, this is the reported history.
   - If there is no weekly history stored on the database, the monthly history is interpolated into weeks based on the calendar.
   - The daily option is only available in a weekly-controlled database when "Allow Daily MI (St)" is true and valid values exist in the "Daily Forecast Horizon In Weeks (St)" and "Weekly Forecast Horizon (St)" fields.

   See "About forecasting periodicity" on page 218.

6 A short Description may be typed in the edit box if required.

7 Click **OK** to close the dialog and assemble the table.

8 Select **View > Output** to view the process log.
The Net Forecast table will now be up to date and can be exported (using Database Administration) or used for interfacing to other systems.

**Note:** The setting of the "Net Forecast Table: Integer Or Decimal (St)" field determines whether the forecast values are stored in integer (0) or decimal (1) format.

## About forecast consumption

In a monthly-controlled database, the first forecast period's net forecast may be partly consumed by open history (that is, demand to date). Forecast consumption is not possible in a weekly-controlled database.

If this Channel Product is subject to forecast consumption (that is, if "Float Current Period Forecast (CPt)" is true), Infor Demand Planning examines the available open history and applies the Channel's "Forecast Consumption Rule (Ct)".

Generating orders from a forecast requires a specification of the manner in which a forecast is to be phased over a lesser time period than the forecast interval. A daily consumption rate is obtained as follows:

- If the "Level Of Forecast Control (St)" is monthly, the monthly forecast from the Net Forecast table is broken down into a number of even daily values based on the demand calendar.
- If the "Level Of Forecast Control (St)" is weekly, forecasts are generated from the Weekly Net Forecast table. If the weekly table does not exist, then monthly data is used as above. As the forecasts in the weekly table already have interpolation vectors applied, these forecasts are used and divided by 7 to give the daily rate.

There are four rules for forecast consumptionheld in the "Forecast Consumption Rule (Ct)" field:

- 1Consume at existing forecast rate

Daily Rate = Monthly Net Forecast / Days in the period. In this case, the net forecast is unchanged by any open history.

- 2 Consume up to period forecast (then rule 1)

Daily Rate = (Forecast - Demand to date)/Days left in the period. Until the forecast is consumed, then revert to rule 1. Calculates the difference between the net forecast and what has been sold (the open history posted) in the month to date. It then divides this difference (which may be negative) evenly between the remaining number of days in the month and adds this average value to the daily forecast for each remaining day. However, if this calculation means that the remaining days are all less than or equal to zero, then Infor Demand Planning reverts to the interpolated daily forecast described previously.

- 3 Consume at current selling rate

Daily Rate = Demand to date/Days to date. Calculates the average daily open history for the month to date, and uses this amount instead of the interpolated daily forecast for the rest of the month.

- 4 Consume up to period forecast (then zero)

Daily Rate = (Forecast - Demand to date)/Days left in period until the forecast is consumed, then daily rate reverts to zero. The unconsumed forecast is spread evenly over remaining days, until all consumed. As Rule 2, except that if the calculation means that the remaining days are all less than or equal to zero then Infor Demand Planning treats this a zero forecast.

The field "Float Current Period Forecast (CPt)" controls whether or not a particular Channel Product uses a forecast consumption rule. A value of 1 means the rule is used, and a value of zero means that the rate derived from the forecast is used. (This is the same as rule 1).

Rules 2, 3 and 4 use the demand to date for the current period. Demand to date can be accumulated daily, weekly or monthly. In the case where demand is only being loaded monthly, then forecast consumption can only be based on the forecast and the stock date. If demand is being loaded daily and / or weekly this is accumulated to give the demand to date from the Open Daily and Open Weekly tables. The history type used for forecast consumption is the one stored in the "Forecast History Row (CPt)" field, this is usually adjusted demand.

Channel Products in their last month of forecast before discontinuation, and using a forecast consumption rule are only decreased at the daily rate. If demand is less than forecast during the last month the remaining forecast will stay at the daily rate. If demand is higher than forecast (perhaps due to an effort to shift stock before discontinuation) the forecast remaining will decrease, and if the entire month’s demand is made before the end of the month, then the remaining daily forecasts are set to zero.

# Balanced Allocation

## About balanced allocation

The aim of balanced allocation is firstly to ensure that, given enough stock, product is distributed from a source to its lower level Channels in the most cost effective manner. If there is a shortage of stock at the source, a secondary aim is to arrange distribution such that sales service levels suffer by the same amount across the network. If a complete stock out occurs, Infor Demand Planning aims to ensure that all Channels go out of stock at approximately the same time.

The sequence for the shipping of stock from the plant to the depots when the plant has insufficient stock is as follows. The key stock levels at the source are:

- No stock. Plant cannot ship.
- Some stock but not enough to fill all back orders. A fraction of the back orders will be filled.
- Fill back orders. Plant fills current back orders and then waits for back orders from depots before filling them because it needs to build up its own safety stock.

- Fill back orders and maintain a reserve. Enough to fill all back orders and maintain a reserve.
- Fill fraction of the lead time forecast. If enough stock is available the plant will ship back orders to depots and some fraction of the demand, for example enough for 3 days.
- Fill all lead time demand. Will fill forecast demand over the lead time from the plant to the depot, held at depot level.
- Fill all lead time demand and a fraction of safety stock. Fractions of the depot safety stock will be filled proportionally.
- Fill all lead time demand and the safety stock at depots. Fill calculated safety stock requirements at the depot.
- Fill to horizon. Maximum storage capacity and shelf life of Product is taken into account in this calculation.

This information is provided in the form of exception views. There is also a critical flag exception which advises whether to expedite an order or to defer one. If, on a ship day, there is a critical order, the order can be rushed, that is, to get to the depot quicker than stated in the lead time. If an order needs to be shipped today but it isn't a designated ship day as defined by the supply calendar, the order can be expedited.

A key calculation is to apportion the on-hand stock into free stock at the source and reserved stock. Free stock is any stock left after back order allocation above reserved stock. Reserved stock is the proportion of source safety stock (between all and none) as defined by the fraction of safety stock to reserve, which is held in the "Proportion Of Safety Stock Reserved (CPt)" field.

Allocation is always performed in increments. All shipment allocations must be rounded to practical shipping quantities according to requirements. Two fields control increments:

- "Increment (CPt)"
- "Minimum Lot Quantity (CPt)"

If adequate stock is available at the source to ship, the rounding is carried out as above.

However, if the shipment is limited by shortage of source stock, the total available quantity is divided in lots as above. These lots are allocated by need in proportion to the unconstrained requirements and rounded using this field:

"Units Per Case (CPt)"

Therefore, when full orders cannot be met, the calculated fair share value is rounded to be increments of units_case.

There is also a minimum number of days cover to ship (at the forecast rate at that time), and a minimum quantity to ship, both rounded up by the minimum increment.

Maximum limits are set so the allocations do not exceed the free stock at the source, rounded down to increments. In addition this must be less than the storage capacity (measured when this order arrives), rounded down, and must be less than the maximum days cover (based on requirements, inclusive of back orders, not forecast rate) rounded down.

The suggested allocation can be edited to be more than the maximum or less than the minimum. In these cases a warning is issued, which may be ignored. If an override is not a rounded quantity a

warning is issued together with a rounding suggestion. If the suggested quantity is not taken, then it is possible to ship in a non rounded quantity.

The safety stock at both the source and the subordinate Channel may vary. Calculations need to take account of the safety stock at each available shipping opportunity.

In auto-commit mode, shipments are committed so that the projected stock on hand at the node when the shipment after this one arrives is (at least) the safety stock at that time.

### Stocked and non-stocked Channel Products

As defined in the Channel Products table, a Channel Product is either stocked or not. A stocked item is treated as usual but a non-stocked item only gets considered for shipment if it has a back order (negative on hand stock), and the only order generated is for the value of the back order, rounded up to the minimum shipment. Normally, non-stocked products have a forecast of 0 and safety stock of 0, and any on-hand stock is the result of working stock due to lot size.

**Note:**

- Non-stocked Channel Products are not considered for expedite exceptions.

## Balanced allocation calculations

Balanced allocation progresses through stages attempting to fill stock to a certain stage for all of the Channels to which supplies are to be made. The stages are:

- Fill back orders
- Fill lead time requirements
- Fill safety stock requirements
- Fill extra requirements out until the specified horizon

The calculations performed by balanced allocation for the fair share of available stock to be supplied to each receiving Channel are:

### Fill back orders

If "Opening Stock (CPt)" < 0

Back order quantity = Absolute value of Opening Stock

If "Opening Stock (CPt)" is ≥ 0

Back order quantity =0

### Fill lead time requirements

Ship date = "Date Stock Last Updated (Ct)"+ 1

Where the Channel in question is the source Channel.

Lead time supply = "Re-order Point (CPt)"- "Safety Stock Units (CPt)"

Stock status = "Opening Stock (CPt)"+ "Due In Stock (CPt)"+ sum of open orders (where "Ship Date (Ot)"< Ship date)

Lead time requirements = Lead time supply - Stock status - Back order quantity

This calculation is zero minimum for the purpose of summing the lead time requirements across all subordinate Channels, but may be negative when calculating the safety stock requirements. This is so that any unnecessary requirements are removed from the SSR for subordinate Channels with excessive stock.

### Fill safety stock requirements

If Lead time requirements ≥ 0

Safety stock requirements ="Safety Stock Units (CPt)"

If Lead time requirements < 0

Safety stock requirements = "Safety Stock Units (CPt)"+ Lead time requirements

This calculation is zero minimum for the purpose of summing the safety stock requirements across all supplied Channels, but may be negative when calculating extra requirements. This is so that any unnecessary requirements for distributed Channels with excessive stock are removed.

### Fill extra requirements out until the specified horizon

Ship date = "Date Stock Last Updated (Ct)"+ 1

Where the Channel in question is the source Channel

Horizon ="Date Stock Last Updated (Ct)"+ "Period Beyond Freeze Fence For Open/Planned Orders (Ct)" or "Date Stock Last Updated (Ct)"+specified extra if overriding database defaults

This value is never greater than "Date Stock Last Updated (Ct)"+ "Deployment Horizon In Days (Ct)"

All requirements =Sum of recommended orders where "Release Date (Ot)" ≥Ship date and ≤Horizon

If Safety stock requirements ≥ 0

Extra requirements = All requirements - (Back order quantity + Lead time requirements + Safety stock requirements)

If Safety stock requirements < 0

Extra requirements = All requirements + Safety stock requirements

The calculated fair share value is then used to balance the orders within the horizon for each subordinate Channel. It is possible for a subordinate Channel to obtain a positive fair share without any if its orders actually being balanced. This is due to a receiving Channel having requirements within the horizon but not actually having any orders released during this time. This fair share amount is then kept at the source in the assumption that future shipping requirements will be needed at that subordinate Channel.

**Note:**

- Even though no balancing occurs, the receiving Channel in this situation is added to the corresponding exception view relating to their fair share.

## Examples of balanced allocation

Consider a demand for the same Product at two different Channels.

| **Channel East** | **Back Orders** | Reserved Stock | Lead time Forecast | Safety Stock | Stock Limit |
|---|---|---|---|---|---|
| Stock Required | 5 | + 5 | + 15 | + 5 | + 10 |
| Cumulative Requirement | 5 | = 10 | = 25 | = 30 | = 40 |
| **Channel West** | Back Orders | Reserved Stock | lead time Forecast | Safety Stock | Stock Limit |
| Stock Required | 10 | + 5 | + 25 | + 10 | + 10 |
| Cumulative Requirement | 10 | = 15 | = 40 | = 50 | = 60 |

There is a total requirement for 40 units for East and 60 units for West resulting in an overall requirement for 100 units. Stock availability less than 100 units could result in demand for one Channel being fully satisfied whilst the other was short of stock for customer supply.

The following chart shows how various levels of available stock would be allocated to the two Channels using balanced allocation:

| Balanced Allocation | | Back Orders | Reserved Stock | Lead time Forecast | Safety Stock | Stock Limit |
|---|---|---|---|---|---|---|
| Req'd at | East | 5 | 5 | 15 | 5 | 10 |
| | West | 10 | 5 | 25 | 10 | 10 |
| 0 stock | East | 0 | 0 | 0 | 0 | 0 |
| | West | 0 | 0 | 0 | 0 | 0 |
| 15 units | East | 5 | 0 | 0 | 0 | 0 |
| | West | 10 | 0 | 0 | 0 | 0 |
| 25 units | East | 5 | 5 | 0 | 0 | 0 |
| | West | 10 | 5 | 0 | 0 | 0 |
| 45 units | East | 5 | 5 | 7.5 | 0 | 0 |
| | West | 10 | 5 | 12.5 | 0 | 0 |
| 65 units | East | 5 | 5 | 15 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | West | 10 | 5 | 25 | 0 | 0 |
| 80 units | East | 5 | 5 | 15 | 5 | 0 |
| | West | 10 | 5 | 25 | 10 | 0 |
| 100 units | East | 5 | 5 | 15 | 5 | 10 |
| | West | 10 | 5 | 25 | 10 | 10 |

Note that each stage in the above sequence satisfies one more stage in each Channel's requirements. The exception being 45 units, which is insufficient to fill all the lead time demand for both Channels. At this point a calculation has been carried out to allocate the available stock proportional to the demand for each Channel:

| | |
|---|---|
| Available stock | 45 Units. |
| Requirements for back orders | 5 + 10 = 15 Units |
| Requirements for reserved stock | 5 + 5 = 10 Units |
| Stock available for lead time demand | 45 – 15 – 10 = 20 Units |
| Requirement for lead time demand | 40 Units |

| | |
|---|---|
| Stock availability | 20/40 = 0.5 |
| Stock allocated to Channel 1 | 15 x 0.5 = 7.5 Units |
| Stock allocated to Channel 2 | 25 x 0.5 = 12.5 Units |

## Balancing stock allocations

1. In Replenishment Planning, select the Channel Products to be included.
   See "About selecting Products and Channels" on page 35.
2. Select **Batch > Balanced Allocation**.
   The Balanced Allocation dialog box is displayed.
3. Select the **Override Database Defaults** check box and type or select a value in the **Days Beyond Freeze Period to Commit Orders** box if you want to override the **Period Beyond Freeze Fence For Open/Planned Orders (Ct)** field. See "Period Beyond Freeze Fence For Open/Planned Orders (Ct)".
4. Click **OK**.
5. To view the process log, select **View > Output**.

# Channels

## About Channel matrix options

In the Replenishment Planner module, orders are created starting at the bottom level of the Channel matrix. Each Channel has a series of orders created that can be used by the Channel above as

requirements. Whether, and how, these requirements are passed up the matrix is determined by the behaviors of each Channel.

See "About Channel behaviors" on page 72.

If a Channel has the Calculate Channel Requirements behavior, then orders are calculated. Otherwise, no orders are calculated regardless of requirements, and the Channel above will not receive any requirements from this Channel.

If a Channel has the Pass Up Requirements behavior, then any orders created at this Channel will be seen by the Channel above as requirements. Otherwise, any orders at this Channel will not be seen as requirements by the Channel above.

The combinations are:

| **Channel Behaviors** | RP Response |
|---|---|
| **Calculate Channel Requirements** selected<br>**Pass Up Requirements** selected | Each Channel tries to meet the requirements from below. |
| **Calculate Channel Requirements** selected<br>**Pass Up Requirements** cleared | Orders are created for bottom level Channels, but these exist in isolation. |
| **Calculate Channel Requirements** cleared<br>**Pass Up Requirements** selected | Only relevant if orders are always imported or specified manually, to be met by the Channel above. |
| **Calculate Channel Requirements** cleared<br>**Pass Up Requirements** cleared | Manual orders, existing in isolation at all levels. |

# Stock

## About stock targets

The stock target is the safety stock target at the end of each period.

If the safety stock is not time-phased (that is, if "Time-phased Safety Stock Code (CPt)" = 1) then the stock target is equal to the value in "Safety Stock Units (CPt)" for each and every period. This is true for both weekly and monthly display periods.

If the safety stock is time-phased, the stock target varies from period to period according to the rule identified by the "Time-phased Safety Stock Code (CPt)" field. There is an exception to these rules if the Channel Product is subject to forecast consumption (that is, if "Float Current Period Forecast (CPt)" is true and the Forecast Consumption Rule (Ct) "Time-phased Safety Stock Code (CPt)" is not Rule

1). In this case, stock targets for periods wholly within the first month are not time-phased, but all subsequent periods are.

See "About time-phased safety stock" on page 398.

# About time-phased safety stock

Safety stock is a stock level calculated to buffer against the forecast variance. The higher the level of forecast uncertainty the higher the level of recommended safety stock to prevent a stock-out situation with extremes of demand. As the level of forecast uncertainty changes with time the safety stock may also be time-phased.

Time-phased safety stock (TPSS) needs to be calculated for each scheduled arrival day at the depots as part of the replenishment planning process. Shipments are made according to the requirements including TPSS. In case of shortages the target needs to take account of different safety stocks to decide on the allocation balance, and also to use this figure for the Fill to Stock calculation in case of a shortfall.

The "Time-phased Safety Stock Code (CPt)" defines how this is calculated. This code allows for constant safety stock, safety stock based on the annualized safety stock divided by 365 to imply the days cover, and an absolute number of days cover. Both "days cover" rules, 2 & 3, have the option to run from either requirements or the net forecast. The rules are:

| | |
|---|---|
| Rule 1 | Target = Safety stock units. This already includes contingency stock. |
| Rule 2 | Target = Net forecast volume to cover the calculated days cover stored in "Days Cover (CPt)". |
| Rule 3 | Reserved for future use. Code operates as 2 defined above. |
| Rule 4 | Target = Requirements from subordinate Channels for the number of days cover stored in "Days Cover (CPt)".<br>This rule should only be used at a source or aggregate Channel. |
| Rule 5 | Target = Days cover, based on average safety stock converted to average days cover, applied to summed RP requirements to the Channel plus dependent requirements (BOM orders). |

## Contingency stock

Contingency stock, expressed as a number of additional days' supply, may also be added to the TPSS by editing the "Contingency Stock (CPt)" field. Although the contingency stock could be negative, the resulting safety + contingency stock can not go below zero. The contingency stock is applied to every period up to the horizon being calculated.

## Target stock override

A target override may be specified for a number of periods. The quantity is added to the existing target for the appropriate period(s) and may be negative providing the SS + Contingency + Override does not drop below zero.

There may be several overrides for a Channel Product. Target overrides may be specified in either units or days cover.

### Stock limits

The safety stock (including contingency and override) is finally limited by a minimum and maximum amount and number of days cover. These limits are held in the following fields:

- Minimum TPSS In Days (CPt) "Minimum Time-phased Safety Stock Days (CPt)"
- Minimum TPSS In Units (CPt) "Minimum Time-phased Safety Stock Units (CPt)"
- Maximum TPSS In Days (CPt) "Maximum Time-phased Safety Stock Days (CPt)"
- Maximum TPSS In Units (CPt) "Maximum Time-phased Safety Stock Units (CPt)"

A zero in these fields implies no limit.

The Stock Cover report provides a view of the stock status by Channel linked to forecast requirements.

See "About Replenishment Planner reports" on page 433.

**Note:**

- The safety stock is calculated by looking into the forecast (or requirements) day-by-day starting from that Channel's stock posting date.

## Calculating discontinuation dates in RP

1. In Replenishment Planner, select the Channel Product(s) required.
   See "About selecting Products and Channels" on page 35.
2. Select **Batch > Calculate Discontinuation Dates**.
   The Automatic Calculation of Discontinuation Dates dialog box is displayed.
3. Select **Remove MI** if you want to remove all MI (except T-type promotional MI) after the calculated discontinuation date.
4. Select the **Align existing Pre/Suc dates** check box if you want to automatically set the effectivity date of the successor equal to the newly calculated discontinuation date of the current (predecessor) item.

   **Note:** These dates will always be aligned when the "Update Successor Effectivity Date (CPt)" field for the predecessor is set to 1 (true), irrespective of this selection.
5. Click **OK**.
6. Click **Close**.
7. Select **View > Output** to display the process log.

   **Exception Views**

   The process may generate the following exception views:

   - "BOM SUB AUTO DISC"

- "FUT EFF AUTO DISC"
- "POT OBS AUTO DISC"
- "RETURNS AUTO DISC"

**Note:** T-type MI can be removed in the Promotions sub-module of Demand Forecaster.

See "About the automatic calculation of discontinuation dates" on page 248.

## Adding target stock adjustments

When viewing the Schedule Worksheet, you can make adjustments to the target stock figure either for a single period or for a range of periods.

1. In Replenishment Planner, open the Schedule Worksheet.
   See "Viewing schedules" on page 431.
2. Select **Worksheet > Navigator > In Detail View**.
   The Schedule Worksheet - In Detail dialog box is displayed.
3. Click any cell in the Target row.
4. Select **Worksheet > Edit Targets**.
   The Edit Target Adjustments dialog box is displayed.
5. Select the range of dates in which the stock adjustment is to fall.
6. Click **Add a new adjustment**.
   The Target Adjustment dialog box is displayed.
7. Enter either a stock quantity or a number of days' supply in the **Quantity** edit box, then click either **Unit Value** or **Days Cover** accordingly. You can specify a positive or a negative adjustment.
8. Specify the start and end dates of the adjustment.
9. Type a unique identifier in the **Description** box.
10. Click **OK**.
11. Click **Apply changes to schedule worksheet**.

## Editing target stock adjustments

1. In Replenishment Planner, open the Schedule Worksheet.
   See "Viewing schedules" on page 431.
2. Select **Worksheet > Navigator > In Detail View**.
   The Schedule Worksheet - In Detail dialog appears showing existing stock adjustments in green cells.
3. Double-click the required cell in the Target row.
   The Edit Target Adjustments dialog appears showing the existing target stock adjustments for the selected period.
4. Select the row to be edited and click **Edit the current adjustment**.

The Target Adjustment dialog box is displayed.

5 Make the required changes and click **OK**.

6 Click **Apply changes to schedule worksheet**.

## Deleting target stock adjustments

1 In Replenishment Planner, open the Schedule Worksheet.
See "Viewing schedules" on page 431.

2 Select **Worksheet > Navigator > In Detail View**.
The Schedule Worksheet - In Detail dialog appears showing existing stock adjustments in green cells.

3 Double-click the required cell in the Target row.
The Edit Target Adjustments dialog appears showing the existing target stock adjustments for the selected period.

4 Select the row to be deleted and click **Delete the current adjustment**.

5 Click **Apply changes to schedule worksheet**.

# Re-order Point

## About the re-order point

The system-generated re-order point (ROP) is recalculated in the Demand Forecaster module when forecasts are changed and stored in the "Re-order Point (CPt)" field. A calculation may be forced by using the Calculate ROP option in the Replenishment Planner module. It is possible, however, to set a manual re-order point which can be stored in the "ROP Manual (CPt)" field.

If you wish to use the manual re-order point value for scheduling calculations rather than the system-generated one, set the "ROP System Or Manual (CPt)" field to 1. If the value of this field is set to 0, the system-generated re-order point value is used.

For normal items ROP represents the forecast across the lead time plus the required safety stock at the end of the lead time. The derivation of the value is slightly more complex for Slow Moving Products (SMPs).

For SMPs, if the "SMP Re-order Point Code (CPt)" field for the Channel Product is set to ‘0’, the ROP represents the integer number of expected sales events (rounded up to the next integer) multiplied by the average event quantity, plus the required safety stock at the end of the lead time. If "SMP Re-order Point Code (CPt)" is set to ‘1’, the reorder point is calculated as for normal items.

In both cases the ROP is designed to give a stock position, which in RP, will trigger the ordering process.

Creating a schedule using rule code 4 (the ROP rule) will produce one order for any Product where the current available stock at a Channel (opening stock + due-in + sum of incoming open orders) is at or below the ROP quantity. This means that if a Channel Product is planned using the ROP rule, then there is no forward schedule of recommended orders. This allows for the creation of orders to be carried out with a minimum of data, and hence at maximum speed. No attempt is made to use the forward forecast in the ROP scheduling rule in order that the processing speed should not be restricted.

See "About scheduling" on page 417.

## Calculating re-order points

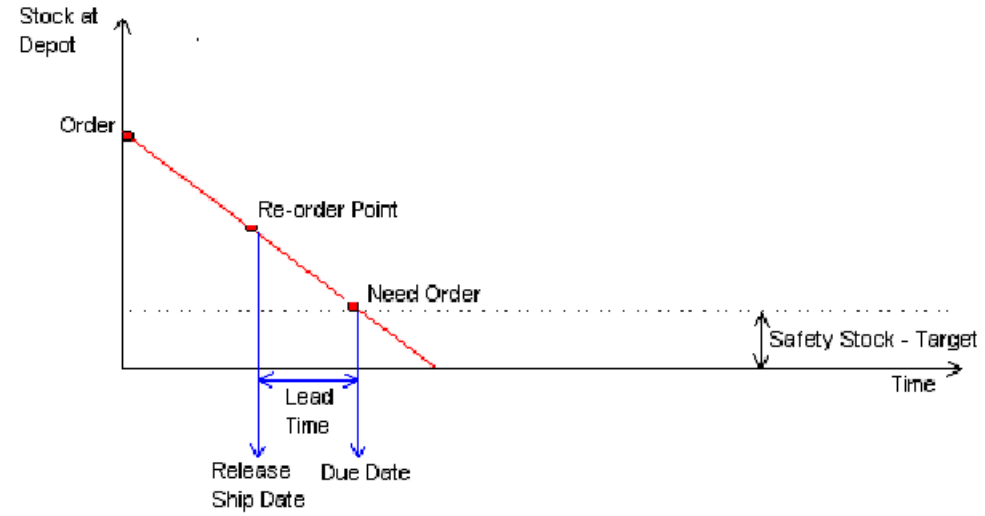
1. In Replenishment Planner, select the Channel Products for which you want to calculate reorder points.
   See "About selecting Products and Channels" on page 35.
2. Select **Batch > Calculate ROP**.
   The Calculate ROP dialog box is displayed.
3. Click **OK**.
4. Click **Close** when processing is complete.
5. Select **View > Output** to display the process log, in which the number of Channel Products processed is shown.

# Orders

## About orders

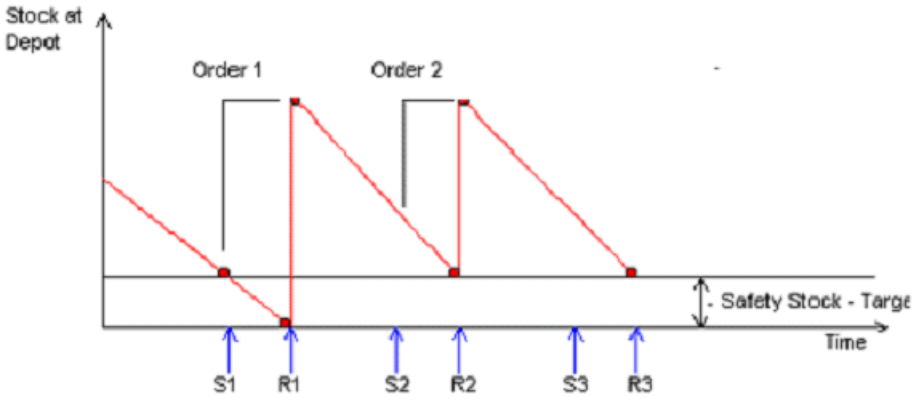
Orders are created starting at the bottom level of the Channel structure. Each Channel has a series of orders created which can be used by the Channel above as requirements.

The bottom level obtains its requirements from the forecast at that level. This is obtained directly from either the Weekly or Monthly Net Forecast table depending on the setting of "Level Of Forecast Control (St)".Existing stock variations from target are taken in to account when calculating requirements from the forecast. Actual stock levels, including stock in transit and current open orders are compared to targets which may include safety stock, time-phased safety stock, target overrides and contingency stock. The calculated orders based on the above are passed to the next level in the Channel structure.




In the above example, the safety stock is the target stock that the system plans not to go below.

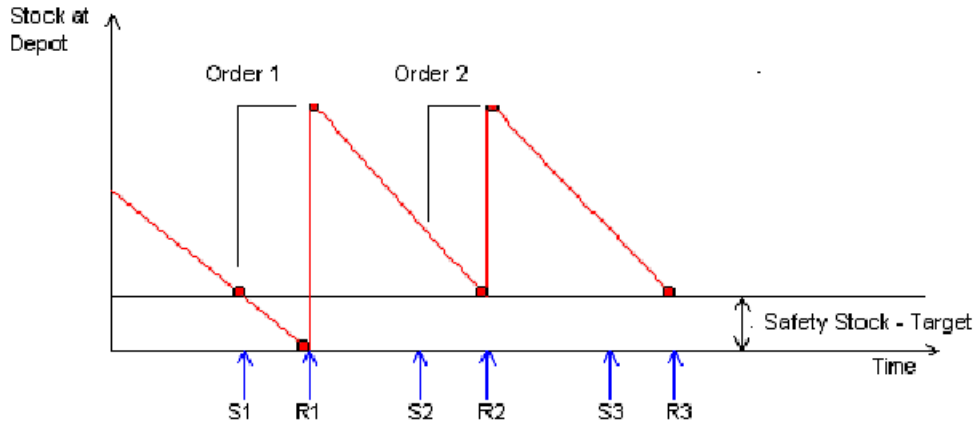
An order is generated at the re-order point (ROP) so that according to the lead time, the stock will arrive at the depot on the due date, before the safety stock is used.




S = Ship Date

R = Receive Date

An example of an order sequence:




Because of increased demand, the stock at the depot on the first ship date (S1) is already at the safety stock target. By the first receive date (R1) the stock has dropped to zero. The system will ensure that the order (1) will be planned by the system to cover the forecast over the lead time plus safety stock requirements.

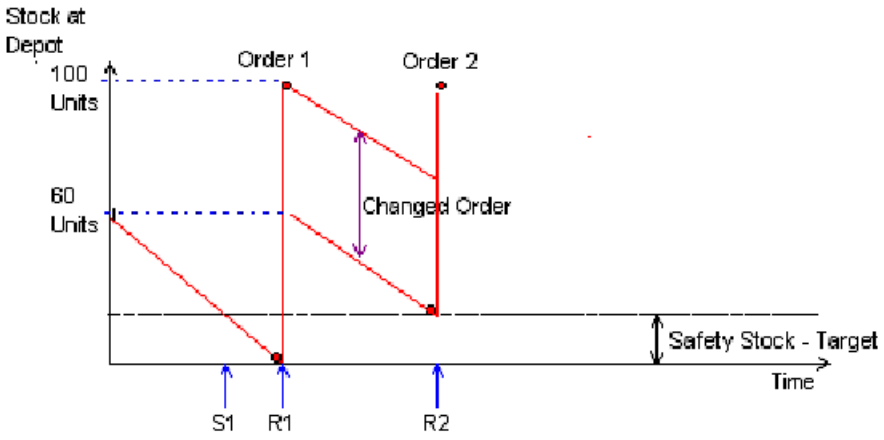
The next order (2) will ensure that, provided demand remains equal to forecast, sufficient stock is shipped at S2 and received by R2 so that the stock immediately before R2 does not fall below the target level.

Further orders are planned to cover the forecast over subsequent lead time. These are shipped at S3, S4 etc and received at R3, R4 etc. Provided the demand remains equal to the forecast, this cycle will continue.

If the demand is above or below the forecast the next order is adjusted to ensure that the stock before the next delivery date returns to target.

The target safety stock is calculated to ensure that there is always stock available, despite the normal variations in demand from forecast.

Rounding also has to be taken account of during this calculation. For example, if the recommended order calculated by the system is 60 units but the minimum lot quantity is 100 then the system will round up to 100 units:



At each subsequent level in the Channel structure the same process occurs, except that the requirements from below are orders instead of the forecast.

## About the Order Viewer

The Order Viewer dialog can be used to view, add, edit and delete orders. If selected by clicking Orders on the **Edit** menu then only orders for a single Channel Product are displayed. The Product and Channel list boxes at the top left-hand side of the screen may be used to select the Channel Product to display. Only those Channel Products originally selected are available from the list boxes.

If selected by clicking **Tools > Order Viewer**, orders for all selected Channel Products are displayed. The list boxes used for the selection of Products and Channels are not available.

In either case, a selection of order types may be made from the list box in the center of the tool bar.

The orders listed are color coded:

| | |
|---|---|
| White background | Normal condition. Due date is within the specified threshold of the estimated need date. |
| Orange background | Order may be deferred. The due date is earlier than the specified threshold from the estimated need date. Also indicates orders constrained, for example by minimum days supply. |
| Red background | Order is critical and should be expedited. The due date is later than the specified threshold from the estimated need date. These orders are displayed in bold blue type during grid editing. |

The table is arranged such that the Channel Products occupy rows and selected fields from the Orders table occupy columns. An order may be selected by clicking on it to highlight in the furthest left hand column. It is further indicated by a pointer ▸ in this column.

The orders are displayed in a grid with the following columns:

| | | |
|---|---|---|
| Product Code | Channel ID | Source Channel |
| Good Qty | Due Date | Order Reference |
| Order Type | Source Code | Original Qty |
| Schedule Date | Release Date | Ship Date |
| Estimated Need Date | Received Date | Creation Date |
| User Id | Po Number | Critical |
| SS Target | Closing Stock | Days Cover |
| Status | Use For Capacity Calc | |
| Transport Type | Userstring 0 to 4 | |

| Limited By. If the order quantity has been limited by either of the following fields, the relevant text is displayed: | | |
|---|---|---|
| Minimum Supply Limit | Maximum Supply Limit | Maximum Store Limit |

Orders can be sorted in ascending or descending order by clicking on a single column heading.

An Advanced Sort can be performed on a maximum of 5 columns by selecting the columns and selecting to Apply Sort. The direction of the sort for each of the selected columns can be specified as ascending or descending.

Buttons available within the Order Viewer dialog have the following functions:

| | |
|---|---|
| **Save Changes** | Following a confirmation message, any changes made are saved to the database. |
| **Print Screen** | Prints the current screen. |
| **Export to Excel** | Exports the displayed orders to an Excel file. |
| **Export to delimited file** | Exports the displayed orders to a delimited file. The file is saved to a specified location. |
| **Edit Current Order** | Opens the Edit Order dialog for the selected order. Note that orders may also be edited by selecting a Channel Product in the body of the table, right clicking and selecting Edit Current Order on the shortcut menu. |
| **Delete Current Order** | Deletes the selected order without further warning. Note that orders may also be deleted by selecting a Channel Product in the body of the table, right clicking and selecting the Delete Current order(s) option. |
| **Vertical Edit [Column Name] Column** | Displays the Vertical Edit dialog box. |
| **Close Current Order(s)** | Converts current order type to "Closed". |
| **Add New Order** | Opens the Channel / Product Selection dialog in which the Channel and Product may be selected to receive a new order. The New Order dialog will then be displayed in which a new order may be created. Note that orders may also be created by selecting a Channel Product in the body of the table, right clicking and selecting the New Order option. |

| | |
|---|---|
| **View Edit Orders** | Changes the view to display orders edited in this session only. Click a second time to restore the view of all orders. |
| **Critical Sort** | Sorts the orders such that all critical orders are at the top. |
| **Find** | Displays the Find dialog. Use this to locate an order. |
| **Filter Orders** | Displays the Filter Orders dialog. Use this to filter the orders you want to display. |
| **RP Information Page** | Displays information from the Products, Channel Products and Orders tables relating to the currently selected order.<br>See "About the RP Information Page" on page 407. |
| **Exit** | Closes the dialog box. If changes have been made and saved, a warning message is displayed. |
| **Help** | Opens the on-screen help. |

## About the RP Information Page

The RP Information Page may be displayed whilst using the Order Viewer dialog by clicking **RP Information Page**. It provides access to a table containing specific user selected data relating to the currently selected order.

The Product and Channel Product data section of the grid displays fields from the Product and Channel Products tables. The Order data section displays selected fields from the Orders table for the currently selected Channel Product.

**Note:**

- You can specify which fields are available to particular users in the Database Administration module.

See "Configuring the RP Information Page" on page 197.

## About requirement horizons

Orders are created starting at the bottom level of the Channel structure. Each Channel has a series of orders created which can be used by the Channel above as requirements.

Orders are calculated for every scheduled day until the requirements horizon, which is stored in the **Requirement Horizon In Days** field, or until the last working day in the receiving calendar defined for this Channel Product. Infor Demand Planning displays an error message if the calendar does not extend as far as the horizon.

For shipments, only those orders within the deployment horizon, stored in the **Deployment Horizon In Days (Ct)** field, are considered for commitment. This parameter defines how far from the stock date the source looks when committing recommended orders for deployment. The Auto Commit function

only considers the current shipment according to the field **Period Beyond Freeze Fence For Open/Planned Orders (Ct)** and it is possible that, if the deployment horizon were less than this, nothing would be shipped.

## About committing orders

The process of order commitment is one in which orders internal to a Channel matrix, and orders placed on external suppliers, are confirmed. This means changing recommended (notional) orders into open (firm) orders. Recommended orders are typically generated by calculating order schedules, but they can also be imported from outside Infor Demand Planning.

Orders can be committed for receipt at a Channel (so-called "pull" orders), or for distribution from a Channel (so-called "push" orders). Internal orders between Channels can be committed either as orders for receipt (at the receiving Channel), or as orders for distribution (at the source Channel), or both.

Committing orders for receipt

When orders are committed for receipt at a Channel ("pull"):

- The orders committed become open orders without a ship date.
- Only recommended orders are available to commit.

Committing orders for distribution

When orders are committed for distribution from a Channel ("push"):

- The orders become open orders with a ship date.
- Only recommended orders and open orders without a ship date (that is, orders previously committed for receipt) are available to commit.
- Previously committed orders, open with a ship date, are not be displayed.

This process may be carried out in a number of ways, and may affect a single order or all currently recommended orders.

Committing orders by category

It is possible to load and commit orders up to a specified amount, based on any one of the Results categories. Simply select the category required, for example Number of Pallets, and enter an appropriate value. Clicking the Load Orders up to specified amount  button loads orders until the entered quantity is reached. If the Exceed Value check box is selected, the first order that takes the quantity over the specified limit is included and flagged to be committed but no further order is loaded. If this check box is not selected, the final order is loaded but not flagged to be committed.

When a category commit is active, all other load options, such as the Days from Freeze Period to Commit on the Distribute tab, are ignored.

Note that when loading orders to be distributed from a source Channel by category, all orders up to the selected value is flagged to be committed, irrespective of the amount of available stock at the source.

See "Committing orders by category" on page 412.

Orders may be committed in a batch.

See "Committing orders automatically" on page 413.

Alternatively, orders may be committed selectively.

See "Committing orders" on page 410.

**Note:**

- Whether an order is open or recommended is specified by its "Order Type (Ot)" field.

## Adding orders

1. In Replenishment Planner, select the Channel Products required.
   See "About selecting Products and Channels" on page 35.
2. Select **Tools > Order Viewer** or **Edit > Orders**.
3. Perform one of these operations:
   - Right-click on the desired Channel Product and select **New Order for [Product] at [Channel]** from the shortcut menu.
   - Click **Add New Order**. If more than one Channel Product is displayed, you must identify the Channel Product for which the order is to be created using the Channel / Product Selection dialog box.
4. Type or select relevant details for the new order in the Edit Order dialog box and click **OK**.
5. Click **Save Changes**.

## Viewing orders for several Channel Products

1. In Replenishment Planner, select the Channel Products to be included.
   See "About selecting Products and Channels" on page 35.
2. Select **Tools > Order Viewer**.
   The Order Viewer dialog box is displayed. See "About the Order Viewer" on page 405.

## Viewing orders for one Channel Product

1. In Replenishment Planner, use the Product and Channel list boxes on the toolbar to select the required Channel Product.
2. Select **Edit > Orders**.
   The Order Viewer dialog box is displayed. See "About the Order Viewer" on page 405.

## Viewing user defined fields in the RP Information Page

1. In Replenishment Planner, select **Tools > Order Viewer**.
   The Order Viewer dialog box is displayed.
2. Click **RP Information Page**.
   The RP Information Page dialog box is displayed.
3. Click **Close** to close the dialog.

## Editing individual orders

1. In Replenishment Planner, select the Channel Products required.
   See "About selecting Products and Channels" on page 35.
2. Select **Tools > Order Viewer** or **Edit > Orders**.
   The Order Viewer dialog box is displayed.
3. Click on the order row you want to edit and either right-click and select **Edit Current Order** from the shortcut menu or click **Edit Current Order**.
4. Make the changes to the relevant edit boxes in the Edit Order dialog and click **OK**.
5. Click **Save Changes**.

## Vertically editing orders

When editing orders, providing the selected Orders table field is editable, you can specify a value for the currently-selected column and apply it to all the orders displayed in the Order Viewer.

1. View the orders for the Channel Product, or Channel Products, you want to edit.

   See "Viewing orders for one Channel Product" on page 409 and "Viewing orders for several Channel Products" on page 409.
2. Select **Orders > Vertical edit [column name] column**.
   The Vertical Edit dialog box is displayed.
3. Type the value to be applied to all orders in the edit box and click **OK**.
4. Click **Save Changes**.

   **Note:** Alternatively, click on any row in the column to edit, right-click and select **Vertical edit [column name] column** from the shortcut menu to open the Vertical Edit dialog box.

## Committing orders

1. In Replenishment Planner, select the Channel Products for which you want to commit orders.

   See "About selecting Products and Channels" on page 35.

2 Select **Tools > Commit Orders**.
The Commit Orders dialog box is displayed.

3 Select one of these options:

- **Received at Selected Channels** to commit orders which will result in stock receipts at the selected Channel(s).
- **Distributed from Source Channels** to commit orders which will result in stock being shipped from the selected Channel.

4 If you selected **Received at Selected Channels**, select or type the number of Days from Freeze Period to Commit.

5 If you selected **Distributed from Source Channels**, perform these operations:

a Select or type the Ship Date to be used to assemble the orders to be committed.

b Select or type the number of Days from Ship Date to Distribute. Only recommended orders falling on or after this date are displayed.

c Select **Run Balance Allocation** if you want to run the Balanced Allocation process.

See "About balanced allocation" on page 390.

6 If you selected **Run Balance Allocation**, perform these operations:

a Select or type the number of Days from Ship Date to Balance the allocation to be specified.

a Select or type the Horizon (in days) to Load Orders that are not included in the fair share calculations.

7 Click **Load Orders**. A warning message is displayed if any of the orders loaded have a Release Date prior to the specified Ship Date.

8 Use one of the following techniques to commit selected orders:

- Commit individual orders by checking the appropriate **Yes** button in the Commit column.
- Commit blocks of orders by clicking the last item to be committed and clicking **Commit to cursor**. This feature may be used in conjunction with the sort facility. Once sorted by the required key, a selection of orders may be made. For example, to a required Cumulative Cost value.
- Commit all loaded orders by clicking **Commit all orders**.
- Click **Advanced Commit** to open the Advanced Commit dialog, which enables you to commit or de-commit orders according to a specified criteria.

9 Click **Partial Commit** if you want to partially commit an order, creating a new order to maintain the original requirement.

See "Partially committing orders".

10 Click **Save**.

**Note:**

- The fields shown and the order they appear in the Commit Orders dialog depend on the defaults that have been set up for you in Database Administration. This sort facility will only function properly if the fields included are populated correctly.
- When committing orders to be distributed from source Channels, orders will not be committed if the "Estimated Need Date (Ot)" is after the receiving Channel's stock posting date ("Date Stock

Last Updated (Ct)") plus the "Deployment Horizon In Days (Ct)". A warning message is displayed to this effect.

- You can use **Auto Commit** to commit orders in batch mode.

## Committing orders by category

It is possible to load and commit orders up to a specified amount, based on any one of the Results categories in the Commit Orders dialog box.

1. In Replenishment Planner, select the Channel Products for which you want to commit orders.
   See "About selecting Products and Channels" on page 35.
2. Select **Tools > Commit Orders**.
   The Commit Orders dialog box is displayed.
3. Select one of these options:
   - **Received at Selected Channels** to commit orders which will result in stock receipts at the selected Channel(s).
   - **Distributed from Source Channels** to commit orders which will result in stock being shipped from the selected Channel.
4. In the Results panel, select the category you wish to use to load orders to commit and enter the appropriate value.
5. Leave the **Exceed Value** check box clear if you don't want the entered value to be exceeded.
6. Click **Load orders up to a specified amount**.
7. Use one of the following techniques to commit selected orders:
   - Commit individual orders by checking the appropriate **Yes** button in the Commit column.
   - Commit blocks of orders by clicking the last item to be committed and clicking **Commit to cursor**. This feature may be used in conjunction with the sort facility. Once sorted by the required key, a selection of orders may be made. For example, to a required Cumulative Cost value.
   - Commit all loaded orders by clicking **Commit all orders**.
   - Click **Advanced Commit** to open the Advanced Commit dialog, which enables you to commit or de-commit orders according to a specified criteria.
8. Click **Save**.
   - When a category commit is active, all other load options, such as the **Days from Freeze Period to Commit on the Distribute** tab, are ignored.
   - When loading orders to be distributed from a source Channel, all orders up to the selected value are flagged to be committed, irrespective of the amount of available stock at the source.
   - The Exceed Value facility is useful when committing to a restraint such as capacity.
   - If the **Exceed Value** check box is not selected, Infor Demand Planning will still load the order that would exceed the stipulated value, although this order will not be flagged to be committed.

## Committing orders selectively

1 In Replenishment Planner, select the Channel Products for which you want to commit or de-commit orders.

See "About selecting Products and Channels" on page 35.

2 Select **Tools > Commit Orders**.
The Commit Orders dialog box is displayed.

3 Click **Load Orders** to display the orders for the selected Channel Products.

4 Click **Advanced Commit**.
The Advanced Commit dialog appears.

5 Select **Mark as 'Do not Commit'** if you want to de-commit the selected orders.

6 Select **Perform as Cumulative** if you want the selection to operate cumulatively.

7 Select the Field required from the list box.

8 Select the Operator required from the list box.

9 Type the Value of the selected Field to use.

10 Click **OK**.

## Committing orders automatically

1 In Replenishment Planner, select the Channel Products for which you want to commit orders.

See "About selecting Products and Channels" on page 35.

2 Select **Batch > Auto Commit**.
The Auto Commit dialog box is displayed.

3 Select the **Override Database Defaults** check box if you want to use a different value to the one stored in Channels table field controlling the number of days beyond the freeze fence for creating open and/or planned orders.

4 Type the required value in the **Days Beyond Freeze Period to Commit Orders** edit box.

5 Click **OK**.

6 Click **Close** when processing is complete.

7 Select **View > Output** to review the process log, in which the number of Channel Products processed is shown.

## Deleting orders

1 In Replenishment Planner, select the Channel Products required.

See "About selecting Products and Channels" on page 35.

2 Select **Tools > Order Viewer** or **Edit > Orders**.
The Order Viewer dialog box is displayed.

3 Click on the order row you want to delete and either right-click and select **Delete Current order[s]** from the shortcut menu or click **Delete Current Order**.
4 Click **OK**.
5 Click **Save Changes**.

# Order Book

## About the Order Book

In Replenishment Planner, it is possible to use an Order Book in conjunction with the forecast to drive the procurement scheduling process. The Order Book is a list of customer orders in the replenishment pipe-line to be processed at particular times in the future.

Order Book functionality is optional. It is enabled by setting the "Order Book (St)" field.

### Order Book table

The information that can/must be stored for each order is:

| Field name | Description | Required/Optional |
|---|---|---|
| Order Book Reference Number | System generated reference for the entry. | Required but read-only |
| Channel Product Reference Number | System generated code of the required Channel Product. | Required |
| Customer Code | Code of the customer that the order is intended for. It must be a valid code set up in the Customer table. | Required |
| Good Quantity | The quantity of stock required by the customer. | Required |
| Ship Date | Projected date that the stock should be despatched to the customer. | Required |
| Customer Due Date | Date that the customer requires delivery of the stock. | Optional |
| PO Number | A user maintained field defining the purchase order number for the order. | Optional |
| Multi-user locking number | System generated field to deal with multiple user edits. | Required but not displayed |
| Userstring 0-3 | User-definable fields. | Optional |

The required fields must be populated. The optional fields are provided to store other relevant information to maintain more complete records.

This table may be maintained in both the Replenishment Planner and Database Administration modules.

### Customers table

The Customers table is used in conjunction with the Order Book table to ensure that customers are recognized and correctly linked to potential supply Channels. It contains the following information:

| Field name | Description | Required/Optional |
|---|---|---|
| Customer Code | System generated code, unique for each Customer. Alternative codes may be imported however. | Required |
| Customer Description | Customer name. | Required |
| Userstring 0-3 | User definable fields. | Optional |

This table is maintained in the Database Administration module.

### Channel Product fields used

The following fields are used when calculating planning requirements using Order Book:

"Days To Use Order Book (CPt)"

"Days To Compare Order Book/Forecast (CPt)"

"Greater Period Or Cumulative (CPt)"

"Use Order Book Plus Forecast (CPt)"

"Use Comparison Or Add Forecast (CPt)"

## Viewing the Order Book

1. In Replenishment Planner, select **Tools > Order Book**.
   The Order Book dialog box is displayed.
2. Click **OK** to close the Order Book dialog box.

## Adding a customer order to the Order Book

1. In Replenishment Planner, select **Tools > Order Book**.
   The Order Book dialog box is displayed.
2. Click **New**.
   The Order Book (Detail) dialog box is displayed.

3 Select either the Channel Product reference number or the Product and Channel codes to identify the Channel Product required.
4 Select the Customer Code required from the list box.
5 In the **Ship Date** box, type or select the order's ship date.
Alternatively, click the **ellipsis** button to display the Select Date dialog and double-click the required day.
6 Type the original order quantity in the **Good Quantity** edit box.
7 Optionally, in the **Customer Due Date** box, type or select the order's due date.
Alternatively, click the **ellipsis** button to display the Select Date dialog and double-click the required day.
8 Optionally, type the purchase order number in the **PO Number** edit box.
9 Specify any other user-defined information.
10 Click **OK** to return to the Order Book dialog box.
11 Click **Save**.

**Note:**

- Infor Demand Planning prompts you to add a customer if none has yet been defined.
- The content of the Order Book and the Order Book (Detail) dialog boxes depends on which fields of the Order Book table have been made active in the application defaults; unused fields are not shown.
- Up to five items of user-defined information can be specified for a customer order, provided that the corresponding user-defined fields of the Order Book table have been made editable.

## Editing a customer order in the Order Book

1 In Replenishment Planner, select **Tools > Order Book**.
2 Either make your required changes to the orders in the Order Book dialog or click to open the Order Book (Detail) dialog, make the changes, and then click **OK**.
3 Click **Save**.

## Deleting a customer order from the Order Book

1 In Replenishment Planner, Select **Tools > Order Book**.
2 Click the order you want to delete and click **Delete**.
3 Click **Yes** to confirm.
4 Click **Save**.

# Scheduling

## About scheduling

As part of the requirement/order creation/stock allocation cycle, delivery schedules are required to determine availability days on which the source may deliver and the depot receive.

Each Channel Product has a receiving calendar to indicate which days are available to schedule orders to be received at a Channel, and to indicate when a source can ship to a Channel. Although it is sensible to make a receipt day an offset time after a ship day, this is not essential as these dates may be used for planning, and may not represent a physical departure and arrival date.

Infor Demand Planning calculates requirements at depots to arrive on scheduled receipt days and the net shipping requirements passed up to the source in the form of orders are on these days, shifted by the offset time to ship to this depot. This offset date defines the order release date at the source.

When orders are to be shipped from a source, the receiving calendar is used and orders are assumed to arrive an offset time after the ship day. This day does not have to be a receipt day as defined by the receiving calendar code.

If the database has every day defined as available, then all requirements are accumulated daily and either manual or auto ship will ship a number of days cover whenever allocation is run.

A Channel Product may ship or schedule if the day after the stock date is defined as an available day. Scheduling rules may be set for each Channel Product.

See "About scheduling rules" on page 419.

If scheduling is disabled for a Product at a depot, then no orders are created (they may however be loaded externally or added manually, and existing orders will remain). The Channel above this sees only the actual current orders that are there. In this case this will normally be zero. If the Channel above has scheduling enabled, then it can only schedule based on the requirements it sees. If the source Channel has scheduling disabled, then no production or procurement orders are created, although if scheduling is enabled at lower Channels, orders are created and, providing shipping is allowed, deployment orders are created.

### Examples of the effect of scheduling rules

| Source rule | Depot rule | Result |
|---|---|---|
| Off | Off | No orders created by Infor Demand Planning for this Product. Manual only orders. |
| On | Off | No orders created by Infor Demand Planning at depots, manual orders only. Source can schedule and deploy available inventory. |
| On | Some off | Source sees requirements from some depots, and schedules for them. |
| Off | On | No source orders for scheduling, but can deploy. |
| On | On | Normal. Orders created everywhere as required. |

## Fields used in the calculation

Infor Demand Planning calculates a schedule of requirements based on a forward view of sales demand taken from the current Net Forecast table and/or the accumulated DRP orders from below, and from the current stock position (on-hand stock and open orders) and target stock requirements (time-phased safety stock) at each Channel. Stock figures used in Infor Demand Planning are held in the following fields of the Channel Products table:

- **Opening Stock (CPt)**
- **Due In Stock (CPt)**
- **Safety Stock Units (CPt)**

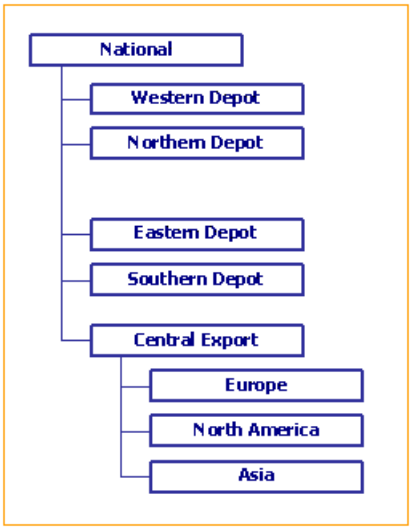
And in the following fields in the Orders table:

- **Safety Stock Target (Ot)**
- **Closing Stock (Ot)**

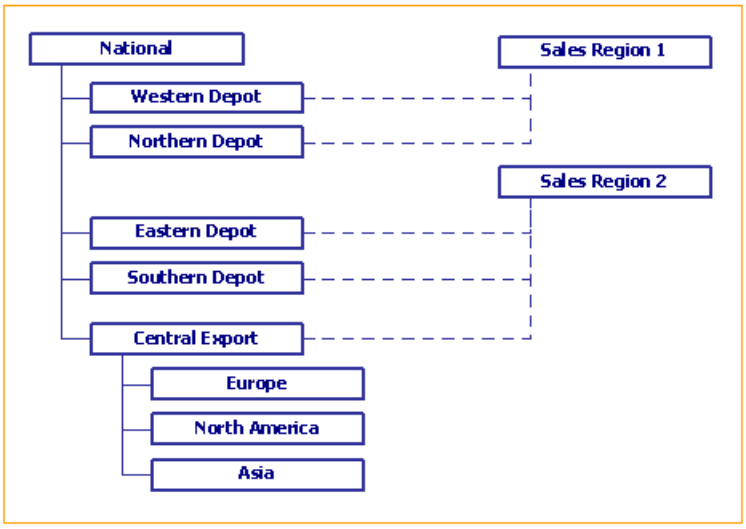
Due in stock is in addition to open orders, and is typically used only when open orders are not held in the Orders table.

## Channel behaviors

Also of relevance are each Channel's behaviors for passing up requirements and calculating requirements. The Channel matrix is used to define which Channels supply other Channels. It is assumed that goods flow down through the Channel matrix, and in the following example goods go from the National Channel out to the five global areas and then finally into geographical continents. The Channel matrix is maintained within the Database Administration module.




It is possible to enable or disable scheduling at individual Channels. Scheduling would typically be disabled if, rather than representing the distribution network, either all or part of the Channel matrix actually represented the sales network. In the following example, it is assumed that Western Depot and Northern Depot form Sales Region 1 whilst Eastern Depot, Southern Depot and Central Export all form Sales Region 2.




Assuming requirements are to be calculated throughout the distribution network (part of the Channel matrix) only, then the Sales Region 1 and Sales Region 2 Channels would not be set to calculate requirements whereas each of the other Channels would. This is achieved by enabling or disabling the Calculate Channel Requirements behavior.

When using normal scheduling it is possible to reduce an item's opening stock by either the net forecast or by the sum of all subordinate Channels' orders (net shipping requirements). This is controlled within the Channel matrix by the Pass Requirements Up behavior. An aggregate Channel will use its forecast when calculating future estimated stock positions unless it has at least one subordinate Channel passing requirements up. If one subordinate Channel has the Pass Requirements Up behavior then all subordinate Channels must be set to work this way.

In the second example above, it may be assumed that orders generated at the global total are not to be based on the global forecast but on the sum of all orders from each of the Channels below. In this case, all of the geographical distribution regions must be configured to Pass Requirements Up.

See "About Channel behaviors" on page 72.

### Alternate sourcing

Alternate sourcing (sometimes known as flexible sourcing) allows you to change the route of a Product through the supply chain without having to change its Channel matrix. It simplifies Channel matrices and allows faster processing.

See "About alternate sourcing" on page 429.

## About scheduling rules

As part of the stock requirement/order creation/stock allocation cycle, schedules are required to determine the order requirements, availability days on which the source may deliver and the depot receive and the rolling stock situation.

Scheduling rules may be set within the "Scheduling Rule (CPt)" field. The rules are:

- Rule 0 - No Scheduling. No order is created (they may however be loaded externally or added manually and existing orders remain). The Channel above only sees the actual current orders that are there. In this case this is normally zero.
- Rule 1 - Normal Scheduling. Normal scheduling attempts to deliver stock just as a Channel reaches safety stock. The rule is governed by a number of parameters detailed later. The principal inputs are the current stock position, the forecast and the safety stock. The controlling parameters are the calendars, rounding quantities, and various constraints and rules that override the unconstrained schedule.

See "About normal scheduling" on page 423.

- Rule 2 - Demand Driven Replenishment (Future release). The key factor in this rule is that no formal forecast is required, and only the next order is calculated. The timing and quantity on the order is governed by the cumulative demand and the rounding quantity. This rule is designed to be low intervention and fast to calculate and is appropriate where products are considered unforecastable, lead times are short and plans flexible.
- Rule 3 - CRP Fast Deployment (Future release). This rule is designed to support a Continuous Replenishment Process (CRP). The aim is principally for deployment and will produce a single order for shipment to a subordinate Channel using the minimum number of calculations.
- Rule 4 - ROP Fast Scheduling. Designed to be the fastest possible rule, and uses the absolute minimum amount of data and calculations. Usually only one order is created, and this rule does not consider many of the rules and constraints imposed by the other rules, and so will only be appropriate for large volumes of data where processing speed rather than sophistication is required.

See "About re-order point scheduling" on page 424.

- Rules 50+ - Custom constructed for the particular requirements of the user. Consult Infor Demand Planning technical support for specific advice regarding this option.

### Summary of fields used by different rules:

| Field description | Rule code number | |
|---|---|---|
| | 1 | 4 |
| Channel Products table fields | | |
| "Alternate Level Code (CPt)" | Y | N |
| "Alternate Source (CPt)" | Y | N |
| "Annualised Forecast (CPt)" | Y | Y |
| "Average Daily Demand (CPt)" | Y | N |
| "Basis Of Cumulative Demand For Last Recommended Order (CPt)" | Y | N |
| "BOM Explosion Code (CPt)" | Y | N |
| "BOM Level Code (CPt)" | Y | N |
| "Channel Product Reference (CPt)" | Y | Y |

| | | |
|---|---|---|
| "Contingency Stock (CPt)" | Y | N |
| "Cumulative Demand Basis Date (CPt)" | Y | N |
| "Cumulative Demand Since Last Shipment Date (CPt)" | Y | N |
| "Daily MSE (CPt)" | Y | N |
| "Date Schedule Last Calculated (CPt)" | Y | Y |
| "Days To Compare Order Book/Forecast (CPt)" | Y | N |
| "Days To Use Order Book (CPt)" | Y | N |
| "Defer Trigger In Days (CPt)" | Y | N |
| "Discontinuation Date (CPt)" | Y | N |
| "Discontinuation Type (CPt)" | Y | N |
| "Due In Stock (CPt)" | Y | Y |
| "Expedite Trigger In Days (CPt)" | Y | N |
| "Greater Period Or Cumulative (CPt)" | Y | N |
| "Increment (CPt)" | Y | Y |
| "Introduction Date (CPt)" | Y | N |
| "Maximum No. Of Days Between Orders (CPt)" | Y | N |
| "Maximum Time-phased Safety Stock Days (CPt)" | Y | N |
| "Maximum Time-phased Safety Stock Units (CPt)" | Y | N |
| "Maximum Storage Capacity (CPt)" | Y | N |
| "Minimum Days Between Orders (CPt)" | Y | Y |
| "Minimum Time-phased Safety Stock Days (CPt)" | Y | N |
| "Minimum Time-phased Safety Stock Units (CPt)" | Y | N |
| "Minimum Lot Quantity (CPt)" | Y | Y |
| "Number Of Days To Calculate Average Daily Rate (CPt)" | Y | N |
| "Number Of Days To Store Orders (CPt)" | Y | N |
| "Number Of Months To Store Orders (CPt)" | Y | N |
| "Number Of Weeks To Store Orders (CPt)" | Y | N |
| "Opening Stock (CPt)" | Y | Y |
| "Open Orders Freeze Period (CPt)" | Y | N |
| "Planned Receipts First Order Date (CPt)" | Y | N |
| "Planned Receipts Last Order Date (CPt)" | Y | N |
| "Product Code (CPt)" | Y | Y |
| "Receiving Calendar Code (CPt)" | Y | Y |

| | | |
|---|---|---|
| "Recommended Prior To Open (CPt)" | Y | N |
| "Re-order Point (CPt)" | N | Y |
| "Requirements Offset Days (CPt)" | Y | Y |
| "Requirement Used To Calculate Orders (CPt)" | Y | N |
| "ROP Manual (CPt)" | N | Y |
| "ROP System Or Manual (CPt)" | N | Y |
| "Safety Stock Performance Level (CPt)" | Y | N |
| "Safety Stock Strategy (CPt)" | Y | N |
| "Safety Stock Units (CPt)" | Y | Y |
| "Schedule Priority (CPt)" | Y | Y |
| "Scheduling Rule (CPt)" | Y | Y |
| "Shelf Life (CPt)" | Y | N |
| "Stocked Product (CPt)" | Y | N |
| "Supplier Code (CPt)" | Y | N |
| "Time-phased Safety Stock Code (CPt)" | Y | N |
| "Units Per Case (CPt)" | Y | N |
| "Units Per Layer (CPt)" | Y | N |
| "Units Per Pallet (CPt)" | Y | N |
| "Use Comparison Or Add Forecast (CPt)" | Y | N |
| "Use Forecast Or Requirements (CPt)" | Y | N |
| "Use Order Book Plus Forecast (CPt)" | Y | N |
| | | |
| Channels table fields | | |
| "Additional Days Offset For New Products (Ct)" | Y | N |
| "Allow Back Orders (Ct)" | Y | N |
| "Channel Reference Number (Ct)" | Y | Y |
| "Date Stock Last Updated (Ct)" | Y | Y |
| "Demand Calendar Code (Ct)" | Y | N |
| "First Day Of Week (Ct)" | Y | N |
| "Next Open Order Reference Number (Ct)" | Y | Y |
| "Period Beyond Freeze Fence For Open/Planned Orders (Ct)" | Y | Y |
| | | |
| Products table fields | | |

| | | |
|---|---|---|
| "Channel Matrix Code (Pt)" | Y | Y |
| "Product Code (Pt)" | Y | Y |
| "Requirement Horizon In Days (Pt)" | Y | N |
| | | |
| Supplier table fields | | |
| Supplier Code | N | N |
| | | |
| Inventory table fields | | |
| Channel Product Reference | N | N |
| Inventory Quantity | N | N |
| Expiration Date | N | N |
| Batch/Lot Number | N | N |
| Available Date | N | N |
| | | |
| Channel matrix fields | | |
| Calculate Channel Requirements | Y | Y |
| Level Code | Y | Y |
| Pass Requirements Up | Y | Y |

## About normal scheduling

In order to calculate both the size and date of orders, the normal scheduling rule firstly attempts to calculate the estimated need date of an order. The current available opening stock is reduced by the forecast until at some point in the future the available stock equals or goes below the safety stock target. This is the first estimated need date.

However, in practice it is rare that companies are either able to (or want to) receive stock on any day. Typically they may only wish to receive stock for a particular item either once a week or only on weekdays and so on. Therefore, once Infor Demand Planning has calculated the first future estimated need date, it then calculates the first opportunity to receive stock either on or before this date. If neither is possible then it picks the first available date after the need date. This is the due date for the first recommended order outside the freeze period.

In order to calculate the size of the order, Infor Demand Planning firstly calculates the next opportunity to receive using the specified receiving calendar, following the due date of the order being considered. The forecast between the two dates is used to ensure that when the following order arrives, the projected available stock is once again at least equal to the safety stock target. Infor Demand Planning then moves on to consider the following order, and so on.

This process results in three of the most important fields stored against each order:

- "Original Quantity (Ot)". The quantity required.
- "Estimated Need Date (Ot)". The date on which the order should arrive in order to maintain target stock levels.
- "Due Date (Ot)". The date on which the order is actually scheduled to arrive based on lead time constraints.

If the estimated need date is before the due date, then the order should be expedited where possible to maintain the target stock. If the estimated need date is after the due date then the order should be deferred, as its early arrival would result in a higher stock level than is strictly necessary.

It is often the case that if an order is planned to be only a few days late, that is, the need date is only a few days before the due date, then there is not an inventory problem. There may only be concern if an order is more than a week late for example. It is possible to define a tolerance for an individual Channel Product relating to how great the expedite and defer time periods need to be before messages are generated.

An expedite message will typically occur when selling at a faster than forecasted rate, or if an order is delivered into stock with a lower quantity than ordered or if the net forecast has been increased. This almost inevitably leads to a certain amount of safety stock being consumed. In essence this is not a problem as this is exactly why safety stock is held; it is only a problem if the rate of consumption is such that all stocks will have been exhausted before the next order is scheduled to arrive.

Under normal circumstances you can avoid using safety stock by either rescheduling the next recommended order to arrive on the estimated need date, or failing that, by increasing the size of any preceding order. The situation can be further exaggerated if there is an open order freeze period, as recommended orders can only be generated after the freeze period. Infor Demand Planning does however continue to recommend that the first open order be expedited.

## About re-order point scheduling

Re-order point fast scheduling is designed to efficiently calculate a single order to maintain a fixed stock level and orders are only generated to replace a current stock shortfall. This rule therefore does not use the forecast to calculate an estimated future stock holding, instead it relies on the re-order point and the current stock levels. As a result of this, the re-order point rule will only ever generate one recommended order at most per Channel Product per scheduling cycle.

The system-generated re-order point (ROP) is recalculated in the Demand Forecaster module when forecasts are changed and stored in the **Re-order Point (CPt)** field. A calculation may be forced by using the Calculate ROP option in the Replenishment Planner module. It is possible, however, to set a manual re-order point which can be stored in the **ROP Manual (CPt)** field.

If you wish to use the manual re-order point value for scheduling calculations rather than the system-generated one, set the **ROP System Or Manual (CPt)** field to 1. If the value of this field is set to 0, the system-generated re-order point value is used.

If the current stock level is below the re-order point, then the system will generate an order that is equal in size to the current stock shortfall. The first opportunity to receive stock may be a period of time into

the future. This would be controlled by the receiving calendar for the Channel Product because businesses do not always wish to be able to receive stock on any day they may only wish to receive once a week or once a fortnight etc.

Another constraint on how soon stock may be received is how long it takes to manufacture/receive the goods on order. If it takes two weeks to receive stock from a supplier then there is little point in Infor Demand Planning generating a new recommended order to be received within this time frame. This constraint is represented by a freeze fence within which recommended orders will not be generated.

It is also possible that within the freeze fence there are open orders already scheduled. It would be inappropriate to generate a new recommended order if there were already an open incoming order to replenish stocks. If however there is an open incoming order that is not large enough to fully replenish stock then there is a need to generate a new recommended order that is large enough to cover requirements. This is achieved by adding any open incoming order values to the current opening stock position and then comparing this computed value with the re-order point.

When generating the recommended order Infor Demand Planning also calculates an estimated need date for the order. To generate a recommended order, stock is already below the re-order point so the estimated need date is set equal to one day before the stock posting date (the date the on hand stock quantity was last updated). This therefore gives an order both a due date (the date on which the order is due to arrive, based on the open order freeze period which represents the lead time) and an estimated need date (when the order is required by to maintain the target stock position). If these dates are different the system will generate an expedite message, suggesting the recommended order is bought in sooner, if possible.

It is often the case that if the due date and the need date are only a few days apart then you may not wish to review an expedite message, but if they are a week apart then you would probably want to review the situation. The Channel Product fields **Expedite Trigger In Days (CPt)** and **Defer Trigger In Days (CPt)** can be used to control the sensitivity of each type of exception.

## About scheduling priority

At summary level, the scheduling priority is indicated by color coding and by priority number.

The "Schedule Priority (CPt)" field contains the priority attached to the last rescheduling of a Channel Product. This value is recalculated every time a reschedule is carried out on a Channel Product. Note that it is possible to edit orders without rescheduling - in this case the priority remains as at the previous reschedule. The priority is indicated on the schedule worksheet - codes 1 & 2 in red and 3, 4 & 5 in amber.

The values are:

0 = Priority not yet established. The default priority which refers to items that have not been scheduled.

1 = Negative on hand within freeze period. Indicates an actual or potential stock out within the freeze period. Note that a projected stock on hand of zero does not trigger this code (for instance, I may have no stock, but no requirements either). The negative stock position is calculated regardless of the setting of the field, "Allow Back Orders (Ct)", as this is only relevant when calculating the order to rectify the stock out situation. The system will not calculate recommended orders within the freeze period, so this case may happen where there is an opportunity to schedule (with or without an open order on that

day). A typical response may be to increase the quantity on an existing open order, or to create a new open order, and to take the reschedule option.

2 = Negative on hand outside of freeze period. Should only occur when there is a constraint on recommended orders. This may be due to there not being an opportunity to schedule until some time after the end of the freeze period, or that there is a restriction of the size of an order which means the requirements cannot be met by recommended orders.

3 = Below target within the freeze period. Similar to priority 1 in that current stock and open orders is insufficient to maintain the safety stock target (which may vary inside the freeze period). If the projected stock drops below the target then this becomes a priority 3.

4 = Below target outside the freeze period. Similar to priority 2 but compared to the variable stock target.

5 = Below target in a non-schedule period. May not be a stock problem, but it may appear to be below target because of the way the current periodicity is set. For example, viewing schedules in months, but calculating orders twice weekly, may give the impression that the target is not being maintained. If the periodicity was changed to days the closing stock may be satisfactory. This situation should only occur when using the schedule worksheet, never in batch order calculations.

9 = No priority.

**Note:**

- The freeze period used for priorities 1, 2, 3 and 4 is found in the "Open Orders Freeze Period (CPt)" field.

## About scheduling granularity

The schedule is calculated according to the schedule granularity, which should not to be confused with schedule periodicity.

- Granularity describes the time periods considered in the calculation and storage of schedules.
- Periodicity describes the time periods used for the reporting of schedule data.

Three Channel Products table fields are used to define the granularity at which orders are kept on the database:

- "Number Of Days To Store Orders (CPt)".Field defining the number of days to keep the orders in daily buckets when stored on the database. This is the minimum number of days that is stored. The number of days are automatically extended to the last day of a complete week so that the granularity in weeks will start on a complete week. If the value in this field is zero, the first weekly period is an incomplete week.
- "Number Of Weeks To Store Orders (CPt)".Field defining the number of weeks to keep the orders in weekly buckets when stored on the database. When a daily granularity has been defined the first week will always start from the first day of a week, this is defined by "First Day Of Week (Ct)". Where no daily granularity is defined the first week will only be a partial week. When a number of months and weeks granularity are defined, the last week is extended beyond 7 days to cover the last day preceding the start of the first required full month.

- "Number Of Months To Store Orders (CPt)".Field defining the number of months to keep the orders in monthly buckets when stored on the database. This starts from the first monthly start date after the daily and weekly granularity has finished. If no daily or weekly granularity is defined then the first monthly period may only be a partial month.

Granularity may be edited via the Properties Page dialog in the Replenishment Planner module or by editing the Channel Products table in the Database Administration module.

## About planning requirements in the Schedule Worksheet

When Order Book is not being used, the Planning Requirements row in the In Detail View of the Schedule Worksheet is the demand, either forecast and/or DRP requirements, depending on whether alternate sourcing is in use. When Order Book is being used, the following fields are used when calculating planning requirements:

"Days To Use Order Book (CPt)"

"Days To Compare Order Book/Forecast (CPt)"

"Greater Period Or Cumulative (CPt)"

"Use Order Book Plus Forecast (CPt)"

"Use Comparison Or Add Forecast (CPt)"

If all the above fields are set to zero, Order Book information will have no effect on the planning requirements displayed.

### Example 1

| | Pd 1 | Pd 2 | Pd 3 | Pd 4 | Pd 5 | Pd 6 | Pd 7 | Pd 8 |
|---|---|---|---|---|---|---|---|---|
| Forecast | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Order Book | 50 | 10 | 15 | 20 | 35 | 10 | 5 | 5 |
| Planning Requirements | 50 | 10 | 15 | 45 | 60 | 35 | 30 | 25 |
| | | Use Order Book | | Use Order Book Plus Forecast | | | Use Forecast | |

To achieve this situation the following Channel Product fields need to be set up as follows:

| | |
|---|---|
| Days To Use Order Book (CPt) | 3 (days) |
| Days To Compare Order Book/Forecast (CPt) | 0 |
| Greater Period Or Cumulative (CPt) | 0 |
| Use Order Book Plus Forecast (CPt) | 4 (days) |
| Use Comparison Or Add Forecast (CPt) | 1 |

## Example 2

| | Pd 1 | Pd 2 | Pd 3 | Pd 4 | Pd 5 | Pd 6 | Pd 7 | Pd 8 |
|---|---|---|---|---|---|---|---|---|
| Forecast | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Order Book | 50 | 10 | 15 | 20 | 35 | 10 | 5 | 5 |
| Planning Requirements | 50 | 10 | 15 | 25 | 35 | 25 | 25 | 25 |
| | Use Order Book | | | Use Greater Of The Forecast/Firm By Period | | | | Use Forecast |

To achieve this situation the following Channel Product fields need to be set up as follows:

| | |
|---|---|
| Days To Use Order Book (CPt) | 3 (days) |
| Days To Compare Order Book/Forecast (CPt) | 4 (days) |
| Greater Period Or Cumulative (CPt) | 0 (by period) |
| Use Order Book Plus Forecast (CPt) | 0 |
| Use Comparison Or Add Forecast (CPt) | 0 |

## Example 3

| | Pd 1 | Pd 2 | Pd 3 | Pd 4 | Pd 5 | Pd 6 | Pd 7 | Pd 8 |
|---|---|---|---|---|---|---|---|---|
| Forecast | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Order Book | 50 | 10 | 15 | 20 | 35 | 10 | 5 | 5 |
| Planning Requirements | 50 | 10 | 15 | 25 | 30 | 20 | 25 | 25 |
| | Use Order Book | | | Use Greater Of The Forecast/Firm Cumulatively | | | | Use Forecast |

The calculation for the Planning Requirements for period 4 is:

(Greater of the cumulative forecast or the cumulative order book from Pd_1 to Pd_4 inclusive) minus (Greater of the cumulative forecast or the cumulative order book from Pd_1 to Pd_3 inclusive)

= (Greater Sum(25+25+25+25) or Sum(50+10+15+20)) - (Greater Sum(25+25+25) or Sum(50+10+15))

= (Greater 100 or 95) - (Greater 75 or 75)

= 100 - 75

= 25

This calculation is also applied for the subsequent periods 5, 6 and 7.

To achieve this situation the following Channel Product fields need to be set up as follows:

| | |
|---|---|
| Days To Use Order Book (CPt) | 3 (days) |
| Days To Compare Order Book/Forecast (CPt) | 4 (days) |
| Greater Period Or Cumulative (CPt) | 1 (cumulatively) |
| Use Order Book Plus Forecast (CPt) | 0 |
| Use Comparison Or Add Forecast (CPt) | 0 |

**Note:**

- The above examples assume that alternate sourcing is not being used and orders are added at a Channel where the demand is forecast.

See "About alternate sourcing" on page 429.

## About alternate sourcing

Alternate (sometimes known as flexible) sourcing allows you to change the route of a Product through the supply chain without having to change its Channel matrix. It simplifies Channel matrices and allows for faster processing. It allows you to specify a source, either an external supplier or an internal Channel, that is not necessarily the primary Channel within an item's matrix. Internal flexible suppliers have to be represented in an item's Channel matrix. They will differ to external suppliers in that their requirements are passed up to the defined Channel.

Each Channel Product is allowed one alternate source at any one time. Alternate sources are Channels that calculate requirements.

When the System Table field, "Alternate Sourcing (St)" is set to 1, the following Channel Products table fields are used:

- "Alternate Source (CPt)"
- "Alternate Level Code (CPt)"
- "Use Forecast Or Requirements (CPt)"

If alternate sourcing is in place, the Calculate Schedules process uses the values in "Alternate Level Code (CPt)". Note that when BOMs are in use, "Alternate Level Code (CPt)" is used in conjunction with the "BOM Level Code (CPt)" to determine the sequence of the calculations.

The "Alternate Level Code (CPt)" is a user-maintained field defining the level code for each Channel Product. These level codes are defined based upon the relationship between Channel ID and "Supplier Code (CPt)" for all Channels at a given Product. They specify the order in which Channels for a Product are processed. Higher numbers are processed first.

For example:

| Channel ID | Alternate Source | Alternate Level Code |
|---|---|---|
| NATIONAL | "Self" or external | 0 |
| NORTH | NATIONAL | 1 |
| SOUTH | NATIONAL | 1 |
| EAST | NATIONAL | 1 |
| WEST | NORTH | 2 |
| CENTRAL | NORTH | 2 |

In this example, NATIONAL is the top-level Channel, NORTH, SOUTH and EAST are at the middle level, whilst Channels WEST and CENTRAL are at the lower level. When orders are being calculated, it needs to be determined whether forecast and/or requirements are to be taken into account. The "Use Forecast Or Requirements (CPt)" field specifies this and the valid values are:

- 0 - use forecast (default).
- 1 - use requirements (sum of orders).
- 2 - use forecast and requirements.

For example, the above scenario may appear as follows. Channels SOUTH, EAST, WEST and CENTRAL use their forecast, NORTH uses both its forecast and DRP requirements and NATIONAL uses the sum of all their orders (DRP requirements):

| Channel ID | Alternate Source | Alternate Level Code | Use Forecast or Requirements |
|---|---|---|---|
| NATIONAL | "Self" or external | 0 | 1 |
| NORTH | NATIONAL | 1 | 2 |
| SOUTH | NATIONAL | 1 | 0 |
| EAST | NATIONAL | 1 | 0 |
| WEST | NORTH | 2 | 0 |
| CENTRAL | NORTH | 2 | 0 |

**Note:**

- All the above System and Channel Products table fields are an integral part of the alternate sourcing functionality and changes should not be made without detailed system knowledge.

## Creating schedules

1. In Replenishment Planner, select the Channel Product(s) required.
   See "About selecting Products and Channels" on page 35.
2. Select **Batch > Calculate Schedule**.
   The Calculate Schedule dialog appears showing the number of Channel Products selected.
3. Select the **Include Sub-Ordinates with corresponding BOM Parents** check box if you want to reschedule BOM subordinates linked to any BOM parents currently selected.
   See "About bills of materials" on page 438.
4. Click **OK**.
5. Click **Close**.
   Details of any exception views created are displayed at the bottom of the window.

   **Note:** If Order Book is in use, the Order Book table must be populated with the latest information prior to running the scheduling process. See "About the Order Book" on page 198.

## Viewing schedules

1 In Replenishment Planner, select the Channel Product(s) required.
See "About selecting Products and Channels" on page 35.

2 Select **Tools > Schedule Worksheet**.
If the selected Channel Products span more than one Channel matrix or not all available Channels are selected, warnings are displayed. Choose whether to load any "missing" Channels or continue with limited functionality.
The Schedule Worksheet dialog box is displayed. See "Schedule Worksheet dialog".

## Editing schedules

You can edit the following cells in the Schedule Worksheet:

- Target stock. See "Editing target stock adjustments" on page 400.
- Open and recommended orders. See "Editing individual orders" on page 410.

## Recalculating schedules in the Schedule Worksheet

When viewing the Schedule Worksheet, you can recalculate the schedule for the currently-selected Product, without leaving the worksheet.

1 Select **Worksheet > Calculate Schedule**.
The Calculate Schedule dialog box is displayed.
2 Select the **Include Sub-Ordinates with corresponding BOM Parents** check box if you want to reschedule BOM subordinates linked to any BOM parents currently selected.
See "About bills of materials" on page 438.
3 Click **Ok**.
4 Click **Close**.
5 Select **View > Output** to display the processing log.
6 Click **Save Schedule**.

**Note:** If Order Book is in use, the Order Book table must be populated with the latest information prior to running the scheduling process. See "About the Order Book" on page 198.

## Defining schedule periodicity

When viewing the Schedule Worksheet, you can change the mix of days, weeks and months displayed (the periodicity).

1 In Replenishment Planner, open the Schedule Worksheet.
See "Viewing schedules" on page 431.

2 Select **Worksheet > Define Periods**.
The Periodicity dialog box is displayed.

3 Type or select the number of Days, Weeks and Months desired.
If necessary, Infor Demand Planning adds additional days or weeks to ensure that all months are aligned with their correct period end dates. These additions may mean that the number of whole months shown on the worksheet is one less than the number you requested.

## Selecting the requirement details display default

1 In Replenishment Planner, open the Schedule Worksheet.
See "Viewing schedules" on page 431.

2 Select **Worksheet > Navigator > In Detail View**.
The Schedule Worksheet - In Detail dialog box is displayed.

3 Click **Hide/Show default**.
The Select Requirement Display Default dialog box is displayed.

4 Choose one of the following:

- **Show Requirement Details**
- **Hide Requirement Details**

5 Click **OK**.

# Shipping

## About shipping

Once a requirement has been converted into an order and that order made open, shipping requirements must be considered. At the Channel Products level, shipping maximums and minimums are defined in terms of both quantity and time. The data is held in the following fields:

"Maximum Storage Capacity (CPt)"

Max No. Days Between Orders (CPt) "Maximum No. Of Days Between Orders (CPt)"

Min No. Days Between Orders (CPt) "Minimum Days Between Orders (CPt)"

"Minimum Lot Quantity (CPt)"

The Channel Products table field "Shelf Life (CPt)" is used in the Inventory Planner module to limit safety stocks and economic order quantities (EOQs). It is also used for limiting the size of orders.

The Orders table field, "Ship Date (Ot)" is used, in addition to designating the date on which an order must be shipped to meet the required need date, to differentiate between order types:

- An open order with the "Ship Date (Ot)" field populated is one that has been committed for distribution.
- If the "Ship Date (Ot)" is in the past (that is, on the stock posting date or earlier), then Infor Demand Planning assumes that the "Good Quantity (Ot)" in the order has been picked and the order is in transit. This order quantity should not be included in the initial "Opening Stock (CPt)" at the distributing Channel.
- If the "Ship Date (Ot)" is in the future (that is, after the stock posting date) then Infor Demand Planning assumes that the "Good Quantity (Ot)" in the order is still to be picked. The "Opening Stock (CPt)" should therefore still include that order quantity. The calculated starting stock for schedules is the "Opening Stock (CPt)" minus the "Good Quantity (Ot)" of all such future orders.
- An open order with the "Ship Date (Ot)" blank has been committed for receipt (a so-called "pull" order) but not yet for distribution. The opening stock will therefore still include the order volume, as will the calculated starting stock for a schedule.

### Rounding shipments

All shipment allocations must be rounded to practical shipping quantities according to requirements. These fields control increments for orders:

"Increment (CPt)"

"Minimum Lot Quantity (CPt)"

If there is adequate stock available at the source to ship, then the rounding is carried out as above. However, if the shipment is limited by shortage of source stock, the total available quantity is divided into lots as above. Then these lots are allocated by need in proportion to the unconstrained requirements and rounded using this field:

"Units Per Case (CPt)"

Therefore, when full orders cannot be met, then the calculated fair share value is rounded to be increments of units_case.

**Note:** An order with a populated "Ship Date (Ot)" will only be created when an open or recommended order is committed for distribution by the Commit Orders or Balanced Allocation functions.

# Reports

## About Replenishment Planner reports

In the Replenishment Planner module, reports may be generated to show a range of data concerned with stock control and order scheduling. Reports are presented by selecting Reports from the main menu. The options are:

"Viewing the Critical report" on page 436 Critical

"Viewing the Stock Cover report" on page 435 Stock Cover

"Viewing the To Be Committed report" on page 434 To Be Committed

"Viewing the Stock Re-balancing report" on page 434 Stock Re-Balancing

All reports require an input to specify the options required. The To Be Committed report will only run whilst the Commit Orders screen is open.

The format of each report is identical, with the report itself being in a spreadsheet format with presentation controls available.

In the case of the Stock Cover report, a graphical presentation is a pie chart available as an alternative to the standard spreadsheet type format.

## Viewing the To Be Committed report

1. In Replenishment Planner, select the Channel Products for which you want to commit orders.
   See "About selecting Products and Channels" on page 35.
2. Select **Tools > Commit Orders**.
   The Commit Orders dialog box is displayed. See "About committing orders" on page 408.
3. Select **Reports > To Be Committed**.
   The To Be Committed report is generated in grid format. See "Report Viewer dialog".

## Viewing the Stock Re-balancing report

1. In Replenishment Planner, select the Channel Product(s) required.
   See "About selecting Products and Channels" on page 35.
2. Select **Reports > Stock Re-balancing**.
   The Stock Re-balancing Report Options dialog box is displayed.
3. Select one of the following ways to calculate available stock:
   - Opening Stock
   - Opening Stock + Due In Stock
   - Opening Stock + Open Orders a number of days from the Stock Date
   - Opening Stock + Due In Stock + Open Orders a number of days from the Stock Date

   See "Stock Re-balancing Report Options dialog".
4. Type or select the number of days to use if required.
5. Select one of the following ways to calculate the excess stock threshold:
   - **ROP + Lot Quantity**
   - **ROP + Number of Days Cover**

- **ROP + Number of Units**

6 See "Stock Re-balancing Report Options dialog".
7 Type or select the required number of days if required.
8 Click **Report**.
9 The Stock Rebalancing Report appears.
See "Stock Re-balancing Report dialog".

## Viewing the Stock Cover report

1 In Replenishment Planner, select the Channel Product(s) required.
See "About selecting Products and Channels" on page 35.
2 Select **Reports > Stock Cover**.
The Stock Cover Report Options dialog box is displayed.
3 Select one of the following ways to calculate available stock:

- Opening Stock
- Opening Stock + Due In Stock
- Opening Stock + Open Orders a number of days from the Stock Date

See "Stock Cover Report Options dialog".
4 Type or select the number of days to use if required.
5 Select one of the following ways to calculate the excess stock threshold:

- **ROP + Lot Quantity**
- **ROP + Number of Days Cover**
- **ROP + Number of Units**

See "Stock Cover Report Options dialog".
6 Type or select the number of days to use if required.
7 Select one of the following to use as sales in the calculation:

- **Current Months Sales**
- **Average Month Sales**

See "Stock Cover Report Options dialog".
8 Click **Report**.
The Stock Cover report is generated in grid format.

## Viewing the Stock Cover graph

1 In Replenishment Planner, select the Channel Product(s) required.

See "About selecting Products and Channels" on page 35.

2 Select **Reports > Stock Cover**.
The Stock Cover Report Options dialog box is displayed.

3 Select one of the following ways to calculate available stock:

- Opening Stock
- Opening Stock + Due In Stock
- Opening Stock + Open Orders a number of days from the Stock Date

See "Stock Cover Report Options dialog".

4 Type or select the number of days to use if required.

5 Select one of the following ways to calculate the excess stock threshold:

- **ROP + Lot Quantity**
- **ROP + Number of Days Cover**
- **ROP + Number of Units**

See "Stock Cover Report Options dialog".

6 Type or select the number of days to use if required.

7 Select one of the following to use as sales in the calculation:

- **Current Months Sales**
- **Average Month Sales**

8 Click **Graph**.
If more than one Channel is currently selected, the Choose a Channel to Graph dialog box is displayed.

9 Select the Channel required.
The Stock Cover Graph dialog box is displayed. See "Stock Cover Graph dialog".

## Viewing the Critical report

1 In Replenishment Planner, select the Channel Product(s) required.
See "About selecting Products and Channels" on page 35.

2 Select **Reports > Critical Report**.
The Critical Report Options dialog box is displayed.

3 Do one of the following:

- Click **Orders for Expedite** to include only orders which should be expedited.
- Click **Orders for Defer** to include only orders which should be deferred.
- Click **Both** to include both of the above.

4 Click **OK**.
The Critical report is generated in grid format. See "Critical report details".

# Properties

## About properties

The Properties Page window allows you to edit various table fields relevant to Replenishment Planner functionality without having to use the Database Administration module.

It can be accessed directly from the Replenishment Planner module (select **Properties** on the **Edit** menu)or from the Schedule Worksheet (click Properties).

Either route presents the Properties Page dialog box. It has five tabs, each one arranged in a spreadsheet format, in which inventory and forecast fields from the Channel Products table may be reviewed and edited.

Data can be exported from the Properties page using the Export to Excel or Export to Delimited file options.

See "Properties Page dialog".

## Viewing and editing properties

You can review and edit inventory, planning and forecast fields in the Channel Products table without having to leave the Replenishment Planner module.

1. In Replenishment Planner, select the Channel Product(s) required.
   See "About selecting Products and Channels" on page 35.
2. Select **Edit > Properties**.
   The Properties Page dialog box is displayed.
3. Click the required tab.
4. You can edit cells directly by clicking to select and typing over the contents. Alternatively, right-click in the selected cell and click one of the following commands on the shortcut menu:
   - Click **Edit Current Cell** to update only the currently selected cell with the new value.
   - Click **Vertical Edit for Product** to update all Channel Products for the Product currently selected.
   - Click **Vertical Edit for Channels** to update all Channel Products where the Channel is the same as the Channel currently selected.
   - Click **Vertical Edit for Column** to update all Channel Products selected.
5. Type the new value in the edit box at the bottom of the dialog.
6. Click ✓.
7. Click **Save**.

# Bills of Materials

## About bills of materials

A bill of materials (BOM) enables you to specify how a parent Product is assembled from one or more subordinate Products at the same Channel.

A BOM is characterized by:

- The code of the parent Product.
- The ID of the Channel at which the BOM is assembled.
- A description of the BOM.
- A unique BOM reference number assigned by Infor Demand Planning.

For each subordinate Product, the BOM defines:

- The code of the subordinate Product
- The quantity of the subordinate needed to make one unit of the parent (known as the "draw quantity")
- The average number of days needed to assemble the subordinate into the parent (known as the "offset period").

The important features to note are:

- A BOM is Channel-specific. Typically, you need only define the BOM at the Channel where it is assembled. (Although Infor Demand Planning appears to allow you to define the same BOM at different Channels, in fact each BOM has a different reference number.)
- A BOM is single-tiered. This implies that although a Product can be a subordinate in several BOMs, a subordinate may not also be a parent in another BOM at the same Channel. Equally, a Product cannot be a parent in more than one BOM at the same Channel.

Demand for a parent Product produces demand for its subordinate Products; this is known as "dependent demand." If a subordinate Product is also sold separately, it has both independent and dependent demand. When you generate a schedule of orders for a parent Product, you can optionally generate schedules for its subordinate Products.

See "About scheduling" on page 417.

Where Products have been defined with a predecessor/successor link, there is no automatic linking of BOMs. In this case a separate BOM has to be defined for the successor Product.

Where balanced allocation is used, this must be done after BOM scheduling because balanced allocation has to operate on a Product by Product basis, whereas BOMs operate by Channel, so one Product may not be completed before moving on to the next. This will essentially require balanced allocation, when run together with scheduling, to be done in a second pass of the database.

See "About balanced allocation" on page 390.

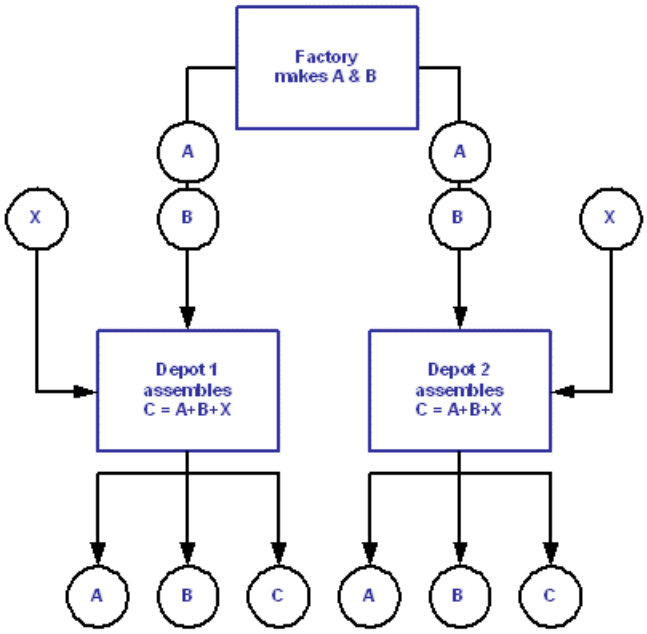
See "Examples of BOMs" on page 439.

# Examples of BOMs

## Example 1: Locally packed promotion

A terminal Channel assembles a promotional pack from finished goods available at that Channel. The components that make up the promotional pack can also be sold individually. Both the promotional pack and the individual items have forecasts and safety stock. The orders generated are requirements/shipments from the source to the terminal Channel for the individual items, and production orders at the terminal Channel to assemble the promotional pack. In this case the promotional pack code is assigned a Channel matrix where the terminal Channel is a source.

Items A and B are manufactured at the source plant, and shipped to nodes. Promotional pack C is made up of A and B and packaging X. Product C only exists at Depot 1 and Depot 2. Orders for packaging X are placed on an external supplier.

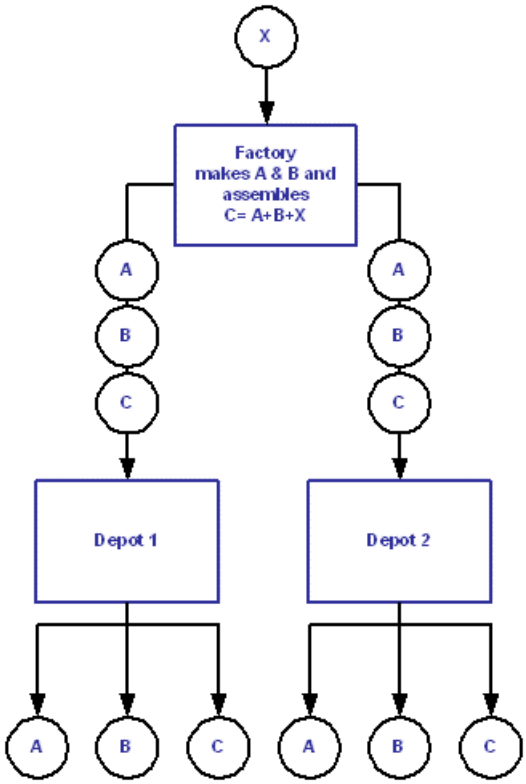



Channel matrix for A & B: Factory is a source, Depot 1 and Depot 2 store history and pass requirements up to the Factory.

Channel matrix for C & X: Depot 1 and Depot 2 are independent sources for internally sourced C and externally sourced X.

## Example 2: Centrally packed gift pack

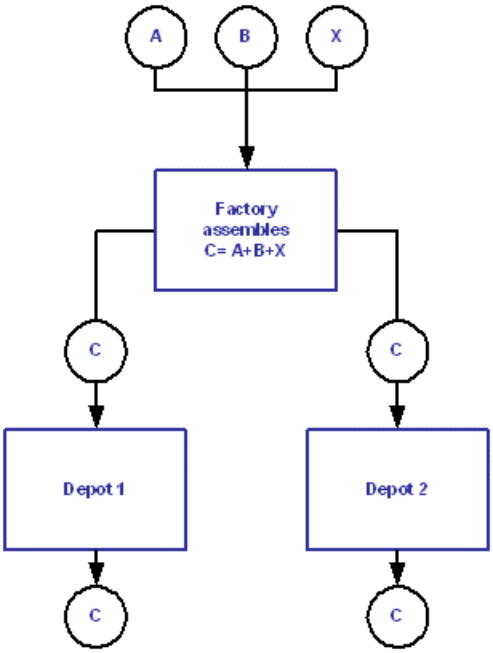
A terminal Channel sells a gift pack, which is assembled by the Channel above and shipped as a Product to the terminal Channel. Here shipments are generated for both individual items and gift packs, and production orders are generated at the source to assemble the gift pack.




The Channel matrix for A, B and C is the same, namely the factory and the two depots. X is supplied from an external supplier. Shipping schedules for A, B and C are generated at the depots and requirements passed up.

### Example 3: Manufacturing from raw materials

A manufacturing plant makes Products from components or raw materials, but only ships the finished item.




The Channel matrix for A, B and X consists of just the factory; all requirements come from BOM dependent demand. The Channel matrix for C has the two depots passing up requirements to create production orders at the factory.

## Creating a bill of materials

1. In Replenishment Planner, select **BOM Maintenance > Create BOM**.
   The Create BOM wizard is displayed.
2. Select the Products to use, then click **Next**.
3. Select a parent Product, then click **Next**.
4. Select the Channel or Channels at which the BOM is assembled, then click **Next**.
   If you select more than one Channel, Infor Demand Planning creates the same BOM at each Channel but with different BOM reference numbers.
5. Type a description for the BOM, then click **Next**.
6. Select the subordinate Products, and click **Next**.
7. For each subordinate Product, type the Draw Quantity and Offset Period. Click **Next**.
8. Click **Finish**.

## Viewing a bill of materials

1. In Replenishment Planner, select **Tools > BOM Structure Viewer**.
   The BOM Structure Viewer dialog box is displayed.

2 Do either of the following:

- Click **BOM Parent** to display the BOM tree structure with the parent Product at the top level and subordinate Products at the lower level.
- Click **BOM Subordinate** to display the BOM tree structure with the subordinate Products at the top level and all relevant parent Products at the lower level.

3 Click the Expand icon to expand each level of the tree. Click the Collapse icon to collapse the level.

**Note:** The final level of the tree view shows the draw quantity and offset period for each subordinate within the BOM.

## Modifying a bill of materials

1 In Replenishment Planner, select **BOM Maintenance > Modify BOM**.
The Modify BOM wizard is displayed.
2 Select the Products to use then, click **Next**.
3 Select the parent Product of the BOM you want to change, then click **Next**.
4 Select the Channel of the BOM you want to change, then click **Next**.
5 Edit the existing BOM description, then click **Next**.
6 Add or remove subordinate Products, then click **Next**.
7 Edit the existing Draw Quantity and Offset Period values as required. Click **Next**.
8 Click **Finish**.

## Deleting a bill of materials

1 In Replenishment Planner, select **BOM Maintenance > Delete BOM**.
The Delete BOM wizard is displayed.
2 Select the Products to use, then click **Next**.
3 Select the parent Product of the BOM you want to delete, then click **Next**.
4 Click **Finish**.

After deleting a BOM, you should re-schedule all subordinate items to remove dependent demand.

## Viewing dependent requirements

1 In Replenishment Planner, select the required subordinate Product.

See "About selecting Products and Channels" on page 35.

2 Select **Tools > Dependent Requirements Viewer**.
The Dependent Requirements Viewer dialog box is displayed.

3 To group the list by column, click and drag the desired column heading into a schematic view in the grouping area above the column header.

**Note:** You can also view dependent requirements by double-clicking in a Dependent Requirements cell in the Detail view of the Schedule Worksheet.

# Rough Cut Capacity Planning

## About rough cut capacity planning

The Demand Forecaster module generates forecasts to provide the best prediction of what customer demand will be. The Inventory Planner module takes into account forecast uncertainty and the other factors involved in generating safety stock levels. The requirements schedule is a statement of what needs to be purchased, produced or distributed within a firm planned period and what the expected requirements for inventory are beyond this time fence. This is constrained by minimum and incremental lot sizes and further restricted by receiving calendars.

The next level of constraint is that of the capacity that applies over a group of items. With sufficient advanced warning most capacity constraints can be solved. Action can be taken either to produce goods in advance, to bring in extra capacity, to find external capacity, or to reduce the damage to the business by selectively allocating the available capacity to protect key business items. Similarly, if a company has the ability to identify excess current capacity, future planned orders may be brought forward to ensure that valuable current capacity resources are not wasted.

The capacity workbench can help to identify these capacity issues in advance and so help to develop schedules that will plan to produce or buy what is required, when it is needed. This facility may be used to maximize usage of any number of resources including labor, machine hours, vehicle loads and so on. Effective use of the capacity workbench can help to minimize production, transportation and inventory costs.

Rough cut capacity planning (RCCP) uses the concept of workcentres. A workcentre is a resource or group of resources that provide constraints on the supply process, either manufacturing or other supply processes, such as distribution constraints. Any number of workcentres may be defined that have a time-phased capacity that can be defined in any unit of measure, typically this might be hours per shift or units per day.

See "About workcentres" on page 450.

Channel Products are then applied to one or more workcentres. Distribution requirements or procurement schedules for these items are then converted into the appropriate unit of capacity measure and accumulated against the available workcentre capacity.

Exceptions of over capacity are visually highlighted for corrective action. Remedial action may be taken to create an open order within the freeze period where excess capacity is available; an action not normally permitted during the normal scheduling routine. An alternative approach is to apply scheduling

logic that pulls forward recommended orders (beyond the freeze period) from times of capacity constraint, to fill periods with available capacity.

## Fixing capacity plans

When two or more concurrent periods have been selected in the Capacity Worksheet, it is possible to fix capacity plans for the selected periods.

1 Select **Capacity > Fix Plans**.
The Fix Capacity Plans dialog box is displayed.

2 Do one of the following:

- Click **Add target adjustments** to make adjustments to the target stock for all Products in the workcentre or adhoc group.
- Click **Make all selected orders open** to make all recommended orders within the selected periods open.

3 Click **OK**.

## About filling capacity

In order to balance required capacity with available production capacity, orders may be moved within a defined time period. The process involves a specified number of iterations in which each consists of an attempt to balance each of the selected periods, starting with the first, to within the target capacity. If a period is already within the defined target capacity and tolerance, then the Fill Capacity process moves to the next period.

If capacity required for a period is greater than its target capacity (plus the specified % tolerance), then orders are pushed out to the next period. The orders to be moved out are selected initially on the basis of the capacity balance specified during the creation of a workcentre. Items with a capacity balance of 1 are attempted to be moved first, then 2 and so on, up to 999. Items with a capacity balance of 0 are not moved. Orders with the same capacity balance are then selected based on "Good Quantity (Ot)" priority, with the process attempting to move the largest orders first.

If all periods are above the target capacity, then excess orders are be moved to the first period after the selected range.

If the required capacity is less than the target capacity (minus the specified % tolerance) for a period, then orders are brought forward from future periods. Orders to pull in are selected using the same method as when pushing out orders. However, orders are initially pulled from the next period, but if there are not sufficient orders to meet the capacity, orders from each of the subsequent periods within the selected range are also pulled in, until the current period is within tolerance of the target capacity.

Within a single iteration, a single period only has orders pushed back or pulled forward, not both. Hence, if a large order is moved out of the period to reduce its capacity, it could result in a need to transfer a smaller order back. In this case, the second move cannot be carried out until the system moves on to the next iteration.

An order is moved, if it puts the current period to within tolerance of the target capacity. All orders in the period are initially checked in this manner, and if no single order can achieve this, then orders are moved if they results in a decrease in the percentage deviation from tolerance.

After all the periods have been processed in this way, the iteration counter increases by 1 and the process returns to the first selected period, and continues. This process continues until all periods are within the requested tolerance, or the maximum number of iterations have been run.

The Average level (even spread) option calculates the target capacity as the sum of the required capacities over the selected periods, divided by the number of periods selected. The fill capacity process then attempts to move orders to achieve that level across all periods. The available capacity of each period is not used in this calculation. In this rule, the tolerance is treated as the number of capacity units above or below the average capacity that is acceptable.

The Manually defined level (capacity percentage) option calculates the target capacity for each period separately. This is calculated as the (manually defined) percentage of available capacity for each selected period. The fill capacity process then attempts to move orders so that the percentage capacity used is equal to the target capacity. In this rule, the tolerance is treated as the absolute percentage above or below the defined level that is acceptable. For example, a 95% capacity with a tolerance of 5%, fills to 90% to 100% of available capacity for each selected period. 60% capacity with the same 5% tolerance fills to 55% to 65% of available capacity.

### Warning/Error messages

There are two possible messages:

| Message | Explanation |
|---|---|
| "The maximum number of iterations has been met, but some items are still outside the specified tolerance.<br>Consider splitting order quantities and recalculating capacity again" | If the fill capacity process reaches the maximum number of iterations without achieving the set tolerance of the target capacity within each period a warning message is presented. In this case, some order quantities could be split to produce smaller orders or the maximum number of iterations increased. |
| "No orders were moved whilst attempting to fill capacity.<br>Check the fill capacity options, and the orders within the selected periods" | If the fill capacity process is unable to move any orders, given the selected options, and periods are outside tolerance then an error message is displayed. The logic of the options specified should be checked and re-specified as necessary. |

## About filling batches

The Fill Batchprocessis an option to allow recommendedandopen orders to be grouped together into batches of a specified size. This enables the capacity of a selected period to be filled with the assembled batch. This option will only be available if a single period outside the freeze fence has been highlighted in the Capacity Worksheet section and the capacity worksheet is displayed in units.

The process involves bringing orders forward from future periods, in order to reach the required batch size. Orders are moved forward in their total, and are not split to give the resultant batch size.

An attempt is made to move orders forward according to the following Orders table field priorities:

- "Estimated Need Date (Ot)", earliest date first
- "Due Date (Ot)", earliest date first
- "Good Quantity (Ot)", largest orders first.

Steps are repeated in the above cycle until either the specified batch quantity is satisfied, no further orders are available within the periodicity defined in the capacity worksheet or any remaining order would take the batch quantity in excess of that required.

### Warning/Error messages

There are three possible messages:

| Message | Explanation |
|---|---|
| "Given the current quantities, the orders within the worksheet could not meet the specified batch size. The filled batch is n weighted unit(s) short" | If the process is able to move some orders forward, but with the available orders, the requested batch size could not be exactly filled, a warning message is produced, detailing the number of units the batch size is short of its target. It may be possible to split future orders such as to create a part order of suitable size to fill the batch. |
| "There were not sufficient orders within the worksheet to meet the specified batch size. Decrease the batch size, to try again" | If the requested batch size could not be filled because the total "Good Quantity (Ot)" of all available future orders within the specified period is less than the specified batch size, then a separate warning is issued. In this case either the batch size must be re-specified to a lower value or additional order created to fill the batch. |
| "Could not fill batch. The selected period contains orders equal to, or larger than the specified batch size. Increase the batch size, to try again" | If existing orders in the selected period already exceed the specified batch quantity then an error message will be displayed. In this case, the batch size must be re-specified to a higher value to proceed. |

**Note:**

- The fill batch option is an ad-hoc activity that only applies to the capacity worksheet. It is not a group scheduling rule.

## Filling capacity

When viewing the Capacity Worksheet, it is possible to advance or delay orders to fill production capacity for a specified range of time periods.

1 In Replenishment Planner, open the Capacity Worksheet.
See "Viewing the Capacity Worksheet" on page 448.

2 Select **Capacity > Capacity View**.

3 Select the periods required.

4 Select **Capacity > Fill Capacity**.
The Fill Capacity wizard is displayed.

5 Do one of the following:

- Click **Average level (even spread)** if you want the system to work out the average level of capacity required in the selected periods and move orders to achieve that level.
- Click **Manually defined level** and type or select the target capacity percentage in the **(% capacity)** edit box.

6 Type or select a value in the **Requirements capacity, units tolerance** edit box.

7 Type or select a value in the **Maximum allowed iterations** edit box.

8 Select the **Allow movement of Open orders** check box if you want the system to additionally consider moving open orders.

9 Click **Next**.

10 Select the Products to be included.

11 Click **Finish**.

12 Click **Save Capacity**.

See "About filling capacity" on page 444.

## Filling a batch

When viewing the Capacity Worksheet, it is possible to advance recommended orders to fill a specified batch quantity during a particular period.

1 In Replenishment Planner, open the Capacity Worksheet.

See "Viewing the Capacity Worksheet" on page 448.

2 Select the period required.

3 Select **Capacity > Fill Batch**.
The Fill Batch Wizard is displayed.

4 Do one of the following:

- Click **Batch size covers workcentre** to base the batch size on the entire workcentre or adhoc group.
- Click **Batch size covers selected items only** to base the batch size only on the items selected in the Capacity Worksheet.

5 Type a value in the **Batch size** edit box, which is consistent with the current order values and must include the current weighting and scaling as shown in the toolbar.

6 Select the **Allow movement of open orders** check box if you want the system to consider moving open orders as well as recommended.

7 Click **Next**.

8 Select the Products to be included.

9 Click **Finish**.

10 Click **Save Capacity**.

See "About filling batches" on page 445.

## Defining capacity periodicity

When viewing the Capacity Worksheet, you can change the mix of days, weeks and months displayed (the periodicity).

1 In Replenishment Planner, open the Capacity Worksheet.

See "Viewing the Capacity Worksheet" on page 448.

2 Select **Capacity > Define Periods**.
The Periodicity dialog box is displayed.

3 Type or select the number of Days, Weeks and Months desired.

4 Click **OK**.
If necessary, Infor Demand Planning adds additional days or weeks to ensure that all months are aligned with their correct period end dates. These additions may mean that the number of whole months shown on the worksheet is one less than the number you requested.

## Viewing the Capacity Worksheet

1 In Replenishment Planner, select **Tools > Capacity Worksheet**.
The Workcentre Selection dialog box is displayed.

2 Either select an existing workcentre or use the currently selected items.

3 Select the order date to use from the **Order Date Selection** list box.

4 In the **Number of Days Offset** edit box, type or select the of days by which the orders displayed are offset from the order date selected.

5 Click **OK**.

If you selected to use the currently selected items, select a receiving calendar and Channel in the Adhoc Workcentre Selection dialog and click **OK**.

The Capacity Worksheet appears. See "Capacity Worksheet dialog".

**Note:** The ship date is only calculated for DRP orders. If no ship date is found, the order release date is used instead.

## Sorting the Capacity Worksheet

When viewing the Capacity Worksheet, it is possible to sort the Channel Products displayed. A simple ascending or descending alphabetic sort can be achieved by clicking on the Product Code or Description column headings. A second click reverses the sort order.

1. To perform a more advanced sort based on a Product or Channel Product field, select **Capacity > Sort**.
   The Sort Capacity Worksheet dialog box is displayed.
2. Select to sort by either a Channel Product or Product field.
3. Select the actual field to use from the list box.
4. Clear the **Ascending** check box if you want to arrange the Products in descending order.
5. Click **OK**.

## Recalculating schedules in the Capacity Worksheet

When viewing the Capacity Worksheet, it is possible to recalculate schedules for the Products displayed without leaving the worksheet.

1. Select **Capacity > Reschedule**.
   The Recalculate Schedules dialog box is displayed.
2. Choose to reschedule only the Channel Product currently selected in the worksheet or all Channel Products in the workcentre or adhoc group.
3. Choose to reschedule From current period selected in the worksheet or for All periods.
4. Click **OK**.
   The Calculate Schedule dialog box is displayed.
5. Select the **Include Sub-Ordinates with corresponding BOM Parents** check box if you want to reschedule BOM subordinates linked to any BOM parents currently selected.

   See "About bills of materials" on page 438.
6. Click **OK**.
7. Click **Close.**
8. Select **View > Output** to display the process log.
9. Click **Save Capacity**.

   **Note:** If Order Book is in use, the Order Book table must be populated with the latest information prior to running the scheduling process. See "About the Order Book" on page 198.

# Workcentres

## About workcentres

Rough cut capacity planning (RCCP) uses the concept of workcentres. Any number of workcentres may be defined that have a time-phased capacity that can be defined in any unit of measure, typically this might be hours per shift or units per day.

A workcentre models a constraint, applicable to a selection of Products at a defined Channel. A workcentre is also associated with a receiving calendar to define available work units (for example, shifts, man-hours or machine hours) in any given day. In most situations a Product will share the same receiving calendar with its workcentre. If this is not the case, the available days defined by the workcentre calendar takes precedence over the available days defined for the individual item, for the purpose of calculating available capacity. Units produced per work unit (shifts etc.) are stored by Channel Product at the workcentre level. This allows a Channel Product to be defined at more than one workcentre.

The RCCP worksheet summarizes the open and recommended orders for each Channel Product in a workcentre or an ad-hoc group. It is possible to view the worksheet in units (production quantities), weighted units or by the defined capacity measure. There is a summary of the group and comparison to the stated capacity at the bottom of the screen.

To enable greater visibility in RCCP, it is possible to evaluate the capacity loading based on different order date fields or on a variable offset defined at run time. For the purposes of RCCP, the following fields are relevant:

- **Due Date (Ot)** time at which the Product becomes available.
- **Release Date (Ot)** date at which the orders should be released to production or the supplier at the agreed lead time.
- **Ship Date (Ot)** allows orders generated by Balanced Allocation or Commit Orders to reflect the loading at the time the order should be dispatched within the DRP network.

The offset allows any of these dates to be used and restates the capacity required based on the date option selected.

## Creating a workcentre

1. In Replenishment Planner, select **RCCP Maintenance > Create Workcentre**.
   The Create Workcentre wizard is displayed.
2. Select the Products to use then click **Next**.
3. Select the workcentre Channel then click **Next**.
4. Type a code and unique name for the workcentre in the edit boxes.
5. Select the default order date from the list box then click **Next**.
6. Select a receiving calendar from the Receiving Calendar Code list then click **Next**.

7 Select the Channel Products to be included in the workcentre then click **Next**.
8 Type the required Capacity Balance and Units Per Work Unit values then click **Next**.
See "Modify Workcentre Wizard: Capacity Balance and Units Per Work Unit dialog".
9 Use the Expand and Collapse icons to review the constituent parts of the workcentre.
10 Click **Finish**.

## Modifying a workcentre

1 In Replenishment Planner, select **RCCP Maintenance > Modify Workcentre**.
The Modify Workcentre Wizard is displayed.
2 Select the Products to use then click **Next**.
3 Select the workcentre to be modified from the **Workcentre Code** list then click **Next**.
4 Edit the Workcentre Code and Workcentre Description as required.
5 Select the Default Order Date from the list box then click **Next**.
6 Select a receiving calendar from the **Receiving Calendar Code** list then click **Next**.
7 Make any changes to the selection of Channel Products included in the workcentre then click **Next**.
8 Edit the Capacity Balance and Units Per Work Unit values as required then click **Next**.
See "Modify Workcentre Wizard: Capacity Balance and Units Per Work Unit dialog".
9 Use the **Expand** and **Collapse** icons to review the modified workcentre.
10 Click **Finish**.

## Deleting a workcentre

1 In Replenishment Planner, select **RCCP Maintenance > Delete Workcentre**.
The Delete Workcentre wizard is displayed.
2 Select the Channels to use then click **Next**.
3 Select the workcentre to be deleted from the Workcentre Code list then click **Next**.
4 Use the Expand and Collapse icons to review the constituent parts of the workcentre marked for deletion.
5 Click **Finish**.

# Scenario Products

## About Scenario Products in RP

Scenario Products may be created in the Demand Forecaster module. Once created, they may be used within the Replenishment Planner module, subject to certain restrictions.

See "Creating Scenarios" on page 277.

### Select Products

Functions within Infor Demand Planning are carried out on the current Product or Channel Product selection. If Scenario Products are required to be included in any RP function, they must first be selected. Scenario Products will only appear in the Product selection window, if the main menu option View and Scenario Products is selected.

Once ticked, Scenario Products are displayed in the Product selection window as any other Standard Product. The Product selection window can be called from either the File menu option or by clicking on the Select Products icon.

### RP functions available for Scenario Products

If Scenario Products are part of the current Product selection (defined above), they are included in the following functions:

- Properties Window
- Order Viewer
- Reporting
- Scheduling
- Committing and Balanced Allocation
- Rough Cut Capacity Planning.
- Load Forecasts from Demand Forecaster
- Calculate ROP

Any changes made will not be applied to the live, Standard Product (known as the base case) until the Scenario Product details have been approved and formally copied across to the base case.

See "Copying Scenarios" on page 453.

### RP functions not available for Scenario Products

Even when Scenarios Products are part of the current Product selection, they are excluded from all bill of materials functionality. These functions are:

- Create/Modify/Delete BOMs

- BOM Structure Viewer
- Dependant Requirements Viewer

## Creating Scenarios

1. In Demand Forecaster, select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
2. Select the required Product from the list.
3. Select **Edit > Scenarios > Create Scenario**.
   The Select scenario suffix dialog box is displayed.
4. Select a Scenario suffix from the list or type a new one.
5. Type a description if required.
6. Click **OK**, then click **OK** again when created successfully.

   **Note:**

   - This functionality is only available for Standard Product and PFGs.
   - When a Scenario is created, it is created for all Channels associated with the base case Product.

## Copying Scenarios

1. In Demand Forecaster, select **Modules > Demand Forecasting > Edit Forecasts**.
   The five Edit Forecasts windows are displayed.
2. Select the required Product from the list.
3. Select **Edit > Scenarios > Copy Scenario**.
   The Copy Scenario dialog box is displayed.
4. Click the code of the Product to copy to.
5. Click **OK**, then click **Yes** to confirm.
6. Click **OK** when copied successfully.

## Copying Scenarios

1. In Replenishment Planner, select the Channel Product to be copied.
   See "About selecting Products and Channels" on page 35.
2. Select **View > Scenario Products** unless there is already a check mark next to this command.
3. Select **Edit > Scenarios**.
   The Copy Scenario dialog box is displayed.
4. Click the code of the Product to copy to.

5 Select the **Would you like to copy all DF fields?** check box if you want to copy Channel Products table forecasting fields.
6 Select the **Would you like to copy all IO fields?** check box if you want to copy Channel Products table inventory fields.
7 Click **OK**, then click **Yes** to confirm.
8 Click **OK** when copied successfully.

## Deleting Scenarios

1 In Demand Forecaster, select **Modules > Demand Forecasting > Edit Forecasts**.
The five Edit Forecasts windows are displayed.
2 Select the required Product from the list.
3 Select **Edit > Scenarios > Delete Scenario**.
The Delete Scenario dialog box is displayed.
4 Select the Scenario you want to delete and click **Delete**.
5 Click **Yes** to confirm.
6 Click **OK** when deleted successfully.

# Sales and Operations Planner

## About S&&OP plans and budgets

Budgets may be assembled and production plans and actuals posted to the database within the Replenishment Planner module.

Sales & Operations Planner must first be configured before these options become available.

See "Configuring Sales and Operations Planner" on page 202.

In addition, S&OP functions must be enabled for the relevant Channel Products.

See "Enabling Channel Products for S&OP and SBT" on page 204.

## Posting requirements and inventory plans

1 In Replenishment Planner, select the required Channel Products.
See "About selecting Products and Channels" on page 35.

2 Select **S&OP > Post Plans**.
The Post Plans dialog box is displayed.
3 In the Post Plan panel, choose to either overwrite existing plans in the S&OP Requirements Plans (SOP_REQS_PLANS) and S&OP Inventory Plans (SOP_INV_PLANS) tables, or insert temporary plans in the S&OP Temporary Requirements Plans (SOP_REQS_TMP) and S&OP Temporary Inventory Plans (SOP_INV_TMP) tables.
4 Click **OK**.
5 Click **Close**.
6 Select **View > Output** to view the process log.

## Posting requirements and inventory actuals

1 In Replenishment Planner, select the required Channel Products.
See "About selecting Products and Channels" on page 35.
2 Select **S&OP > Post Actuals**.
The Post Actuals dialog box is displayed.
3 Click **OK**.
4 Click **Close**.
5 Select **View > Output** to view the process log.

**Note:** For each Channel Product, the value in the "Production This Period (CPt)" field is posted as the requirements actual and the sum of the values in the "Opening Stock (CPt)" and "Due In Stock (CPt)" fields is posted as the inventory actual.

## Making inventory and requirements budgets

1 In Replenishment Planner, select the required Channel Products.
See "About selecting Products and Channels" on page 35.
2 Select **S&OP > Make Budget**.
The Make Budget dialog box is displayed.
3 Do one of the following:
- Select **This Year** if you want to post the budget for the current year only.
- Select **Next Year** if you want to post the budget for the next year only.
- Select **Both Years** if you want to post the budget for the current year and the next year.

4 Select the budget name.
5 Click **OK**.
6 Click **Close**.
7 Select **View > Output** to view the process log.

For weekly S&OP ("S&OP Data Stored (St)" field set to 8 or 9) it is not possible to post inventory budgets if the "Sales Plan For Inventory Calculation (St)" field is set to 102 or 104.

# Sales Budgeting and Tracking

# 8

## About Sales Budgeting and Tracking

Sales Budgeting & Tracking (SBT) enables you to compare plans and budgets with actual data, to asses their accuracy.

- Sales Plan

An SBT sales plan is a slice of net or statistical forecast data for the current fiscal year. This may be either the most recent data, or offset from the present by a defined number of periods. The previous fiscal year's data is also available for review. The key to an effective sales plan is deciding which slice to use.

See "About SBT sales plans" on page 459.

- Budget

There are three possible SBT budgets: original, revised and target. You can import a budget or save the current forecast as a budget.

See "About SBT budgets" on page 462.

- Actuals

The data against which the sales plan and the budget are judged. This may be sales, demand or (more usually) adjusted demand.

It is important to realize that all of the above – sales plans, budgets and actuals – are kept separately for each individual Channel Product for which SBT has been enabled by setting the "Store SOP Data (CPt)" field.

SBT is permissible for all types of Product except Forecast Group Products.

To compare plans and budgets with actuals, you can view Sales Planning reports. Each report consists of one or more slant charts (and associated bar charts).

See "About Sales Planning reports" on page 463.

# About the difference between SBT and S&&OP

Infor Demand Planning offers two ways of comparing what you planned with what actually happened.

- Sales Budgeting & Tracking (SBT)

This Windows-based Demand Forecaster module enables you to compare actual sales against an annual sales plan and budget (with the option of revising the budget part-way through the year).

- Sales & Operations Planner (S&OP)

This Web-based Collaborate module offers more sophisticated analysis of sales, with four different types of sales plans, and the option of including requirements and inventory plans too.

These features can be run side-by-side, as they use different database tables. Both SBT and S&OP are configured within Database Administration.

**Note:**

- Although S&OP and SBT can be used at the same time, there are subtle differences in the way they work. This means that it is sometimes not advisable to make direct comparisons between their reports.

# Configuring Sales Budgeting && Tracking

Sales Budgeting & Tracking (SBT) is usually configured when the database is set up.

1 In Database Administration, select **System > System Data**.
The System Data dialog box is displayed.

2 In the **SOP Control** box, select one of the following:

- **Forecasting Only (SBT)**, to enable only SBT functions.
- **Full SBT and SO**P, if you want to enable all SBT and S&OP Sales, Requirements and Inventory functions.
- **SBT & S&OP Sales Only**, to enable SBT and also S&OP Sales functions.

Changing this setting affects the value of the S&OP Data Stored field of the System table. See "S&OP Data Stored (St)".

3 In the **History Row for SBT** box, select the type of history that should be used by default as "actuals" in the SBT functions (sales, demand or adjusted demand).

You can override this default when producing Sales Planning reports.

4 In the **Remove History SBT** box, type the maximum number of periods of history that should be stored for SBT purposes.

If you do not specify a number, Infor Demand Planning assumes either 36 or 39 periods, depending on whether there are 12 or 13 forecast periods per year.

**Note:**

- You can enable Sales & Operations Planner (S&OP) at the same time as enabling SBT.
- The database's application defaults are set up so that every Channel Product you import or create is automatically enabled for the SBT and S&OP functions you have configured.

# Enabling Channel Products for S&OP and SBT

Typically, the application defaults ensure that when new channel products are added to the database, they are automatically enabled for all S&OP and SBT functions that have been configured. This is achieved by configuring the application defaults so that the default initial value of Store SOP Data (CPt) is "1". See "Store SOP Data (CPt)" and "Editing application defaults" on page 70.

However, if a channel product is not enabled, you can enable it by editing the Channel Products table.

**1** In Database Administration, select the required channel products and perform these actions for the selected channel products:

a Select the check box in the **Store SOP Data** cell.

b Optionally, for SBT functions, in the **SOP Offset Periods** cell, specify the offset, in periods, between the SBT sales plan values and the period forecast values.

See "Editing the Channel Products table" on page 116.

**2** If S&OP functions are already in use, reinitialize the S&OP tables.

This is necessary because the S&OP tables require new rows for the newly enabled channel products. See "Reinitializing sales and Operations Planner" on page 204.

> ⚠ **Caution:** If the S&OP tables contain data that you do not want to lose, export the data before you reinitialize S&OP, then import it again afterwards.

See "Configuring Sales and Operations Planner" on page 202 and "Configuring Sales Budgeting && Tracking" on page 458.

# Sales Plans

## About SBT sales plans

An SBT sales plan is a slice of net forecast or statistical forecast data for the current fiscal year.

### Simple and offset plans

A simple sales plan consists of the most recent forecast for each period of the year. For future periods, this is nothing more than the current forecast. But for historical periods, the most recent forecast for each period is the forecast that was made in the preceding period.

In contrast, an offset sales plan consists of demand forecasted at even earlier times. For example, if a Channel Product has a lead time of two months, you might want its sales plan to be based on forecasts made two months prior to the most recent forecast. (In fact, Infor Demand Planning allows a plan to be offset by up to a year.)

The offset for any particular Channel Product may be defined by:

- A specific number of periods: "SOP Offset Periods (CPt)".
- The Channel Product's lead time: "Lead Time (CPt)".
- The Channel Product's freeze fence: "Open Orders Freeze Period (CPt)".

When you generate a Sales Planning report, you can select any of these offsets, or specify an offset just for that report.

See "Examples of sales plans" on page 460.

### Saving forecast data

It follows that in order to produce this year's plan, and allow last year's plan to be reviewed, Sales Budgeting & Tracking needs to store not only the current net forecast (statistical forecast plus market intelligence) but also historical forecasts for the current year, the previous year, and the year before that. Moreover, each forecast must itself cover at least two years into the future.

Once SBT is enabled, the process of saving the current forecast for SBT sales plans happens automatically at period end. If a Channel Product's current forecast changes after period end, you can either update its original (that is, existing) sales plan data or save the changed forecast as a temporary (non-offset) sales plan. Any temporary sales plan is deleted automatically at the next period end.

**Note:**

- If the forecast changes mid-period, but you don't update the original plan data before period end, the changed forecast is never reflected in SBT plans.

## Examples of sales plans

The following diagrams show a series of forecasts for a Channel Product. The current period is May, and the current forecast is highlighted in blue. (For simplicity, each forecast covers only one year, and less than a full year's historical forecasts are shown.)

### A plan with no offset

Let us assume that the sales plan for this Channel Product has no offset, so that it is based on the most recent forecast data for each period. The green figures are the plan, and the red figures show

from which forecasts the plan is derived. Note that in this situation, the plan for all future periods is simply the current forecast.

| | | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug | 7 | 10 | 14 | 17 | 18 | 25 | 21 | 21 | 19 | 17 | 12 | 9 | | | | | | | | |
| | Sep | | 11 | 13 | 19 | 17 | 24 | 20 | 21 | 20 | 18 | 13 | 10 | 7 | | | | | | | |
| | Oct | | | 12 | 19 | 20 | 27 | 25 | 22 | 21 | 20 | 14 | 11 | 8 | 9 | | | | | | |
| | Nov | | | | 20 | 21 | 28 | 27 | 21 | 21 | 19 | 13 | 11 | 8 | 9 | 14 | | | | | |
| | Dec | | | | | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | | | | |
| | Jan | | | | | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 21 | | | |
| | Feb | | | | | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 25 | 31 | | |
| | Mar | | | | | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 26 | 32 | 30 | |
| | Apr | | | | | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 27 | 32 | 31 | 29 |
| Now | May | | | | | | | | | | | | | | | | | | | | |
| | Jun | | | | | | | | | | | | | | | | | | | | |
| | Plan | 7 | 11 | 12 | 20 | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 27 | 32 | 31 | 29 |
| | | | | | | | | | | Now | | | | | | | | | | | |

### A plan with a two-period offset

Now assume that the plan has a two-period offset. Again, the green figures are the plan, and the red figures show from which forecasts the plan is derived. Note that in this situation, the plan for all future periods is not related to the current forecast.

| | | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aug | 7 | 10 | 14 | 17 | 18 | 25 | 21 | 21 | 19 | 17 | 12 | 9 | | | | | | | | |
| | Sep | | 11 | 13 | 19 | 17 | 24 | 20 | 21 | 20 | 18 | 13 | 10 | 7 | | | | | | | |
| | Oct | | | 12 | 19 | 20 | 27 | 25 | 22 | 21 | 20 | 14 | 11 | 8 | 9 | | | | | | |
| | Nov | | | | 20 | 21 | 28 | 27 | 21 | 21 | 19 | 13 | 11 | 8 | 9 | 14 | | | | | |
| | Dec | | | | | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | | | | |
| | Jan | | | | | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 21 | | | |
| | Feb | | | | | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 25 | 31 | | |
| | Mar | | | | | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 26 | 32 | 30 | |
| | Apr | | | | | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 27 | 32 | 31 | 29 |
| Now | May | | | | | | | | | | | | | | | | | | | | |
| | Jun | | | | | | | | | | | | | | | | | | | | |
| | Plan | 6 | 9 | 14 | 19 | 20 | 28 | 26 | 27 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 25 | 31 | 0 | 0 |
| | | | | | | | | | | Now | | | | | | | | | | | |

Therefore, mid-period changes to the current forecast affect only sales plans that have no offset.

# Updating existing SBT sales plan data

If a Channel Product's current forecast has changed, you can update its existing SBT sales plan data.

1 In Demand Forecaster, select one or more Channel Products for which you want to update the existing sales plan.

See "About selecting Products and Channels" on page 35.

2 Select **Modules > Sales Budgeting & Tracking > Edit Sales Plans**.

3 Click **Overwrite existing plan**, then click **OK**.

**Note:** Although the sales plan data is updated for every currently-selected Channel Product, it has noticeable effect only for those Channel Products which (a) actually have changed forecasts and (b) have non-offset plans (that is, plans based on the most recent forecast data).

## Creating temporary SBT sales plans

If a Channel Product's current forecast has changed, you can use it to create a temporary, non-offset SBT sales plan.

1 In Demand Forecaster, select one or more Channel Products for which you want to create (or update) a temporary sales plan.

See "About selecting Products and Channels" on page 35.

2 Select **Modules > Sales Budgeting & Tracking > Edit Sales Plans**.

3 Click **Insert temporary plan**, then click **OK**.

**Note:**

- Although a temporary plan is saved for every currently-selected Channel Product, it has noticeable effect only for those Channel Products that (a) actually have changed forecasts and (b) have non-offset plans (that is, based on the most recent forecast data).
- All temporary sales plans are zeroed at the next period end.

# Budgets

## About SBT budgets

A Channel Product can have up to three different SBT budgets:

- An original budget, typically produced at the beginning of a fiscal year.
- A revised budget, typically produced partway through the fiscal year.
- A target budget, typically produced for a specific sales promotion.

All budgets are based on fiscal years. Usually, each budget extends to just this fiscal year and the next, but Infor Demand Planning supports 10-year budgets if required. Last year's budgets are also available for review.

You can either import a budget or save the current forecast as a budget. If you save the current forecast partway through the year, the year-to-date periods are actuals and the remainder of the year is forecast.

## Creating SBT budgets from the current forecast

1 In Demand Forecaster, select one or more Channel Products for which you want to create a budget.
See "About selecting Products and Channels" on page 35.

2 Select **Modules > Sales Budgeting & Tracking > Initialize Budgets**.
The Initialize Budgets dialog box is displayed.

3 Under Post Budgets For, specify whether you want to create a budget for this year, next year, both, or up to 10 consecutive years.

4 Under Post Budgets As, specify whether this is an original budget, a revised budget or a sales target budget.

5 If you want to copy time-phased weighting (TPW) values from one TPW vector to another, for all of the selected Channel Products, click **TPW** to expand the dialog, then select the source and target TPWs. Optionally, you can limit the number of forecast TPW values that are copied (historical TPW values are always copied).
See "About time-phased weightings" on page 108.

6 Click **OK**.

## Importing SBT budgets

You can import SBT budgets by an automated process that reads an import file into a raw import table, then automatically transfers the acceptable data into the correct SBT table (named SOP_DATA).

The process is triggered by loading a special Import Raw Budgets import template when importing the file.

See "About automated importing" on page 138 and "Importing data by loading a template" on page 137.

# Sales Planning Reports

## About Sales Planning reports

A Sales Planning report consists of a set of slant charts. When generating such a report for a selection of Channel Products, you can specify which of the following slant charts you want to include:

- A slant chart for each individual Channel Product.
- A slant chart for each Product, summed across all Channels.
- A slant chart for each Channel, summed across all Products.
- A slant chart summed across all Products and Channels.

- A slant chart for one or more groups of Products, based on a selected Products table field, summed across all Channels.

A report can include slant charts for either the current or the previous fiscal year. The format of each slant chart is the same in all cases.

See "Interpreting a slant chart" on page 465.

The slant charts can be weighted by any static weighting or time-phased weighting.

See "About static weightings" on page 107.

See "About time-phased weightings" on page 108.

## Viewing a Sales Planning report

1. In Demand Forecaster, select the Channel Products you want to include in the report.
   See "About selecting Products and Channels" on page 35.
2. Select **Modules > Sales Budgeting & Tracking > Reports**.
   The Sales Planning Report Options dialog box is displayed.
3. On the **Report Control** tab, specify which of the following slant charts you want to include in the report:
   - A slant chart for each individual Channel Product.
   - A slant chart for each Product, summed across all Channels.
   - A slant chart for each Channel, summed across all Products.
   - A slant chart summed across all Products and Channels.
   - A slant chart for one or more groups of Products, based on a selected Products table field, summed across all Channels.
4. On the **Report Detail Options** tab, specify this information:
   - The type of history to show as "actuals" in the report (sales, demand or adjusted demand).
   - The type of forecast data to show (statistical or net forecast).
   - The type budget to show (original, revised or sales target).
   - The type of sales plan to show (original or temporary).
   - The offset, if any, between the actuals and the period forecast data to which they are compared.
5. Optionally, on the **Report Weighting** tab, specify this information:
   - Whether the report is to be weighted by a static weighting or a time-phased weighting.
   - Whether the report is to be scaled.
6. Click **OK**.
7. Specify whether you want the report to show the previous or the current fiscal year.
   The requested slant charts are displayed as a multi-page report in the Slant Chart window. An SOP toolbar and a Report toolbar also appear. See "Slant Chart window".

8 To page forwards and backwards through the report, select **File > Next item** or **Previous item**.

**Note:**

- To change the font used in the report, select **Tools > Fonts**.
- To print the report, select **File > Print**.

## Viewing a Sales Planning bar chart

You can view a graphical representation of any slant chart in a Sales Planning report. The graph shows a bar chart of plan, actual and budget data for each period.

1 Create a Sales Planning report that includes the slant chart that you want to view, and go to that page of the report.

See "Viewing a Sales Planning report" on page 464.

2 On the SOP toolbar, click **SOP Plot**.
A Sales Planning Plot window appears, showing a bar chart based on the underlying slant chart. The window has a Chart toolbar and a legend. See "Sales Planning Plot window".

**Note:**

- To copy the chart to the Clipboard as a bitmap (.bmp) file, on the Chart toolbar, click **Snapshot**.
- To print the graph, on the Chart toolbar, click **Print**.

## Interpreting a slant chart

Here is a typical example of a slant chart:

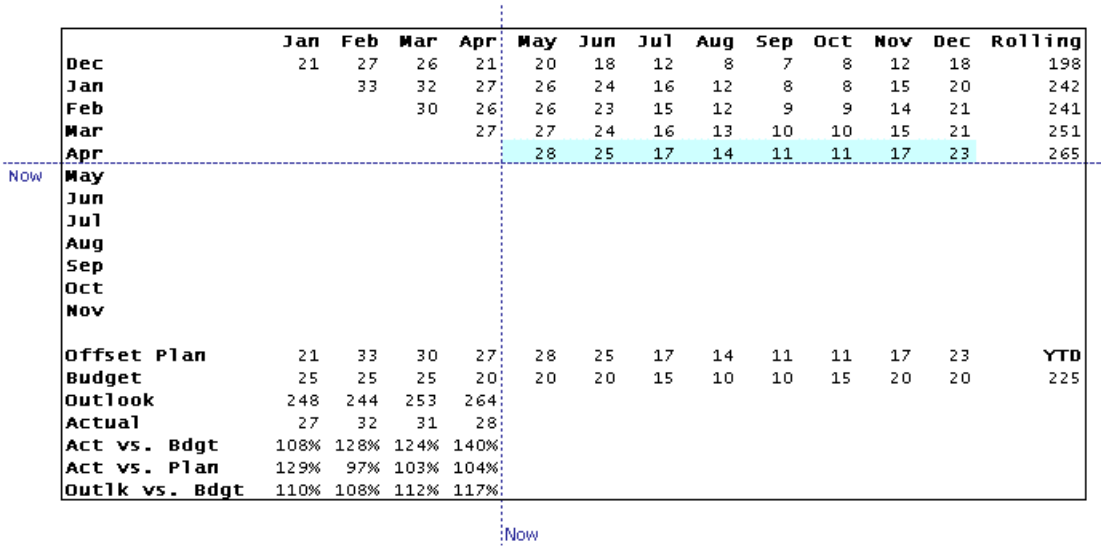
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 |
| Now May | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | |

Now

The "Now" lines shows the current point in the fiscal year.

## Forecasts

The figures above the horizontal "Now" line show the forecasts made since the beginning of the (fiscal) year. In the following example, the most recent forecast (made in April, for May onwards) is highlighted:

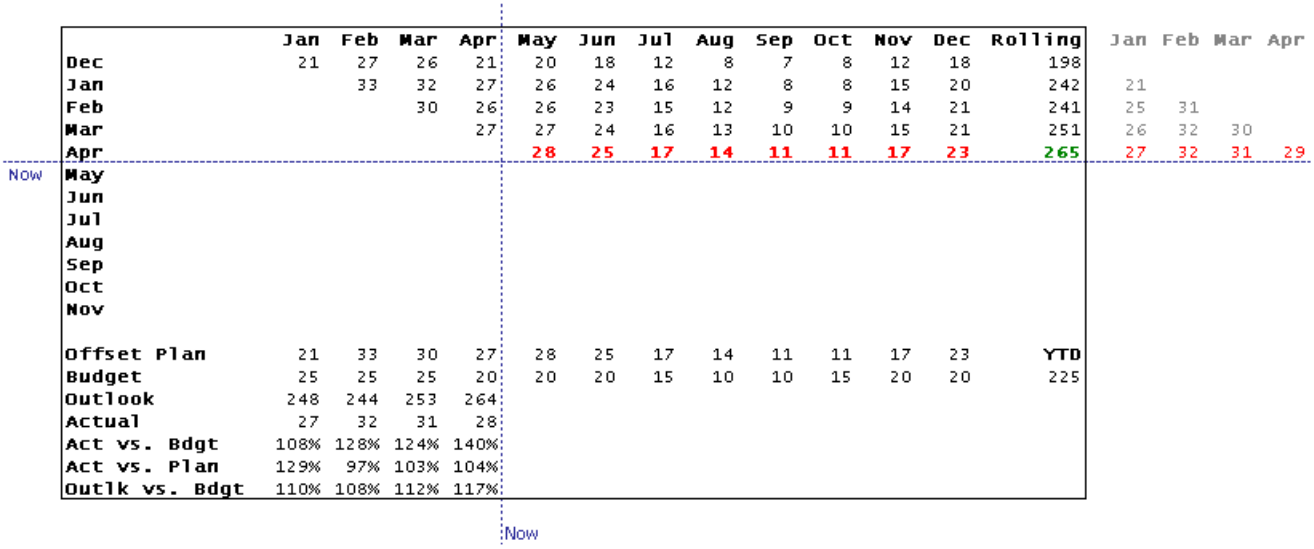


| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 |
| Now May | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | |

Now

## Rolling totals

The Rolling column can be hard to understand until you realise that it sums a full twelve periods although only the current (fiscal) year is shown in the slant chart. So, for example, the Rolling figure for April is the sum of the forecast from May this year to April next year, although only this year's forecast is shown:



| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling | Jan | Feb | Mar | Apr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 | | | | |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 | 21 | | | |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 | 25 | 31 | | |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 | 26 | 32 | 30 | |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 | 27 | 32 | 31 | 29 |
| Now May | | | | | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD | | | | |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 | | | | |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | | | | | |

Now

In this example, only the Rolling figure for December sums values that are all present in the chart.

## Offset Plan

The Offset Plan row shows the sales plan, offset from the present by the defined number of periods. For a chart that is showing an individual Channel Product, the relationship between the plan values and the period forecast values can be seen directly. For example, if the offset is zero, the plan (green figures) is simply the most recent forecast (red figures):

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 |
| Now | | | | | | | | | | | | | |
| May | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | |

Now

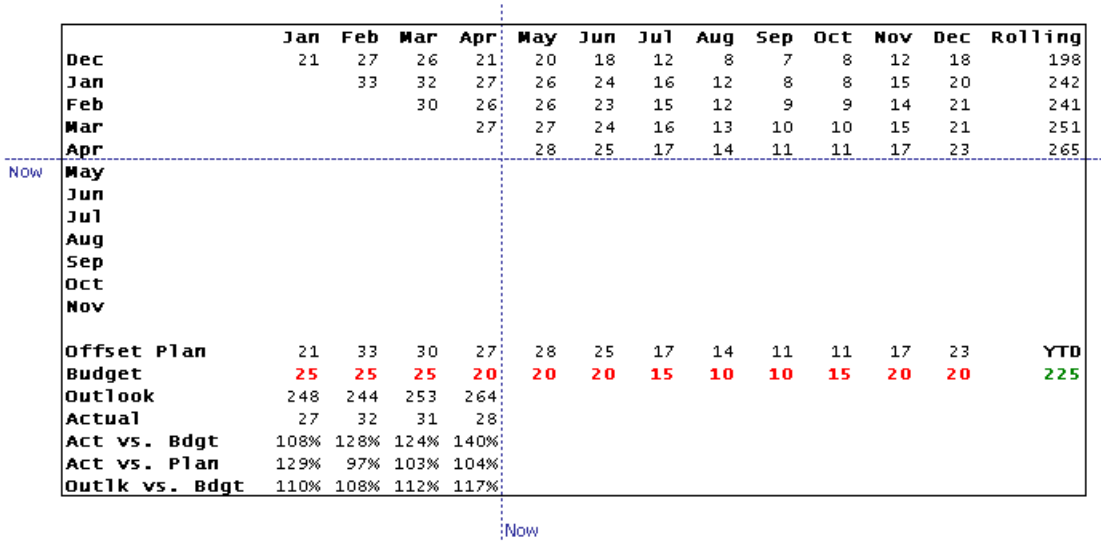
However, for summed slant charts, this relationship may not be obvious, because different Channel Products may have different offsets.

See "About SBT sales plans" on page 459.

## Budget

The Budget figures for a year can be generated either by importing, or by saving a forecast. Remember that there are three different types of budget that can be reported. The YTD figure is really the total budget for the year.

See "About SBT budgets" on page 462.



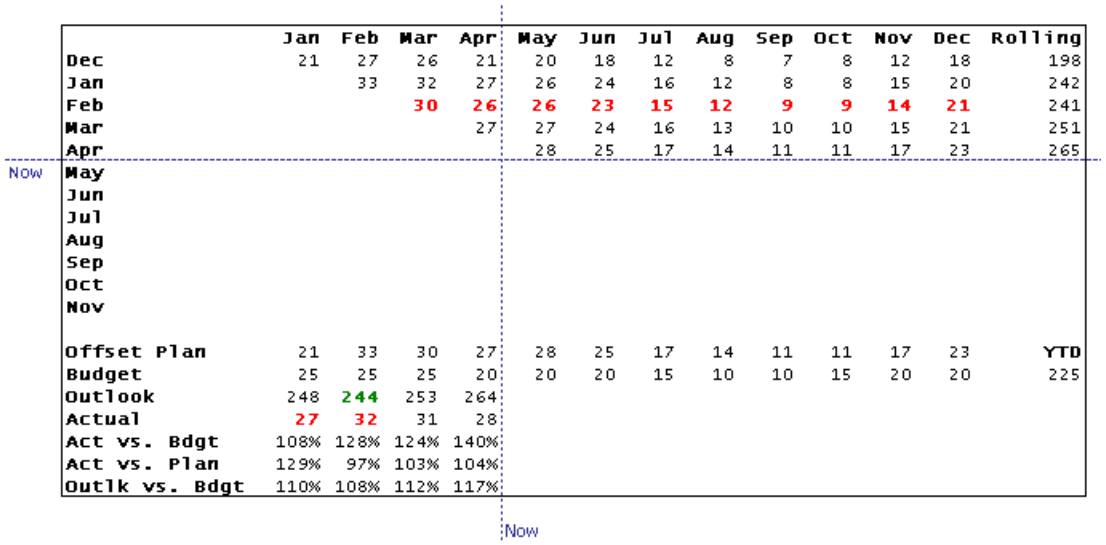
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 |
| Now May | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | |

Now

## Outlook and Actual

Actual figures show the sales, demand or adjusted demand recorded for the (fiscal) year to date.

The Outlook for a period is the total actuals up to and including that period, plus the forecast onwards to the end of the (fiscal) year. So, for example, the Outlook in February is the sum of the actuals for January and February, plus the forecast made in February from March to December:

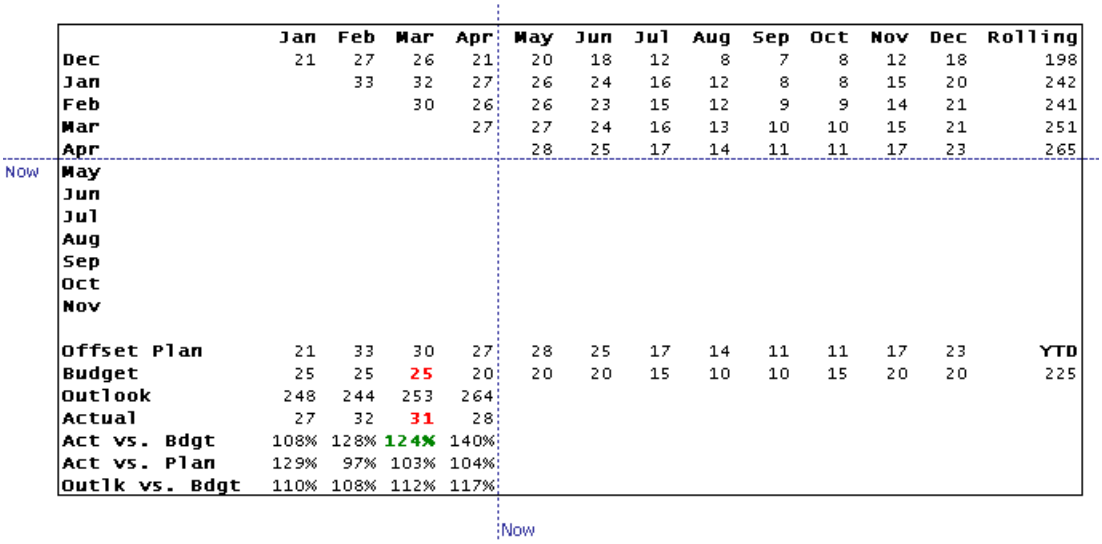


| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 |
| Now May | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | |

Now

## Actual vs. Budget

Simply a month-by-month comparison of the Actual and Budget values. For example, the Actual vs. Budget for March (124%) is the percentage change from the Budget (25) to the Actual (31):

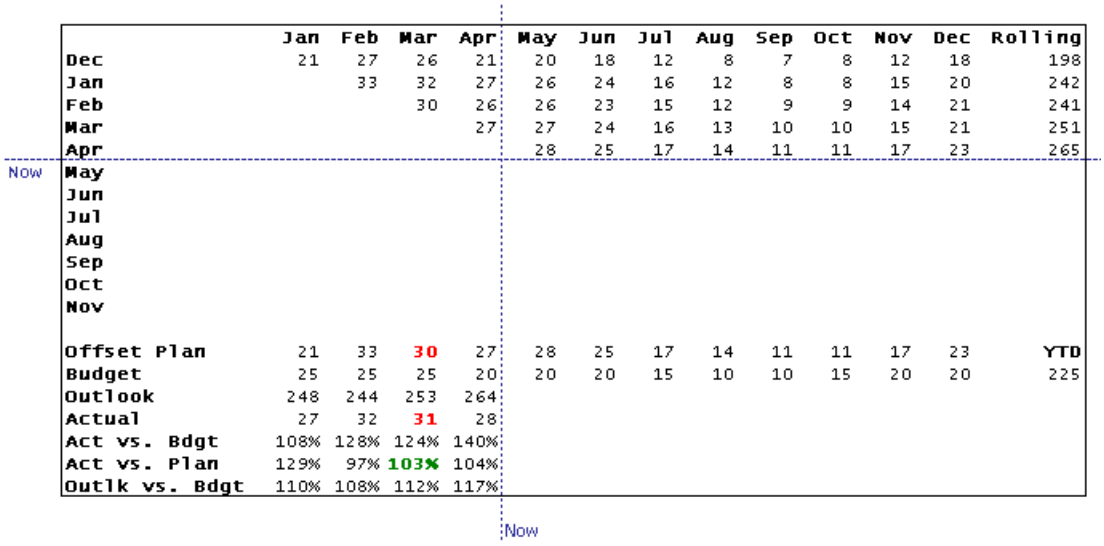


| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 |
| May | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | |



## Actual vs. Plan

Simply a month-by-month comparison of the Actual and Offset Plan values. Here, March is again used as the example:

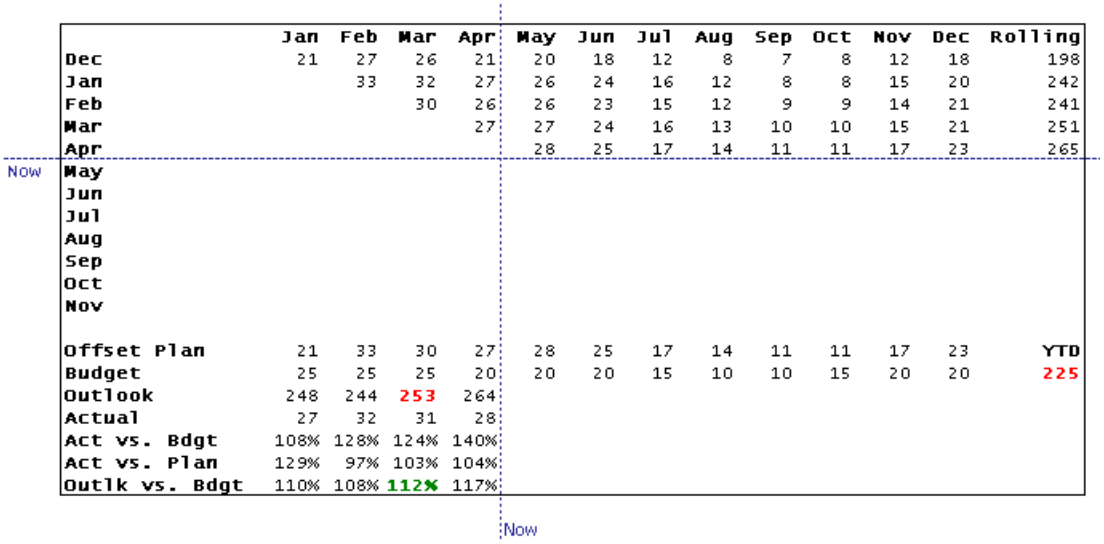


| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 |
| May | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | |



## Outlook vs. Budget

Finally, the Outlook vs. Budget figure compares each months' Outlook with the total annual budget. Once more, here is March as an example:



| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Rolling |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec | 21 | 27 | 26 | 21 | 20 | 18 | 12 | 8 | 7 | 8 | 12 | 18 | 198 |
| Jan | | 33 | 32 | 27 | 26 | 24 | 16 | 12 | 8 | 8 | 15 | 20 | 242 |
| Feb | | | 30 | 26 | 26 | 23 | 15 | 12 | 9 | 9 | 14 | 21 | 241 |
| Mar | | | | 27 | 27 | 24 | 16 | 13 | 10 | 10 | 15 | 21 | 251 |
| Apr | | | | | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | 265 |
| May | | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | | |
| Jul | | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | | |
| Offset Plan | 21 | 33 | 30 | 27 | 28 | 25 | 17 | 14 | 11 | 11 | 17 | 23 | YTD |
| Budget | 25 | 25 | 25 | 20 | 20 | 20 | 15 | 10 | 10 | 15 | 20 | 20 | 225 |
| Outlook | 248 | 244 | 253 | 264 | | | | | | | | | |
| Actual | 27 | 32 | 31 | 28 | | | | | | | | | |
| Act vs. Bdgt | 108% | 128% | 124% | 140% | | | | | | | | | |
| Act vs. Plan | 129% | 97% | 103% | 104% | | | | | | | | | |
| Outlk vs. Bdgt | 110% | 108% | 112% | 117% | | | | | | | | | |

# Index

## A



## B

## C



## D

## E



## F



## G

## H



## I



## L



## M



## N

## O



## P



## R

## S

## T

## U



## V



## W