Supply Chain Planning and Control
# Table Of Contents

1. Supply Chain Planning and Control .................................................. 6

2. Business Background ........................................................................ 8
   2.1 Demand Planning ................................................................. 8
   2.2 Forecasting ......................................................................... 10
   2.3 Supply Planning ................................................................. 14
   2.4 Availability Checks ............................................................ 16
   2.5 Capacity Planning ............................................................... 19
   2.6 Stock Overview ................................................................. 26

3. Demand Planning ............................................................................ 28
   3.1 Business Background .......................................................... 28
      Demand Planning Process ...................................................... 28
      Demand Management and Forecast Consumption .................. 30
      UoM-Based Rounding of Final Forecast Figures ...................... 32
   3.2 Demand Plans View ............................................................. 34
      Demand Plans Quick Guide ................................................... 34
      Tasks ................................................................................. 37
   3.3 Automated Actions View ....................................................... 47
      Quick Guide for Automated Actions (in Demand Planning) .... 47
      Tasks ................................................................................. 50

4. Supply Planning ............................................................................. 52
   4.1 Business Background .......................................................... 52
      Material Planning ................................................................. 52
      Source Determination in Planning .......................................... 58
   4.2 Exceptions View .................................................................... 62
      Exceptions Quick Guide ......................................................... 62
      Business Background .......................................................... 66
      Maintain Demand Forecast .................................................... 72
   4.3 Products View ...................................................................... 73
      Quick Guide for Products in Supply Planning ......................... 73
      Business Background .......................................................... 79
      Tasks ................................................................................. 94
   4.4 Resource Load View .............................................................. 96
      Resource Load Quick Guide ................................................... 96
      Business Background .......................................................... 101
      Tasks ................................................................................. 106
   4.5 Customer Demand View ........................................................ 107
# 6 Outbound Logistics Control

6.1 Customer Demand View
   - Customer Demand Quick Guide
   - Business Background
   - Tasks

6.2 Delivery Due List View
   - Delivery Due List Quick Guide
   - Tasks

6.3 Automated Actions View
   - Quick Guide for Confirmation Update Runs
   - Quick Guide for Release Due Deliveries Runs
   - Tasks

6.4 Reports View
   - Outbound Delivery Performance - Quick Analysis
   - Outbound Delivery Performance by Quantity
   - Outbound Delivery Performance by Time
   - Order Fulfillment Outbound Lead Time Averages
   - Order Fulfillment Outbound Lead Time Detailed
1 Supply Chain Planning and Control

Overview
The Supply Chain Planning and Control business area enables you to manage your supply and demand planning, and control the material flow. On the basis of an exception-driven approach, you can plan and consolidate procurement requirements, create production plans, and determine and confirm delivery dates. Choose the product specification to easily define and maintain individual customer requirements and product variants. You can also use the ATP based on product availability check with the product specification.

You can combine automated operations such as demand forecast runs with manual planning. Additionally, you can manage your resource load and specify resource groups. You can also specify your stock transfer processes.

Relevance
The following business packages are associated with the Supply Chain Planning and Control business area:
- Demand planning
- Demand management and order confirmation
- Exception monitoring and control
- Supply planning
- Supply control
- Logistics control

Benefits
Flexible control of both the internal and external supply chain
- Prioritize your execution plans by production needs, existing and incoming supplies, on-hand stock and external purchasing. Reprioritize the production schedule and adjust delivery dates on the basis of order confirmation.

Full demand and supply visibility across the supply chain
- Full integration through a production model between manufacturing execution and supply chain planning and control provide on-time production and delivery. With the help of the resource load you can control the workload on different levels of granularity – from machine groups to a single machine. Planners can filter their work lists by priority, with escalations automatically highlighting a product.

Integrated capacity planning
- Your planners can estimate the average capacity needed in a given timeframe (such as a shift or a week) and then make provisions for additional capacity to meet requirements. In addition, you can use interactive load leveling, single-level and multilevel material planning, and network scheduling, to keep multilevel material plans consistent.

Measurable estimates of future demand and combining fulfillment strategies
- Generate accurate demand forecast through automated planning functions combined with interactive planning. These forecasts trigger the supply planning process in anticipation of actual demand. You also can mix your fulfillment strategies to meet requirements via the customer demand. On an individual sales order
basis, your company can run multiple fulfillment strategies – such as all demand consumes forecast or all demand reduces forecast.

Stock transfer

- Process the transfer of products from one site to another of the same company (intracompany stock transfer) or between two sites of partner companies (intercompany stock transfer)
2 Business Background

2.1 Demand Planning

Overview
Demand planning enables the demand planner to forecast demand and subsequently release it to supply chain planning and control, at the level of a product in a specific supply planning area.

Demand forecasts are key to supply chain planning – the more transparent and accurate they are, the more effectively companies can plan for future demands. Real-time business data captured from application areas such as sales and supply chain, is stored in one data warehouse. Companies thus have a comprehensive view of all relevant figures today, and the information they need for effective planning in the future.

You can access this function in the Demand Planning work center under Demand Plans.

Benefits
Demand planning provides you with the following benefits:

- Demand plan settings are easy to set up and to maintain, for example:
  - Predefined planning options are available
  - Reduced setup and update effort as demand planning uses settings in supply planning with respect to:
    - Provision of historical data
    - Forecast consumption (in supply planning)
- Demand planning can serve as an input to forecast-driven supply planning, for example:
  - Leveling of supplies and related cost savings in procurement and production
  - Avoiding cost of non or late delivery
- Advanced demand planning options are available such as:
  - Multilevel demand planning
  - Statistical forecasting
  - Rounding forecast figures when copying statistical forecast into final forecast
  - Outlier correction
  - Forecasting of stocked products, both in-house and externally procured

Demand Planning in Detail
Demand planning takes place in a closed loop planning process that includes customer requirement processing, supply and demand matching, and manufacturing execution.

Demand planning does the following:

- Receives and performs analysis of time series with respect to actuals such as: customer requirement quantities, stock transfers, and dependent demand
- Performs a statistical forecast based on actuals
- Allows you to maintain a manual final forecast based on actuals and the statistical forecast
• Rounds forecast figures when copying statistical forecast into final forecast based on unit of measure business configuration settings. In single-level and multilevel demand plans different UoMs are used: planning UoM per product in single-level and demand plan UoM in multilevel.

• Releases the final forecast to demand forecast processing (in supply planning)

You use a demand plan primarily to trigger the creation of supplies ahead of actual demand. The demand plan final forecast released from demand planning (to supply planning) by a product and supply planning area, first creates a demand forecast. The demand forecast is represented as planned independent requirements in supply chain planning and control. Planned independent requirements are consumed or reduced by actual demand (such as sales orders), and used as an input for net demand calculation in supply planning.

For more information, see Demand Planning — Process [page 28].

Forecast Horizon and History Horizon

The Forecast Horizon is used to set the amount of time extending into the future covered by a demand plan. You can also specify a History Horizon that defines the amount of time extending into the past for which the demand forecast is calculated.

- Forecast Horizon and History Horizon are basic settings that rarely need to be changed during the lifetime of a demand plan.

Rolling of Plan and Rolling Interval

You use demand plan rolling to keep the forecast and history horizons stable, and to update the actuals data. The demand plan is periodically rolled into the future. You should specify a Rolling Interval to shift the demand plan time periods to the new planning horizon at regular time intervals.

- If required, you can automate plan rolling using automatic planning. For more information, see Quick Guide for Automated Actions (in Demand Planning) [page 47].

History Data Management

Actual demand is used as historical data for statistical forecast calculations in demand planning.

- You can also do demand planning without using statistical forecasting.

You can compile and adjust historical data collected from sales orders, stock transfer orders, and production orders for components.

The process of history data management includes:

1. Uploading of the actuals data (history)
2. Copying the raw actuals data into final actuals
3. If required, manually adjusting the final actuals data (history)

Release to Planning

The Release to Planning process to make the demand plan available to the supply chain planner. It is dependent on the release horizons that you have maintained for the demand plan. You can then use the demand plan as a basis for supply planning in supply chain planning and control. Release to supply planning is the basis for follow-up decisions in production and external procurement.
Release Horizons and Release Offset

The Release Horizon is used to set a point in time beyond which forecast demand is not released to demand forecasting and supply and demand matching.

You can also specify a Release Offset that suppresses the release for the first supply planning periods.

See Also

Demand Planning Process [page 28]
Forecasting [page 10]
Demand Management and Forecast Consumption [page 30]
Demand Plans Quick Guide [page 34]
UoM-Based Rounding of Final Forecast Figures [page 32]

2.2 Forecasting

Overview

Demand planning enables the demand planner to make forecasts and use statistical models to create a demand plan used during planning for anticipated product demand. Demand plans are critical to supply chain planning, the more transparent and accurate they are, the more efficiently you can plan for future supplies.

You can access the forecasting functions outlined below in the Demand Planning work center.

Forecasting in Detail

Statistical forecasting uses various models to compile forecasts interactively, or during a planning run in the background.

Forecasting Models

You can select a model variant from a set of forecasting models to create a statistical forecast. The statistical parameters of each model variant that you select can be modified according to the demand patterns of the products in scope.

When using automated forecasting, or when planning interactively, one forecasting model variant can be set as default. If required, you can run simulations using different forecasting model variants and parameter settings.

Forecasting models include and integrate several properties used to predict future demand:

- **Trend** – a movement of demand (increase or decrease)
- **Seasonality** – a pattern of demand that occurs weekly, monthly, or yearly
- **Alpha Factor** – the level smoothing factor
- **Beta Factor** – the trend smoothing factor
- **Gamma Factor** – the seasonality factor
- **Periods per Season** – the number of weeks or months that comprise a season

You can choose a model variant from the following forecasting models:

- **Average**
The forecast value is calculated from the mean of all historic values. Choose this constant model when the historic data follows a horizontal trend with negligible deviation.

- **Moving Average**
The forecast value is calculated from the mean of a certain number of historic values. The restricted set of historical periods used for forecasting moves to the right on the time axis so that they are always near to the future starting date. Choose this model if recent data is more representative of future demand than the older data. This model reacts with a certain lag on deviations from a horizontal trend depending upon the number of history periods chosen. This model reduces the need to maintain historical data.

- **Weighted Moving Average**
In the weighted moving average model, every historical value is weighted with a factor. The weighted moving average model allows you to weight recent historical data more heavily than older data when determining the average. Choose this model if recent data is more representative of future demand than older data, and if you want to react more quickly to changes in demand. This model reduces the need to maintain historical data.

- **Linear Regression**
Linear regression is a statistical model that can be used for forecasting trends. In contrast to most other forecast models for trends, the forecast parameters are not determined by starting with an initial assumption and then refining this assumption from one period to the next. Instead, linear regression considers all the data at once and calculates a straight line through the data that results in the smallest error (sum of squares).

- **Seasonal Linear Regression**
Choose seasonal linear regression to forecast using seasonal models. Before the system applies seasonal linear regression, it carries out a seasonal test (determines the autocorrelation coefficient for all periods) to check if the historical data contains any seasonal patterns. If the coefficient determined is greater than a certain threshold, the system applies seasonal linear regression. If the coefficient is less than this threshold, the system does not recognize a seasonal pattern and applies linear regression instead.

- **Simple Exponential Smoothing**
Choose this constant model when the historic data follows a horizontal trend. It uses the level smoothing factor alpha. The Alpha factor determines the weight of the latest historical period as opposed to all other historical periods. The higher the alpha factor, the more the forecast reacts to recent changes of historical demand. Choose the Alpha factor between 0.05 and 0.5. You must determine the alpha factor that best suits your need using trial and error. This model reduces the need to maintain historical data.

- **Simple Exponential Smoothing With Optimization**
Choose this constant model when the historic data follows a horizontal trend. The level smoothing factor alpha is optimized over a user-defined range using one of the following error measurement techniques:
  - Mean Absolute Deviation (MAD)
  - Error Total (ET)
  - Mean Absolute Percentage Error (MAPE)
  - Mean Standard Error (MSE)
  - Root Mean Squared Error (RMSE)
  - Mean Percentage Error (MPE)

- **Linear Exponential Smoothing**
Forecasting is based on Holt’s model. Choose this model where the historic values follow an increasing or decreasing trend.

- **Seasonal Exponential Smoothing**
Choose this model if your historic values display seasonal fluctuations (for example annual) from a constant basis value.

- **Seasonal Trend Exponential Smoothing**
Forecasting is based on Winter and Holt’s multiplicative model. Choose this model if historic values fluctuate on a seasonal basis from an increasing (upward) or decreasing (downward) trend. The magnitude of the fluctuation is dependent on the size of the trend.

- **Croston Procedure**
  Choose the Croston model for products with sporadic (intermittent) demand. The Croston model consists of the following steps:
  1. A separate simple exponential smoothing estimate is made of the average size of a demand.
  2. The average interval between demands is calculated.
  3. The average interval is then used in a form of the constant model (simple exponential smoothing) to predict the future demand.

- **Optimization Procedure**
  The system itself chooses an appropriate forecasting model. All models of exponential smoothing, Croston, and linear regression are considered by the system. The forecast model is chosen based on the Mean Absolute Deviation (MAD) value.

**Single-level and Multilevel Demand Plans**

The purpose of demand planning is to create a forecast at the level of a product in a certain supply planning area. **In most cases a single-level plan is sufficient.**

In certain cases however, statistical forecasting data can be too sporadic to create an accurate statistical forecast at such a detailed level. Statistical forecasting must then be performed at higher levels of data (for example, forecasting groups). The aggregate numbers of historical demand for all products belonging to a forecasting group (for example) render a more reliable statistical forecast.

In cases where the statistical forecasting data is sporadic, you can use multilevel demand planning and do the following:

1. Determine an appropriate planning level to perform statistical forecasting.
2. Calculate or maintain distribution factors to split the aggregate forecast down to the most granular level of individual products in individual planning areas.

The main characteristics of single-level (release level), and multilevel planning are as follows:

**Single-level Planning**

- No hierarchical planning – planning quantities can only be maintained by product and planning area combination
- Products per planning area can have different units of measure

**Multilevel Planning**

- Statistical forecasting can be done on aggregated levels
- Statistical planning quantities on aggregated levels can be distributed to the most detailed level
- A forecasting group or other aggregation criteria such as a planning group or product group must be maintained for each product
- All products in a demand plan must have the same unit of measure (or have conversion factors applied) to allow derivation of demand in terms of a common unit of measure

**Forecasting Groups**

A forecasting group is a set of products that share common forecasting properties. It is the primary demand plan-specific aggregation criteria used in demand planning.

Before starting the demand planning process, you need to create a forecasting group hierarchy that contains one or more forecasting groups. You should then assign these forecasting groups to the products (to be planned using demand planning).
Note that only forecasting groups with directly associated products will be available for selection of products and aggregation of figures across associated products. If a product group has both directly associated products and nested product groups below it, only the figures belonging to the directly associated products will be aggregated for this specific product group.

You assign forecast groups to products to:

- Assign products to the scope of a demand plan jointly rather than one by one
- Perform multilevel statistical forecasting
- View the forecast at the level of forecast groups

### Aggregation and Disaggregation

Aggregation is used at aggregate levels to:

- View forecasting data
- Calculate statistical forecasts
- Maintain the key figures **Final Forecast**, **Final Actuals**, and **Distribution Factors** at an appropriate level

Disaggregation is used to break down key figures that were calculated at an aggregate level.

#### Aggregation

The aggregation function is used to automatically sum key figure values from the lowest level of detail. You can then display them or plan on a high-level.

For example, if you display the final forecast demand for a product in the planning board, what you see is the final forecast demand for all of the supply planning areas for this product (summed by the system).

#### Disaggregation

The disaggregation function automatically breaks down key figures that are changed at aggregate levels (such as statistical forecast) from high-level to the most detailed level (product and supply planning area).

For example, if you forecast demand for a particular forecasting category, the system distributes this value among the different products and supply planning areas.

The Actuals key figure is not distributed as values are automatically collected at the most detailed planning level. In the case of the Statistical Forecast key figure, when the distribution factors change from their initial values (meaning that no values are available at the detailed planning level), this key figure is distributed according to the distribution factor values. Otherwise, the Statistical Forecast key figure values are evenly distributed. When the Final Actuals, Final Forecast, and Distribution Factors key figures are initial, their values are evenly distributed. Otherwise, they are proportionally distributed taking into account the current values at the most detailed planning level.

### Demand Plan Setup

The demand plan contains all the basic data needed to define and control the business processes that generate and release demand plan figures.

Actual demand (collected from the sales and production process) is used as historical data for statistical forecast calculations in demand planning.

To start planning, you must maintain certain settings. The most important settings include:

- Selecting the scope (the set of supply planning areas and the products to be planned)
- Choosing time granularity (weekly or monthly)
- Selecting multilevel versus single-level planning
- Setting the planning horizon and other time parameters
- Selecting the forecasting models, and their respective statistical parameters
Interactive Planning

Interactive demand planning enables you to do manual planning and make adjustments to the statistical forecast before releasing it to supply planning.

You can use interactive demand planning to:

- Interactively maintain forecasts and trigger statistical calculations
- Evaluate different forecast model variants
- Verify the results of a forecast created in the background

Mass Data Run

Demand planning uses a mass data run (MDR) to automatically modify, manage, or process large volumes of data in multiple transactions.

For example, in the Demand Planning work center Automated Actions view, you can choose from the following mass data runs:

- **Rolling Runs** – adjust the time series for selected demand plans by periodically rolling them into the future
- **Preparation Runs** – prepare the time series for a set of demand plans for forecasting
- **Forecasting Runs** – perform forecasting of material demands based on a set of demand plans including rounding of forecasting quantities
- **Release Runs** – release forecasted quantities of materials to supply planning based on a set of demand plans

For more information, see Quick Guide for Automated Actions (in Demand Planning) [page 47].

See Also

Demand Planning [page 8]
Demand Planning Process [page 28]
Demand Management and Forecast Consumption [page 30]
Demand Plans Quick Guide [page 34]
UoM-Based Rounding of Final Forecast Figures [page 32]

2.3 Supply Planning

Overview

As supply planner, your main objective is to balance demand with supply within your company’s supply chain. The system enables you to create feasible production and procurement plans to cover demand by the requested date and in the correct quantity. Independent demand in the form of sales orders, service orders, and forecast demand, as well as dependent demand in the form of input products for production orders are considered.

Not only is the actual stock and supply situation taken into account during planning, but constraints such as lead times and resource capacities are also considered. You are provided with an up-to-date view of the supply and demand situation for monitoring purposes and with the tools to adjust your production or procurement plans to solve planning issues that may arise.

In addition, supply planning is closely integrated with production and purchasing to facilitate the seamless handover of production and purchasing proposals for execution. The level of detail in planning, however, can still be defined differently from that in execution. For example, while capacity planning is at an aggregated level to enable you to focus on overall sufficient capacity, manufacturing can create a detailed resource schedule.
With effective supply planning, your company is able to optimize inventory levels and resource utilization, as well as achieve customer satisfaction with the on-time delivery of orders. These functions are available in the Supply Planning work center.

**Supply Planning in Detail**

Supply planning comprises the intertwined dimensions of material planning, capacity planning, and exception-based planning.

It is important to remember that in reality these dimensions represent the perspective you can take when performing supply planning rather than decoupled elements in the system:

- **Material planning**
  If your key aim as supply planner is to guarantee product availability, you will work mainly in the **Products** view of the Supply Planning work center. Here, you will devise a plan that ensures that the requested product quantities are produced or procured on time to cover demand.
  You have the option of performing an automated planning run, for instance, overnight, or interactively for a specific product to take into account the most up-to-date demand and supply situation. The planning run results in the automatic creation of proposals for production and purchasing at all product levels – from finished products to raw materials.
  In addition to using the planning run, you can manually create and adjust planning proposals to cover demand where necessary.
  For more information, see Material Planning [page 52].

- **Capacity planning**
  If you want to monitor resources and adjust the capacities required to meet demand on time and in the correct quantities by means of in-house production, you work mainly in the **Resource Load** view of the Supply Planning work center. During material planning, the load for all relevant resources is calculated and kept up-to-date by the system. This allows you to analyze capacity load for resources within a specific time bucket, such as a shift or week, and therefore estimate the average capacity needed within a given time frame to fulfill demand.
  With functions such as interactive load leveling, you can also react to capacity issues that arise on a case-by-case basis.
  For more information, see Capacity Planning [page 19]

- **Exception-based planning**
  To facilitate your tasks as supply planner, the system automatically raises exceptions to alert you to critical planning issues, giving you all the information and options required to solve these issues. These exceptions are independent of the planning run and always up-to-date and raised in relation to both product and capacity planning problems. What is more, the exceptions brought to your attention are given a high, medium, or low priority to enable you to organize your daily work more effectively. The **Products** and **Resource Load** views of the Supply Planning work center provide you with all the relevant information for product and capacity planning, including exceptions, whilst the **Exceptions** view enables you to focus entirely on solving existing planning issues.
  For more information, see Exception-Based Planning [page 66].

**See Also**

- Quick Guide for Products in Supply Planning [page 73]
- Resource Load Quick Guide [page 96]
- Exceptions Quick Guide [page 62]
- Planning Run Quick Guide [page 156]
2.4 Availability Checks

Overview

Availability checks enable you, as a supply planner, to answer the question of whether or not a requested quantity of a product is available at a certain place at a certain point in time. Confirmations as a result of these checks not only give a reliable answer to this question, they are also required for the follow-on processes in logistics execution. Providing a reliable delivery date at the very time when a quote or order is entered in the system, helps you to improve customer satisfaction.

The system allows you to check the availability for sales orders, service orders, stock transfer orders, project stock orders, and sales quotes.

You can access the availability check function from the following locations:

- **Sales Quote** view of the **New Business** work center
- **Sales Orders** view of the **Sales Orders** work center
- **Service Order Processing** view of the **Service Orders** work center
- **Customer Demand** view of the **Outbound Logistics Control** work center or the **Supply Planning** work center
- **Confirmation Update Runs** view of the **Outbound Logistics Control** work center or the **Supply Planning** work center

Availability Check Methods

On the **Availability Confirmation** tab of the **Materials** view in the **Product Development** work center, you specify how you want the system to check the availability for a product, that is, you decide which availability check method you want to use. You can enter the following:

- **A goods issue processing time**
  This time is the lead time required for preparing the shipment of goods in the warehouse. It is taken into account during scheduling. Note that the working day calendar and the operating hours of the ship-from location are also considered for the goods issue processing time. If you do not enter anything here, the system uses a goods issue processing time of zero for scheduling.

- **An availability check scope with or without an availability check horizon**
  These settings specify which types of supply the system considers when trying to match a demand.

- **A replenishment lead time with or without an availability check scope and availability check horizon**
  This time specifies the maximum length of time required to produce or procure a product.

If you do not enter anything on the **Availability Confirmation** tab, you specify that you are only interested in scheduled dates and do not want to match supply and demand.

Note that you must make the settings in the product master for each planning area.

The following methods for checking the availability and determining a confirmation are available in the system:

- **Availability checks based on scheduling**
  This check method results in the confirmation of the requested quantity on the date determined by scheduling. For more information, see **Availability Checking Based on Scheduling** [page 125].

- **Availability checks with replenishment lead time**
  This check method results in the confirmation of the requested quantity at the end of the replenishment lead time. For more information, see **Availability Checking with Replenishment Lead Time** [page 134].

- **Product availability checks**
This check method results in the confirmation of the requested quantity or partial quantities by checking the customer demand against the supply. The following options are available:

- **Availability checks with availability check scope**
  The system matches the demand against the types of supply specified in the availability check scope. Examples for the types of supply would be stock, or stock and all receipts. For more information, see Availability Checking with Availability Check Scope [page 137].

- **Availability checks with availability check scope and horizon**
  The system matches the demand against the types of supply specified in the availability check scope within an availability check horizon. Examples for the types of supply would be stock, or stock and all receipts. For more information, see Availability Checking with Availability Check Scope and Availability Check Horizon [page 140].

- **Availability checks with availability check scope, horizon, and replenishment lead time**
  The system matches the demand with the types of supply specified in the availability check scope within an availability check horizon you specified. Examples for the types of supply would be stock, or stock and all receipts. Beyond the check horizon, the system creates or updates the confirmation based on the replenishment lead time you specified. For more information, see Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time [page 144].

- **Confirmation update runs**
  Usually, you check the availability at the very moment when a quote or order is created in the system. As an alternative, you can schedule confirmation update runs to check the availability for a large number of different demand categories, such as sales orders for a specific product category or any demand from a specific customer. For more information, see Confirmation Update Run [page 148].

- **Availability checks in third-party order processing scenarios**
  This check method results in the confirmation of the requested quantity based on the supplier lead time. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

- **Availability checks for complete delivery orders**
  The system checks and aligns the availability of all items of a delivery group in a complete delivery order. For more information, see Availability Checks for Complete Delivery Orders [page 130].

Irrespective of the availability check method you choose, the system always carries out ship-from determination for a customer demand to determine possible sources of supply and schedules the demand to determine the dates that are required to plan the goods delivery. Starting from the requested delivery date, the system takes into account the shipping duration to determine the requested shipment date and uses the goods issue processing time to determine the requested execution start date. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

**Sales/Service Order Settings**

The delivery rule settings made in the sales order or service order screen for each order item affect the result of the availability check as they restrict whether one or more confirmations may be created. The following options are available:

- **Multiple Deliveries**
  This is the system’s default setting for sales orders. More than one delivery may be sent to the customer, this means that the number of confirmations is not restricted. The requested delivery date does not have to be met, and the delivery may comprise the requested quantity or only part of the requested quantity.

- **Single Delivery**
  Only one delivery may be sent to the customer, this means that only one confirmation is created. The requested delivery date does not have to be met and the delivery may comprise the requested quantity or only part of the requested quantity.
• **Single Delivery – Full Quantity**
  This is the system’s default setting for service orders. Only one delivery may be sent to the customer, this means that only one confirmation is created. The requested delivery date does not have to be met but the delivery must include the requested quantity. If this is not possible, the system issues a confirmation with zero quantity.

• **Single On-Time Delivery**
  Only one delivery may be sent to the customer, this means that only one confirmation is created. The requested delivery date has to be met, but the delivery may comprise less than the requested quantity.

• **Single On-Time Delivery - Full Quantity**
  Only one delivery may be sent to the customer, this means that only one confirmation is created. The requested quantity has to be delivered at the requested delivery date. If this is not possible, the system issues a confirmation with zero quantity.

Note that you can display the *Simulated Confirmation Schedule* hidden column for any of the “single” delivery rules. It simulates the earliest delivery date and quantity for each item to show earlier possible delivery dates.

In addition, a delivery priority (*Immediate, Urgent, Normal, or Low*) may be assigned to a sales order. The confirmation update run considers the delivery priority when sorting the customer demand to be checked.

If a sales order has delivery priority *Immediate*, everything that the system confirmed up to today may be released to outbound logistics right away.

### Project Stock Order Settings

The delivery rule settings made in the project stock order screen for each order item affect the result of the availability check as they restrict whether one or more confirmations may be created. The following options are available:

• **Multiple Deliveries**
  This is the system’s default setting for project stock orders. More than one delivery may be sent to the customer, this means that the number of confirmations is not restricted. The requested delivery date does not have to be met, and the delivery may comprise the requested quantity or only part of the requested quantity.

### Working with Availability Checks

Starting from the requested delivery date given by the customer, the system determines the confirmed delivery date. Depending on the availability check method you use, the system takes into account different criteria to calculate this date.

A traffic-light system helps you to find out easily if the requested quantity of the product your customer ordered is available on the requested date. The colors displayed for the availability status of each customer demand item provide the following information:

• Green: The required quantity is fully confirmed on time.
• Yellow: The required quantity is partially confirmed or confirmed on a later date than requested.
• Red: The required quantity cannot be confirmed at all (confirmation with zero quantity) or an error occurred, for example, missing transport lane.
• Gray: Availability check was not performed, for example, if the sales order data is inconsistent.

If the requested delivery date is not entered in the sales order, service order, stock transfer order, project stock order, or sales quote, the availability status is determined based on whether or not the requested quantity is available.

When the order is saved, the system creates a customer demand that you can see in the *Customer Demand* view of the *Outbound Logistics Control* work center or *Supply Planning* work center. Schedule lines for the individual order items provide more detailed information about the dates and quantities that are requested, confirmed, released, not
confirmed, or fulfilled. At the same time, you can monitor the confirmed schedule lines as due deliveries in the Delivery Due List view of the Outbound Logistics Control work center. When you release the customer demand or due delivery, a delivery proposal is created, which you can see in the Delivery Proposals view of the Outbound Logistics work center. The warehouse manager can then create a warehouse request for the delivery proposal or post a goods issue.

Changing the Result of Availability Checks

If you want to change the result of the availability checks manually, you can use the following functions:

- Select source of supply
  If you do not want to use the ship-from site or supplier that the system found in ship-from determination for a customer demand, you can select any of the alternative sources of supply displayed in the Order Logistics Details screen. A simulative availability check, that is, without confirming quantities was performed for the alternative sources listed here. If you select one of them, the system carries out a binding availability check with confirmed quantities. Note that the system keeps the source that you selected manually even if the availability for this customer demand is checked again manually. If the availability is checked again in a confirmation update run, the source you selected manually is also kept unless you select the Update Source of Supply checkbox on the Confirmation Update Run screen. For more information, see Confirmation Update Run [page 148].

- Force confirmation
  In a forced confirmation, you confirm the requested quantity on the requested date for a specific customer demand. If the requested date is in the past, the system confirms on the current date. Note that you should only use this option if you are entirely sure that a demand can be confirmed as requested.
  You can reset a forced confirmation by canceling the confirmation or by checking the availability for the customer demand again. Note that forced confirmations are not included in confirmation update runs.

- Cancel confirmation
  The system checks availability according to the “first come, first served” principle, which means that the available quantity is allocated to the customer demand that is checked first. If you want to give priority to a more recent sales order from a valuable customer, for example, you can cancel a confirmation for a less important sales order. The system then creates a confirmation with a zero quantity for this sales order on the requested date. The quantity that becomes available in this way can now be allocated to the more recent sales order when you check the availability again.

2.5 Capacity Planning

Overview

The solution supports you when planning the load of resources required to fulfill demand with in-house production. Capacity requirements are automatically determined and updated during material planning when production proposals are being created. You are therefore able to monitor the most up-to-date resource load for your equipment and labor resources, and also given the flexibility to react to capacity issues such as resource overload by, for example, performing load leveling. These functions are available in the Supply Planning work center.

In the following sections, detailed information is provided about:

- Planning operations
- Prerequisites for capacity planning
- Solving capacity issues
Planning Operations

Planning Operations: Introduction

The dispatching of operations on resources to fulfill several production orders is normally determined on the shop floor. Supply planning therefore has to provide the time frame in which production execution can perform this detailed scheduling. The scheduling that supply planning carries out can also be described as rough-cut scheduling: Planning (or rough-cut) operations are used for this. The main purpose of rough-cut scheduling is to determine the time frame in which production execution has to process the operations.

The following figure illustrates this in detail:

Planning operations have two main tasks: scheduling production proposals and determining the capacity requirements of production proposals. In addition, the requirement dates of the input products and the availability dates of the output products of production proposals are determined by planning operations.

Capacity requirements for planning are only created if the required resource is defined as planning-relevant in the resource master. However, the processing duration of production execution operations on resources not relevant to planning is considered in supply planning for the scheduling of production proposals. Planning operations conceal the details of production execution in planning while showing the planning-relevant information in an aggregated manner to the planner.

The following figure shows the details of production execution within the execution view of the bill of operations and the aggregation of the planning-relevant information within the planning view of the bill of operations:

The execution view of the bill of operations shows the details of all operations, such as the required resources, operation duration, and operation sequence. The drilling machine and the packaging line are defined as not relevant
for planning in the resource master. This means that capacity requirements are not created for these resources, and these resources will not be visible in capacity planning and will therefore most likely never become a constraint from a capacity perspective.

The planning view of the bill of operations only considers those resources that are defined as planning-relevant in the resource master. Capacity requirements are created for the production proposals and so capacity planning can be performed for these resources. The duration of operations on resources that are not relevant for planning is taken into account for the scheduling of planning operations for production proposals.

For more information related to the planning view of the bill of operations, see Planning View of Bill of Operations.

**Planning Operation Duration**

The duration of a planning operation is calculated by adding the durations of setup, production, tear-down, and final inspection activities of a production execution operation to the scheduling buffer of the resources. The system only considers activities that are part of the “critical path”. Most setup and tear-down activities are not part of the “critical path” because they can be carried out in parallel to the production activities of the predecessor or successor operation respectively. Only the durations of the first setup and the last tear-down activity are considered by the system.

The following figure shows the details of production scheduling and the planning operation duration:

The duration of a planning operation can also be set manually in the planning view of the bill of operations in the production model master. Setting the duration of the planning operation allows for additional buffer time, for example, a putaway buffer, that cannot be derived from a resource. The duration of a planning operation is calculated during the explosion of a released planning model (RPM) when a production proposal is created. This calculation also takes the proposal quantity and the requested availability date into account.

**Calendar for Scheduling and Loading**

Planning operations are scheduled and loaded based on the operating hours of the site’s location calendar and capacity supply is calculated using the resource calendar. This means that the regular working day is taken as default from the site’s location calendar.

Assuming that the majority of your company’s resources only operate during regular working hours and that it is only bottleneck resources that typically operate for longer, the location and resource calendars should be set up as follows:
The site’s location calendar and opening hours should represent regular working hours.

Resources that are not critical should be given the same calendar and opening hours as the site’s location.

Resources that need to operate for longer than a regular working day should be assigned a calendar that defines the individual resource’s working time, for example, two shifts. For resources that work longer than the regular working day specified by the site’s location calendar, this may result in planning operation lead times that are longer than the duration of a regular working day. It therefore becomes impossible for the loading exercise to schedule the planning operations. For this reason, this setting should be used carefully. Example: Scheduling is based on the location calendar that specifies eight working hours per day. A sixteen-hour operation on a bottleneck resource that works sixteen hours a day would therefore be scheduled with a duration of two days.

If a bottleneck resource operates on non-working days of the location calendar, the resource buckets should be weeks, otherwise load leveling would not be able to fully utilize the resource capacity. For more information, see Load Leveling [page 101].

**Capacity Requirements**

The capacity requirement of a planning operation, which is calculated based on the location calendar, is evenly distributed between the start date and the end date of the planning operation. An even distribution of the capacity requirement over the lead time reflects the fact that the exact start date and time of the operation in production execution is unknown. This enables production execution to start anytime within the lead time of the planning operation, assuming that it can also be finished within the lead time.

The following figure shows the details of the capacity requirements of planning operations evenly distributed on a resource:

Production proposal 1 has a capacity requirement of 20 hours and a duration of 4 days which leads to an even, daily capacity requirement of 5 hours between the start and end date of the production proposal. Production proposal 2 has a capacity requirement of 20 hours and a duration of 5 days. This leads to an even, daily capacity requirement of 4 hours between the start and end date of the production proposal. With a capacity supply of 8 hours from Monday to Friday, this leads to an overload on Thursday.

The system determines the capacity requirement for each planning-relevant resource in the bill of operations according to the following rules:

The capacity requirements are calculated by adding the fixed and variable activity durations that belong to a planning-relevant resource.
• The resource scheduling buffer is considered for all resources.
• If you have created a branching with multiple sequences that contain the same planning-relevant resource, the system creates only one planning alternative and uses the average capacity requirement for this resource.
• If a planning-relevant resource is assigned to a resource group, the system only shows the capacity requirement for the corresponding resource group in the planning view.

Capacity Consumption
In rough-cut planning, capacity is typically checked in buckets, such as days, weeks, or months. If a planning operation is completely scheduled within one bucket, the capacity requirement of the planning operation consumes the capacity of this bucket. An additional operation can be processed in a bucket if the required capacity is less or equal to the remaining capacity of the bucket, assuming that the operation can be completed within a single bucket.

The resource calendar determines the capacity supply.

If a planning operation spans across multiple buckets, the capacity consumption is distributed like the working time defined by the location calendar. The working time of the resource influences the capacity of the resource only. It does not influence the way capacity requirements are distributed across buckets. The following figure illustrates this in detail:

The location calendar provides 8 hours of working time every working day. A planning operation of a production proposal has a duration of 8 hours due to 2 hours buffer time that spans across two buckets from Monday to Tuesday. Its capacity requirement is 6 hours which is evenly distributed between the start and end date of the production proposal. Since the capacity requirement spans across two buckets, it is proportionally distributed with the working time of the planning operation between these buckets.

Prerequisites
The following elements are required for capacity planning:
• Resource master
You must setup the resource and specify it as being relevant for supply planning in the Resources view of the Supply Chain Design Master Data work center. You can specify the resource capacity with the following parameters:

- **Operating times**
  This represents the effective time that a capacity, such as a machine, is available to work. The working time, break times, and rate of capacity utilization are all factors in the calculation.

- **Resource utilization**
  This allows you to define the real machine availability within the defined operating times. The percentage of utilization is part of the calculation of the working hours and the bucket capacity. A percentage lower than 100% reduces the working hours and also the bucket capacity.

- **Number of resources**
  This represents the number of analog resources on which the operation can be performed in parallel. This parallel mode results in a reduction in the lead time.

- **Bucket type**
  This represents the bucket in which capacity planning is performed for the resource.

- **Bucket utilization**
  This represents the capacity of the available working time that should be considered, taking into account the time used for production (production utilization). For example, a resource operates 8 hours a day and the production utilization is 75%, so 6 hours are considered for production. For a bucket of a 5 day week, the capacity is 30 hours if the bucket utilization is 100%.

- **Scheduling buffer**
  This is a fixed duration that is added to the lead time of the planning operation. It extends the duration between the earliest start and the latest end date of a production order and gives production execution some flexibility to determine the dispatching of operations as well as to reflect queuing times for bottleneck resources. The buffer time is also used to calculate the latest start and earliest end date of a production order.

The following figure shows the impact of using a buffer time in the bill of operations on the production proposal and production order:

For more detailed information, see Resources.

- Released planning model (RPM)
Provided that you have enabled the production model for planning in the Production Models view of the Planning and Production Master Data work center, the RPM is automatically created upon releasing the production model using the planning information from the bill of operations planning view. It then becomes the RPM that is referenced for the creation of production proposals in supply planning. For more information related to the RPM, see:

- Production Models
- Bill of Operations
- Planning View of Bill of Operations

### Location and resource calendars

The location calendar and the resource calendar must be aligned in terms of working days and non-working days. In addition, the opening hours must be equivalent. If there are deviations, the consequences are as follows:

- If the resource calendar of a resource provides capacity for a certain bucket and the location calendar does not provide opening hours for the same bucket (for example, a non-working day in the office), the system cannot schedule a production proposal to use this capacity supply.
- If the location calendar provides opening hours for a certain bucket and the resource calendar of a resource does not provide capacity for the same bucket, the system could potentially schedule production proposals to non-working days. This could in turn lead to a resource overload and therefore overload exceptions that would later need to be resolved.
- If the location calendar provides opening hours for one shift (for example, an 8-hour working day in the office) and the resource calendar provides capacity for two or three shifts, all production proposals will be scheduled according to the opening hours of the location calendar. Overload exceptions are created only if the capacity requirement exceeds the available capacity calculated from the resource opening hours. This means that few or possibly even no overload exceptions are raised. In the case of an overload, load leveling is not able to schedule the planning operations and will raise the following information message: Not possible to schedule any operations for selected resource.
- If the site’s location calendar provides a larger opening hours interval than the resource, overload exceptions are raised more often as there is more chance that the capacity requirements exceed the available capacity of the resource.

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It is recommended that the resource bucket (maintained at the resource master) is greater than the average duration of all planning operations running on a resource to allow complete planning operations to be planned in one resource bucket.

### Solving Capacity Issues

Typically, you obtain an overview of the current resource load situation for a specific bucket in the Resource Load view of the Supply Planning work center. Exceptions highlight for you the resources that are overloaded. For more information about planning exceptions, see Exception-Based Planning [page 66]. This helps you to focus on the more urgent issues. Normally, you will select a resource with a high-priority exception and from there, navigate to the Resource Planning Details screen to examine the capacity and load details for that resource. You have several options available to you to solve capacity issues from within the Resource Planning Details screen:

- **Running load leveling**
  You can select Run Load Leveling directly from this screen.

- **Increasing the capacity of the resource**
  You can navigate to the resource master for the selected resource from this screen, where it is then possible to extend the capacity of a resource by increasing its operating times.

- **Changing the source of supply for a production proposal**
You can change the current source of supply for a production proposal from one released planning model to another to relieve an overloaded resource. This option is available to you as an action from this screen. In certain cases, you may even consider switching to external procurement as a result of a short term make-or-buy decision.

- Adjusting the production proposal
  It is possible to resolve a capacity issue by editing the production proposal from this screen. This can mean rescheduling it by changing the operation start and end date, or reducing its quantity in the case of an unpegged quantity.
- Shifting the load of a planning operation to another resource
  You can decide to manually shift the load of a planning operation to an alternative resource that has available capacity from this screen.

For details about how to perform the aforementioned tasks as a means of solving capacity issues, see Resource Load Quick Guide [page 96].

Once you have solved the problem, the exception disappears. From the Resource Planning Details screen, you can then analyze the impact the changes have had on the pegged demand and supply situation in the Material Flow screen. You can also adjust the pegging net by propagating the impact of load leveling to upper and lower levels of the pegging net by selecting Top-Down and Bottom-up Scheduling.

### 2.6 Stock Overview

#### Overview

The stock overview is one of the most important views used by warehouse and production staff to show what stock is on hand, at customers’s sites, in transit, and with a third party logistics provider. It also provides a fast and flexible overview of stock categories. To see the stock overview, start the Stock Overview common task, which belongs to the Inbound Logistics, Outbound Logistics, Internal Logistics, Outbound Logistics Control, Supply Planning, Supply Control, Physical Inventory, Third-Party Logistics and Production Control work centers. The stock overview shows a static view of the inventory, and it is the main tool used to check whether your company’s inventory management works correctly.

#### Viewing the Stock

You can specify the data you want to see by selecting specific fields. There are no mandatory fields in this screen. The most important fields are explained below.

- **Product ID**
  The identifier of the material.
- **Site ID**
  The identifier of the physical location of the company where the stock is located.
- **Logistics Area ID**
  The identifier of the physical space where the product is stored.
- **Logistics Unit ID**
  The identifier of the logistics unit, consisting of packaging material and the products it contains, to which the product belongs.
- **Identified Stock ID**
  The identifier of the identified stock to which the product belongs.
- **Restricted**
A status assigned to an item of stock that indicates that it is subject to usage restrictions.

When you provide a logistics area, the query results are displayed for the specified logistics area rather than for the entire site.

Empty logistics areas do not appear in the stock overview.

Stock Overview and Projected Material Flow

While the Stock Overview view may appear similar to the Projected Material Flow view, there are key differences:

- **Stock Overview** provides information at the logistics area or the bin level. It provides the actual inventory information.
- **Projected Material Flow** allows you to show unavailable stock and inventory allocations. It provides access to the documents on which the projected material flow is based.

The Projected Material Flow can be used to investigate a failed confirmation of a pick task. The Stock Overview may show stock in a bin, but because it does not show allocations, the failed confirmation will remain inexplicable. Running a projected material flow query will provide you with the allocations for the bin, revealing that there is not enough available stock to perform the pick operation.
3 Demand Planning

3.1 Business Background

3.1.1 Demand Planning Process

Overview

This process describes each activity in the demand planning cycle. In general, you can assume that the order of the processes presented here is the order in which you should proceed through the demand planning cycle of activities. Demand planning enables the demand planner to forecast demand and subsequently release it to supply chain planning and control, at the level of a product in a specific supply planning area.

Statistical forecasting using the multilevel planning option allows you to create a statistical forecast at aggregate levels, such as product group, or across supply planning areas. Statistical forecasts created at aggregate levels are distributed to the level of individual products and supply planning area using distribution factors. You can choose to calculate distribution factors automatically (based on historical figures), or you can define them manually.

Process Flow

Create and Maintain Master Data

Before you can include a product into a demand plan, you should create and maintain the following master data:

- Forecasting groups (when using the multilevel planning option)
- Planning view of products

During this process you access the Product Data and the Planning and Production Master Data work centers.

1. Create and maintain your forecasting groups in the Planning and Production Master Data work center under Product Group → Forecasting Group.
2. Set the Allow product assignments flag for all product groups.
3. Assign the individual products to the forecasting groups in the Product Data work center under Materials.
4. On the Planning tab page, select the demand management procedure for your individual products.
   - To edit a certain product (material), click Edit, choose View All, and then the Planning tab.
   - You must maintain a demand management procedure or the system assumes that the demand plan for this specific product is not relevant for supply planning.
5. If you wish to create a multilevel plan, you must maintain conversion factors in the Product Data work center, under the Material → Edit → View All → General tab.

Setup

During this process you access the Demand Planning work center.

1. Create your demand plan in the Demand Planning work center under the Demand Plans view:
a. Maintain the general settings.
b. Select characteristics that will be used in the plan.
c. Select the scope of the plan (the products assigned to the plan).
d. Maintain forecasting models.
e. Enter appropriate time parameters.
   If you need to change the above settings, you can edit your demand plan in the **Demand Planning** work center under **Demand Plans ▪ Edit**.
f. Create and activate the plan.
   For more information, see [Create a New Demand Plan](#) [page 37].

2. Edit the demand plan to make specific adjustments to the plan setup in the **Demand Planning** work center under **Demand Plans ▪ Edit**.
   For more information, see [Edit a Demand Plan](#) [page 39]

### Planning Process

During this process you access the **Demand Planning** and the **Supply Planning** work centers.

1. Periodically roll all demand plan planning horizons to a new planning window, and update the actuals data required for statistical forecasting in the **Demand Planning** work center:
   - Interactively – under **Demand Plans ▪ Roll**
   - Automatically – under **Automated Actions ▪ Rolling Runs**
   For more information, see [Roll a Demand Plan](#) [page 41].

2. Create a final forecast for the products in the scope of your plan for release to supply planning in the **Demand Planning** work center:
   - You can create an automated final forecast under **Automated Actions ▪ Forecasting Runs**
   - You can create an interactive (manual) final forecast under **Demand Plans ▪ Forecast ▪ Planning Board**
   To prepare an interactive (manual) final forecast, you must do the following:
     a. Review the actuals data provided by the system.
     b. If necessary, manually adjust the **Final Actuals**.
     c. In the case of multilevel forecasting, review and update the distribution factors calculated by the system.
     d. Calculate a statistical forecast based on the **Final Actuals**.
     e. If statistical forecasting was selected, decide on the rounding which will take place based on the UoM settings in business configuration.
     f. If necessary, manually adjust the **Final Forecast**.

   ![](image.png)
   If you choose to create an **automated final forecast**, steps a to e above are performed automatically.

   For more information see, [Create or Update a Demand Forecast](#) [page 44].

3. Release your final forecast to supply chain planning and control in the **Demand Planning** work center under the **Demand Plans** view.
   If required, you can also choose to release the final forecast under the **Demand Planning** work center **Automated Actions** view.
   For more information, see [Release a Demand Plan](#) in the Tasks section of the Demand Plans Quick Guide [page 34].

4. If needed, you can view the released data in the **Supply Planning** work center under **Common Tasks ▪ Maintain Demand Forecast**, or under **Related Links ▪ Forecast Consumption Report**.
3.1.2 Demand Management and Forecast Consumption

Overview

Demand management and forecast consumption enables the demand and supply planner to define how forecast demand and actual demand is considered in supply planning. The system uses demand management procedures (by product and planning area) to control the various strategies in demand management.

Demand Management and Forecast Consumption in Detail

The following types of actual demand exist for any given product:

- Sales orders
- Dependent demand – demand for components derived from the explosion of bills of material
- Stock transfers between planning areas

If products are standardized and the market is asking for short delivery times (shorter than your existing replenishment lead times), to remain competitive, you must preempt demand (with forecast demand) well before actual demand arises. Supply planning will create production and purchase proposals in advance to cover the forecast demand.

There is an inherent risk in forecast demand in that it never proves completely accurate when compared with incoming actual demand. By choosing a demand management procedure for each product, you can determine exactly how to balance that risk with the risk of delivering too late or not at all.

You can choose a demand management procedure for each product and planning area combination. Each demand management procedure is tailored to a particular business scenario and determines how demand is considered for a product.

You can choose to omit a demand management procedure in your product meaning that you produce on order and only consider actual demand as relevant. In this case a forecast is not created in supply planning. Choose this option if your replenishment lead times are shorter than the delivery times your customers are asking for.

You can also choose to consider forecast only in supply planning, that is, you rely only on forecast as a basis of supply planning no matter how actual demand develops.

If required, you can combine forecast and actual demand, that is, you can automatically increase combined demand in case actual demand exceeds forecast.

Demand Management Procedures

You can access the following demand management procedures from the Product Data work center, under the Materials view:
All Demand Reduces Forecast

You use All Demand Reduces Forecast if you want to react to actual demand using your existing stock. This means that actual demand in the form of sales orders for finished goods, dependent demand for components, or stock transfers for finished goods or components, is satisfied from stock. Stock is accumulated in advance according to forecast demand. Additional supplies will not be created if actual demand exceeds forecast. The demand relevant in supply calculations will also not be reduced if actual demand is less than the forecast demand. You should use this demand management procedure in an environment where you are very sure of your forecast accuracy (where the demand is pretty stable, or where the capacity is limited for example, production to a maximum stock).

When using this strategy the forecast is fulfilled at the time when actual demand is consumed. For example, forecast is reduced by the same amount as stock is reduced for outbound delivery of a particular sales order.

When using All Demand Reduces Forecast, the demand forecast is the only product requirement actually considered in supply planning. If you select this demand management procedure and a demand forecast exists, actual demands are made irrelevant for planning to ensure that no product requirements are missed. In effect, actual demand does not influence the required quantity in the product planning details.

All Demand Consumes Forecast

You use All Demand Consumes Forecast if you want to react to actual demand from stock and you also want to react to excess demand. Actual demand, in the form of sales orders for finished goods, dependent demand for components, or stock transfers for finished goods or components are satisfied from stock. Stock is accumulated in advance according to forecast demand. Actual demand will replace forecast so that the excess demand will be added to the original forecast. The demand effective in supply calculations will not be reduced if actual demand is less than forecast.

You should use this demand management procedure in an environment where you are fairly sure of your forecast accuracy.

When using All Demand Consumes Forecast, both the forecast and the actual demand become visible in supply planning. This enhances visibility and supports short-term plan adjustments. For example, if you have forecast demands for two products; one that underestimates actual demand and the other that overestimates actual demand, the supply planner can shift production from the overestimated to the underestimated product.

The consumption of forecast demand is done by bucket (time period), and you can configure the precise consumption logic during business configuration.

The forecast demand is consumed (replaced) by actual demand (incoming sales orders), until the actual demand reaches the same level as the forecast. The following definitions apply:

- **Forecast demand** – the anticipated demand
- **Actual demand** – incoming sales orders, stock transfer orders, and dependent demand from production orders
- **Open quantities** – the difference between forecast demand and actual demand (unconsumed forecast)
- **Total demand** – the sum of open quantities and actual demand (the planning relevant demand)

Deleting Forecasts (Demand Time Fence)

It is possible to delete all the forecasts for a product and supply planning area combination. After the deletion, all data, such as consumption data, are lost. The status of the demand forecast is changed to initial.

When the forecasts move into the past, they are eliminated by the demand time fence of the demand management procedures. The demand time fence is differently defined for each demand management procedure:

- Current bucket consumption: forecasts are set to zero if they are before today's date.
• Adjacent buckets consumption: forecasts are set to zero if they are two time periods in the past (forecasts in the period -2 from today’s date)
• Preceding bucket consumption there is not automatic removal.

It is important to note that these demand time fences cannot be freely defined.

See Also
Demand Planning  [page 8]
Demand Planning Process  [page 28]
Forecasting  [page 10]
Demand Plans Quick Guide  [page 34]
UoM-Based Rounding of Final Forecast Figures  [page 32]

3.1.3 UoM-Based Rounding of Final Forecast Figures

Overview
In demand planning, the forecast quantities can be calculated using statistical functions or entered manually by the planner using the Maintain Demand Forecast common task in the Supply Planning work center. These calculations can yield decimal result values. The UoM based rounding flag allows the planner to round the values that are copied to the final forecast figures based on the accuracy of the UoM in use.

The main goal is to provide UoM based rounding for the final forecast figures as they appear in demand plan.

Rounding Logic
The rounding logic is more sophisticated than simply rounding a single figure. The rounding needs to take the time dimension into account.

Time – each final forecast figure should be considered within the plan forecast horizon, as opposed to being rounded as a single figure. This ensures that the total amount throughout the horizon will not be significantly lower or higher than the non-rounded one. Rounding is performed on the most detailed level — for each planning area and material combination.

Trigger for Rounding
Rounding settings are displayed in the General section when editing the settings of an existing demand plan.

UoM based rounding takes place when copying the calculated forecast figures to the final forecast figures. Rounding can be triggered manually by the user when dealing with a specific demand plan by choosing the Copy Statistical Forecast or using an automatic mass data run. These actions can be found in the demand planning board in the Demand Plans view of the Demand Planning work center. It is added here to allow the automatic processes (namely the calculate forecast run) to round the values if the relevant demand plan was defined this way.

How it Works
Time based rounding is performed in the following manner:

1. Round down all the figures relevant to the forecast horizon and accumulate the remainder.
2. Round up the remainder and distribute it evenly on the set.

### Initial Set

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<tbody>
<tr>
<td>Statistical Forecast</td>
<td>100.23</td>
<td>60.870</td>
<td>89.159</td>
<td>94.000</td>
<td>101.637</td>
<td>72.826</td>
</tr>
</tbody>
</table>

Forecast horizon = 6 months; UoM = Each

### Step One

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</thead>
<tbody>
<tr>
<td>Final Forecast</td>
<td>100</td>
<td>60</td>
<td>89</td>
<td>94</td>
<td>101</td>
<td>72</td>
</tr>
</tbody>
</table>

Reminder = .23+.87+.159+.637+.826 = 2.722 ~ 3

### Step Two

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Final Forecast</td>
<td>101 (=100 +1)</td>
<td>61 (=60 +1)</td>
<td>90 (=89 +1)</td>
<td>94</td>
<td>101</td>
<td>72</td>
</tr>
</tbody>
</table>

Sum of the original set of forecasts = 518.722
Sum of the rounded set of forecast = 519

Since the current copy is performed on the most detailed level, there is no need to consider the hierarchical rounding (between aggregation levels).

### See Also

- Demand Planning  [page 8]
- Demand Planning Process  [page 28]
- Forecasting  [page 10]
- Demand Management and Forecast Consumption  [page 30]
- Demand Plans Quick Guide  [page 34]
3.2 Demand Plans View

3.2.1 Demand Plans Quick Guide

As a demand planner, you need to provide accurate forecasts of future demand for your company’s products. The Demand Plans view allows you to setup and maintain demand plans so you can provide such forecasts for future demand. You can access the Demand Plans view from the Demand Planning work center.

Your main working environment for manual planning and forecasting is the Planning Board, a predefined spreadsheet where you can easily review and change your forecasts. You can create forecasts manually, or you can let the system calculate a forecast using a statistical forecasting model and your history data as a reference.

Once you have finished the planning process for a certain period, you can release the demand plan to supply planning where it known as a demand forecast and forms the basis for current and future production and procurement until you receive sales orders. This process is usually repeated on a rolling basis, weekly or monthly.

You can automatically prepare demand plans, roll demand plans, run statistical forecasts, and release demand plans. For more information, see Automated Actions (in Demand Planning) [page 47].

You also have the option to create a report to download the demand plan data into Microsoft Excel. You use the Demand Plan Report data source and assign the report to a work center with a Reports view, such as the Supply Planning work center. For more information, see Design Reports Quick Guide.

Business Background

Demand Planning

Demand planning enables the demand planner to forecast demand and subsequently release it to supply chain planning and control, at the level of a product in a specific supply planning area.

Demand forecasts are key to supply chain planning – the more transparent and accurate they are, the more effectively companies can plan for future demands. Real-time business data captured from application areas such as sales and supply chain, is stored in one data warehouse. Companies thus have a comprehensive view of all relevant figures today, and the information they need for effective planning in the future.

You can access this function in the Demand Planning work center under Demand Plans.

For more information, see: Demand Planning [page 8].

Demand Planning Process

This process describes each activity in the demand planning cycle. In general, you can assume that the order of the processes presented here is the order in which you should proceed through the demand planning cycle of activities.

Demand planning enables the demand planner to forecast demand and subsequently release it to supply chain planning and control, at the level of a product in a specific supply planning area.

Statistical forecasting using the multilevel planning option allows you to create a statistical forecast at aggregate levels, such as product group, or across supply planning areas. Statistical forecasts created at aggregate levels are distributed to the level of individual products and supply planning area using distribution factors. You can choose to calculate distribution factors automatically (based on historical figures), or you can define them manually.

For more information, see: Demand Planning Process [page 28].
Forecasting
Demand planning enables the demand planner to make forecasts and use statistical models to create a demand plan used during planning for anticipated product demand. Demand plans are critical to supply chain planning, the more transparent and accurate they are, the more efficiently you can plan for future supplies.
For more information, see: Forecasting  [page 10].

Demand Management and Forecast Consumption
Demand management and forecast consumption enables the demand and supply planner to define how forecast demand and actual demand is considered in supply planning. The system uses demand management procedures (by product and planning area) to control the various strategies in demand management.
For more information, see: Demand Management and Forecast Consumption [page 30].

UoM-Based Rounding of Final Forecast Figures
In demand planning, the forecast quantities can be calculated using statistical functions or entered manually by the planner using the Maintain Demand Forecast common task in the Supply Planning work center. These calculations can yield decimal result values. The UoM based rounding flag allows the planner to round the values that are copied to the final forecast figures based on the accuracy of the UoM in use.
The main goal is to provide UoM based rounding for the final forecast figures as they appear in demand plan.
For more information, see: UoM-Based Rounding of Final Forecast Figures [page 32].

Demand Planning (Scenario)
The Demand Planning business scenario allows you to interactively create demand forecasts in rolling time periods (for example months) using different forecasting methods. You then release the demand forecasts to supply planning. You typically use demand planning to plan forecast demand in midterm or long term planning horizons for the Make to Stock and Procure to Pay (Stock) scenarios.
Before starting a new periodic forecast for a demand plan that already exists, you must consider potential changes such as new products, phased out products, and planning horizons. If necessary you may need to set up a new demand plan.
For more information see, Demand Planning.

Tasks
Edit Forecasting Groups
1. Choose the common task Edit Forecasting Group.
2. Check and edit your forecasting groups as required. The following options are available:
   - To edit a forecasting group, select the forecasting group ID and choose the appropriate settings.
   - To allow your forecasting groups to be assigned to products, select the Allow Product Assignments checkbox.
   - To add a subgroup, select the forecasting group ID, click Add Subgroup and choose the appropriate settings for the subgroup.
   - To delete a subgroup, select the appropriate forecasting group ID and click Delete Subgroup.
3. Save your changes.
Create a New Demand Plan

For more information about this task, see Create a New Demand Plan [page 37].

Edit a Demand Plan

For more information about this task, see Edit a Demand Plan [page 39].

Roll a Demand Plan

For more information about this task, see Roll a Demand Plan [page 41].

Prepare a Demand Plan

You only need to use the preparation process for a new or a changed (for example, time horizons, demand plan scope) demand plan.

At all other times the rolling process is used to update actuals at the start of each planning period.

1. Go to the Demand Planning work center and choose the Demand Plans view.
2. Select the appropriate demand plan.
3. Click Prepare to open the Prepare quick activity.
4. Under Update Actuals, Update Final Actuals, and Distribution Factors, select the particular actions that you wish to perform on your demand plan.
5. Optional: If you have selected Update Actuals or Update Final Actuals, set their associated time horizons.
6. Click Apply and then click Close.

Upload History Data

For more information about this task, see Upload History Data [page 42].

Create or Update a Demand Forecast

For more information about this task, see Create or Update a Demand Forecast [page 44].

Release a Demand Plan

Your demand plan must have the status Active before you can release it to supply planning.

1. In the Demand Planning work center, choose the Demand Plans view.
2. In the Demand Plans view, select the demand plan containing the forecast that you wish to release to supply planning.
3. Click Release to display the Release screen.
5. Click Apply to release the demand plan and associated final forecast.
6. Click Close to close the Release screen.
Analyze Demand Plan Scope

1. Choose the common task *Analyze Demand Plan Scope*.
2. Using the *Advanced Search* options, define a certain set of demand plans.
3. Click *Go* to locate the demand plans that you have defined.
4. Select the demand plan that you wish to analyze in the table.
5. Under *Details: Demand Plan <ID>* , choose the following tabs and analyze the demand plan scope data:
   - Demand Plan
   - Planning Area
   - Product
   - Product and Planning Area

Copy a Demand Plan

To save time when planning, you can make a copy of a demand plan that already exists and is similar to the plan that you wish to create.

- Your demand plan settings are copied into a new demand plan. Associated demand forecasts are not copied to the new demand plan.

1. In the *Demand Planning* work center, choose the *Demand Plans* view.
2. In the *Demand Plans* view, select a demand plan.
3. Click *Copy* to copy the demand plan.
   The *Copy Demand Plan* dialog box is displayed.
4. In the *Demand Plan ID* field, enter a new plan ID and click *OK*.

The copy of your existing demand plan is added to the table of demand plans ready for you to make appropriate changes. For more information, see *Edit a Demand Plan* [page 39].

3.2.2 Tasks

3.2.2.1 Create a New Demand Plan

Overview

Before creating a forecast, you must create a demand plan to provide the planning framework for a certain combination of products and planning areas.

Creating a demand plan includes the following activities:

- Defining the basic capabilities of the demand plan such as:
  - Enabling multilevel planning
  - Enabling statistical forecasting and selecting appropriate statistical parameters
- Defining the demand plan scope (the set of products and planning areas)
- Defining the demand plan time horizons and other time parameters
**Procedure**

1. In the **Demand Planning** work center, choose the **Demand Plans** view.
2. In the **Demand Plans** view, click **New** to open the **New Demand Plan** guided activity.
3. In the **Define General Settings** step of the guided activity, select the general settings and scope of the demand plan:
   a. Under **General Settings**, enter the demand plan ID and demand plan description.
   b. Under **Planning Mode**, select multilevel or single-level planning mode. If you have selected multilevel planning, you must enter a unit of measure (UoM) for the demand plan in the **Demand Plan UoM** field.
   c. Under **Forecasting**, select or deselect statistical forecasting. (For more information about rounding in forecasting, see **Edit a Demand Plan** [page 39].)
   d. Under **Time**, define appropriate period parameters and click **Next** to continue.
4. In the **Select Planning Criteria** step of the guided activity, do the following:
   a. Under **Eligible For Planning Levels**, select the characteristics that will form the planning levels that you intend to use.
   b. Under **Eligible For Selections**, select the characteristics that will form the selection definitions that you intend to use for filtering products.
5. In the **Maintain Scope** step of the guided activity, click **Add Row** to add products to the scope of your plan manually, or add large numbers of products by clicking **Extend By Selection** Click **Next** to continue.
6. Optional: If you previously enabled statistical forecasting, then do the following:
   a. In the **Define Forecasting Models** step of the guided activity, select appropriate forecasting models for the products that are in the scope of your plan.
   b. Under **Model Variant Settings**, maintain appropriate settings for your model variant.
   c. Click **Next** to continue.
7. In the **Set Time Parameters** step of the guided activity, define the release offset and the release horizon. Click **Next** to continue.
8. In the **Review** step of the guided activity, review the settings for your new demand plan and choose **one** of the following:
   - Click **Previous** to step back in the procedure and make changes.
   - Click **Finish with Activation** to save your demand plan with the status **Active**, and then click **Next** to continue.

If required, you can click **Finish** to create a demand plan with the status **In Preparation**.

Your demand plan can have one of the following statuses:
- **In Preparation** – initial status, you can perform all actions on your demand plan
- **Active** – your demand plan is ready for release to supply planning
- **Blocked** – use this status to prevent the release of an active demand plan. You can perform all actions on your demand plan but you cannot release it to supply planning
- **Obsolete** – your demand plan is obsolete, no action is possible

9. In the **Confirmation** step of the guided activity, click **Close** to close the **New Demand Plan** guided activity.
Result

The new demand plan is saved to the system and added to the list in the Demand Plans view. To open the demand plan from this list, click the appropriate demand plan ID link.

3.2.2.2 Edit a Demand Plan

Overview

You must regularly review and edit your demand plan settings such as scope, planning levels, and forecasting models, before planning and releasing a forecast to supply planning.

Procedure

1. In the Demand Planning work center, choose the Demand Plans view.
2. In the Demand Plans view, select a demand plan and click Edit to open the Demand Plan screen.
3. Optional: If required, choose the General tab and under Forecasting click Yes to enable statistical forecasting.

   If statistical forecasting was selected, decide on the rounding that will take place based on the UoM decimal setting in business configuration. For example, in a single level demand plan for material ABC, the planning UoM is ZZ with 2 decimal positions. After the calculation of the statistical forecast, the figures have 3 decimal positions (maximum level of accuracy allowed by the demand planning process). When the statistical forecast data is copied, the rounding process takes place and the data is updated. For more information see, UoM-Based Rounding of Final Forecast Figures [page 32].

4. Optional: If required, under Time enter a new History Horizon and Forecast Horizon.
5. Choose the Planning Criteria tab. In the Usage of Characteristics table, under Eligible for Planning Levels and Eligible for Selections, review and select appropriate characteristics that will be used for planning levels and selections.
6. Choose the Scope Maintenance tab and review the scope of your demand plan. Click Add Row or Delete to add or delete a product from the scope of your demand plan.

   You can click Extend by Selection or Delete by Selection to add or delete multiple products using selection.

7. Choose the Process Settings tab and review your process settings:
   a. Choose the Time Parameters tab and review and adjust the following time–related parameters:
      1. Under Roll, enter an appropriate Rolling Interval.
      2. Under Updating Actuals, enter:
         • Forecasting Horizon for Updating Actuals
         • History Horizon for Updating Actuals
         • Forecasting Horizon for Updating Final Actuals
         • History Horizon for Updating Final Actuals
      3. Under Forecasting, enter the Offset for Overwriting Final Forecast.
4. Under **Release Offset**, enter the **Release Offset** and the **Release Horizon**.

   If your demand plan is **not multilevel** and **Statistical Forecasting** is **not enabled**, ignore the following step.

b. Choose the **Distribution Factors** tab:

   1. Under **Distribution Factors Calculation** click one of the following distribution modes:
      - **Manual** – to manually maintain distribution factors
      - **All Forecast Periods** – to automatically calculate distribution factors over the entire forecast horizon
      - **New Forecast Period(s)** – to calculate distribution factors during plan rolling; only new forecasting periods are taken into account
   2. Under **Distribution Factors**, enter the **History Horizon For Factor Calculation**.

   If **Statistical Forecasting** is **not enabled**, ignore the following step.

c. Choose the **Forecasting Models** tab and check that your forecasting model variants are up-to-date. If necessary, select new forecasting model variants and adjust their parameters accordingly:

   1. Under **Forecasting Models**, select an appropriate forecasting model from which you wish to create a new model variant.
   2. Click > to create your new forecasting model variant under **Forecasting Model Variants**.
   3. Under **Model Variant ID**, enter an appropriate ID for your forecasting model variant.
   4. Under **Model Variant Settings**, maintain the parameters for your new model variant.

d. Choose the **Automated Actions** tab and under **Planning Level For Statistical Forecasting**, select the characteristics that will be part of the planning level used during automated statistical forecasting.

8. Choose the **Planning Board** tab and select the defaults applied when you open the **Planning Board**:

   a. Choose the **Display of Characteristics** tab, and under **Part of planning Level** select appropriate characteristics to define the default planning level.
   b. Choose the **Display of Characteristics** tab, and under **Displayed** select characteristics that will be displayed when you open the **Planning Board**.

      You can click **Move Up** or **Move Down** to change the display order of the characteristics that you select.

c. Choose the **Key Figures** tab, and under **Displayed** select key figures that will be displayed when you open the **Planning Board**.

      You can click **Move Up** or **Move Down** to change the display order of the key figures that you select.

d. Choose **Layout** and under **Enabled Buttons** select the buttons you wish to enable when the **Planning Board** is opened. Under **Time Axis**, enter the number of periods that will be displayed and the number of periods that will be scrolled when the **Planning Board** is opened.

e. Choose **Default Selection** and choose a default selection that will be used to filter products in the **Planning Board**.

9. Choose the **Selections** tab to define new search selections that can be used to **filter products** when scoping and planning:
a. Choose the tab that corresponds to your selection criterion. For example, choose the Product tab and do the following:
   1. Under Include/Exclude, choose Excluding or Including.
   2. Under Search Pattern, choose a search pattern.
   3. Under Product ID From and Product ID To, choose an appropriate product.

b. If you have more selection criteria, repeat step a for the other tabs.

10. Optional: If you have enabled multilevel planning, choose Disabling Planning Levels and add any planning levels that you wish to disable.

11. Click Save and then click Close.

Result
Your demand plan is now configured and ready to create a demand forecast.

3.2.2.3 Roll a Demand Plan

Overview
You must periodically roll your demand plan into the future to ensure that the correct time periods are opened for forecast maintenance, and that obsolete time periods are closed.

Procedure
1. In the Demand Planning work center, choose the Demand Plans view.
2. In the Demand Plans view, select the appropriate demand plan.
3. Click Roll, and then choose Roll Plan to open the Roll screen.
4. Under Update Actuals, enter the History Horizon for Updating Actuals and the Forecast Horizon for Updating Actuals.
5. Optional: If appropriate, under Update Final Actuals, select Copy Actuals into Final Actuals.
6. Optional: If you have selected Copy Actuals into Final Actuals, enter the History Horizon for Updating Final Actuals and the Forecast Horizon for Updating Final Actuals.
7. Click Apply and then click Close to close the Roll screen.

Result
Your demand plan is rolled into the future.
3.2.2.4 Upload History Data Using Microsoft Excel®

Overview

You can upload any of the demand plan manual key figures: Final Actuals, Final Forecast, and Distribution Factor. You decide exactly which key figures will be uploaded by selecting the appropriate value (Final Actuals, Final Forecast, or Distribution Factor) in the Key Figure Type column in the upload template.

Historical data (sales orders, stock transfer orders, and production orders) that was not created by the SAP Business ByDesign system can be uploaded as Final Actuals. History data is typically used when:

- Your system has just gone live
- You have newly launched products that do not have any associated history data
- You believe that the existing history data is not representative of the future

When you upload history data you directly update the key figure Final Actuals. Your statistical forecast is calculated based on the uploaded history data independent of the existing historical values of the key figure Actuals.

The key figure Final Actuals are overwritten (updated) by the values in the key figure Actuals when uploading history data.

To keep the existing values of your Final Actuals over a certain time period, you must set the time period History Horizon for Updating Final Actuals so that it is shorter than the History Horizon itself.

For example, to prevent any update of the the key figure Final Actuals, you would set the value of History Horizon for Updating Final Actuals to zero.

To prevent overwriting your Final Actuals over a certain time period, choose Demand Plans > Edit > Process Settings > Time Parameters and ensure that the History Horizon for Updating Final Actuals is set appropriately.

Forecasts calculated externally to the SAP Business ByDesign system can be uploaded using the Final Forecast key figure. These forecasts can then be released to supply planning to create the required planning proposals.

The key figure Final Forecast is overwritten (updated) by the uploaded values.

Distribution factors are uploaded at the detailed level of the demand hierarchy. They serve to compute the distribution of forecasts maintained or calculated at aggregated levels of the demand hierarchy, such as forecasting group.

The key figure Distribution Factor is overwritten (updated) by the uploaded values.

Prerequisites

You have installed the latest Add-In for Microsoft Excel. Depending on your solution set-up, you can do this from the Self Services Overview in the Home work center, from the Download Center in the Application and User Management work center, or from the Download link that is available directly on the user interface.

Also, the settings for your browser must be set correctly. You can check this by clicking Check My Computer Settings on the logon screen.

Steps

In the SAP Business ByDesign system, go to the Demand Planning work center. Choose the Demand Plans view and click Upload.
Get the Template

1. Select the template. Choose the template in the required language and click Download.

   - You can choose any language that you have selected during scoping. If you have selected only one language during scoping, you will not get a selection of language versions to choose from.

2. Decide what you want to do with the template. Choose one of the following options:
   - If you want to use the template only once, you can open the template without saving it. Click Open.
   - If you want to save the template so that you can use it again, choose a location to save the file to, enter an appropriate file name, and click Save. Then click Open.

   - If you have previously downloaded and saved this template on your computer, navigate to the location where you have saved the template, and open it.

Log on to the solution from Microsoft Excel

1. In the SAP Add-In ribbon in Microsoft Excel, click Logon.

   - If the SAP Add-In ribbon is not displayed, check to make sure that the Add-In for Microsoft Excel has been installed correctly (see Prerequisites in this document).

   A dialog box opens where you can enter the logon details. The system URL is proposed automatically. The system URL is the URL of the system that you are working with.

2. Enter your user ID and your password, and click Logon.

   - After initial logon to the system, the ribbon text is changed from SAP Add-In to the name of your solution.

Enter Details in the Microsoft Excel Template

Note the following:

- The Microsoft Excel template is presented with a number of rows where you can enter or copy your data. If you need more, add the number of rows you need before you start entering or copying your data.
- Ensure that mandatory fields (those marked with an asterisk) are filled.
- To help you fill in the details:
  - Some fields have dropdown lists.
  - In some fields you can search the system for data, for example, countries. Place the cursor on the field, and click Lookup in your solution's tool bar or ribbon to search the system. A search field is available in the Lookup dialog box that appears. When you start to type text in the search field, the relevant entries are filtered in the ID and Description columns, meaning that you do not have to scroll through the whole list. If the Lookup button is not active in the ribbon or toolbar, then it is not possible to perform a search.

Follow the instructions given in the Microsoft Excel template and enter the history data that you want to upload to SAP Business ByDesign:
- UploadProductAndPeriod tab – enter the history data that you want to upload
- ReadMe tab – explanation of the data fields
- Where to Look Up Required Data tab – where to locate your data
• **SimulateAllowedPeriods** tab – simulate the value range for the periods that can be uploaded

**Save Your Data**

1. After you have finished entering all the data, save the Microsoft Excel file.
2. Click ![Save Data to](image)
   A dialog box opens, informing you that the data is being saved to the solution.
   After the upload, a message informs you that your data has been saved in the solution.

   If you do not provide all the required information, or if you provide incorrect information, some records will not be saved. Error messages will highlight the problems so that you can correct them and save the data again.

3. You can then log off by clicking ![Logoff](image).

**Result**

You have updated the key figures **Final Actuals**, **Final Forecast**, and **Distribution Factor** with your data.

### 3.2.2.5 Create or Update a Demand Forecast

**Overview**

You use the **Planning Board** as your primary workspace for creating, viewing, and editing demand forecasts before releasing them to supply planning.

You can access the **Planning Board** in the **Demand Planning** work center under **Demand Plans**.

When creating or updating your demand forecast you typically do the following:

- Calculate or update the key figures
- Review the key figure **Actuals**
- Review the key figure **Final Actuals** and overwrite outliers in **Final Actuals** (as appropriate)
- If your plan is multilevel, review the key figure **Distribution Factors** and overwrite them (as appropriate)
- Review the key figure **Statistical Forecast** and run a statistical forecast (as appropriate)
- Review the key figure **Final Forecast**, copy **Statistical Forecast** into **Final Forecast**, and overwrite **Final Forecast** (as appropriate)

**Prerequisites**

Edit your demand plan setup. For more information, see **Edit a Demand Plan** [page 39].
The Planning Board default display settings are intended as an initial starting point when forecasting. As you proceed through the detailed steps in this procedure, you can choose Demand Plans, and then click Plan to navigate through your demand plan in the following way:

- Click Choose Planning Layout, and choose Maximal. You can also choose Minimal, Default Settings, or Maximal Layout (depending on the step you are currently performing).
- Under Active Filter, you can change the filter and select products that are not included in your default filter.
- Click Select Characteristics to move to a different planning level. You can change the key figures Final Actuals, Final Forecast, and Distribution Factors at any planning level.
- Click Select Key Figures to filter and sort key figures that you need for a certain step.
- Click Move Forward or Move Backward to move forward or backward in the time axis.

Procedure

1. Calculate or update the key figures required to derive your demand forecast:
   a. In the Automated Actions view, choose Preparation Run or Rolling Run to schedule an automatic update of the following key figures:
      - Actuals
      - Final Actuals
      - Distribution Factors
   
      Alternatively, you can manually perform the update by choosing the Demand Plans view and clicking Prepare or Roll.
   b. In the Automated Actions view, choose Forecasting Run to schedule an automated update of the key figure Statistical Forecast.
2. Choose the Demand Plans view.
3. In the Demand Plans view, select a demand plan. Click Plan to open the Planning Board.
4. Review the key figure Actuals. This key figure shows historical demand and helps you to understand the basis for forecasting calculations. You can scroll through products and historical periods. If you believe that your data is outdated, carry out the procedure in Prepare a Demand Plan in the Tasks section of the Demand Plans Quick Guide [page 34].
5. Review the key figure Final Actuals and overwrite outliers in Final Actuals (as appropriate).

   The key figure Final Actuals is used as input for the forecasting run to extrapolate demand into the future.

   If you previously chose the option Copy Actuals into Final Actuals, then Actuals has the same value as Final Actuals within the horizons for updating Final Actuals.

   a. Optional: If your data is outdated for many products, carry out the procedure in Prepare a Demand Plan in the Tasks section of the Demand Plans Quick Guide [page 34].
   b. Optional: If your data is outdated for a few products only:
      1. In the Planning Board table, select the appropriate product.
      2. In Function Period, specify the From and To period for the copy process.
      3. In Active Function, select the planning function Copy Actuals.
      4. Click Run Function to run the planning function.
c. Optional: If Final Actuals contains outliers that statistical forecasting cannot handle automatically, overwrite the existing values as appropriate.

If Multilevel Planning is disabled, ignore the following step.

6. If your plan is multilevel, review the key figure Distribution Factors and overwrite them as appropriate:
   This key figure shows the historical distribution of demand by product and planning area over each time period. It forms the basis for distributing aggregate-level statistical forecasting calculations.
   a. Optional: If the data is outdated, perform the procedure in Prepare a Demand Plan in the Tasks section of the Demand Plans Quick Guide [page 34].
   b. Optional: If the calculated distribution factors do not reflect the future distribution pattern, overwrite the existing values as appropriate.

If Statistical Forecasting is disabled, ignore the following step.

7. Review the key figure Statistical Forecast and run a statistical forecast as appropriate:
   a. Optional: If you rely on the key figure Statistical Forecast as an input for Final Forecast, choose Planning Board ➤ Show Statistical Forecast Details and select Copy Statistical Forecast into Final Forecast.
   b. Optional: If you changed the key figures Final Actuals or Distribution Factors in the previous steps or the key figures were not updated in the current planning cycle, choose Planning Board ➤ Show Statistical Forecast Details and click Run Statistical Forecast to update the key figure Statistical Forecast based on your changes.

If Statistical Forecasting is disabled, ignore the following step.

8. Review your forecasting result and refine the result if required:
   a. Click Choose Planning Board Layout and select Maximal Layout.
   b. Click Show Statistical Forecast Details.
   c. In Active Forecasting Profile, select an alternative Forecasting Model Variant.
   d. Adjust the active forecasting model variant control parameters (as appropriate).

If Statistical Forecasting is disabled, ignore the following step.

9. Review the key figure Final Forecast and copy Statistical Forecast into Final Forecast, and overwrite Final Forecast (as appropriate):
   a. Optional: If you rely on Statistical Forecast as an input for the Final Forecast for a limited set of products, and you changed the key figure Statistical Forecast in the previous step, do the following:
      1. In the Planning Board table, select the appropriate product.
      2. In Function Period, specify the From and To period for the copy process.
      3. In Active Function, select the planning function Copy Statistical Forecast.
      4. Click Run Function to run the planning function.
b. Review the result of copying the statistical forecast and decide if the Final Forecast is appropriate.

c. Overwrite Final Forecast as appropriate, and update the estimated figures for the products where the statistical forecast was not copied into the Final Forecast.

10. Click Save to save the plan.
11. Click Close to close the Planning Board.

3.3 Automated Actions View

3.3.1 Quick Guide for Automated Actions (in Demand Planning)

In the Automated Actions view of the Demand Planning work center, you can automate the planning process allowing creation, editing, deletion, and scheduling of automatic mass data runs for different demand planning tasks.

You can automate your planning process using the following mass data runs:
- Preparation Runs subview – initialize actuals and calculate distribution factors
- Rolling Runs subview – update demand plan time periods and close those that are obsolete, automatically update the actuals
- Forecasting Runs subview – create a statistical forecast
- Release Runs subview – release your demand plan and associated final forecast to supply planning

Business Background

Mass Data Runs (MDR)

A Mass Data Run (MDR) is the automatic mass processing of a task or a business transaction. MDRs enable mass processing of business data and are used in business processes, for example, invoice runs, payment authorization runs, or balance confirmation runs. When a user schedules an MDR the system represents it as a background job. During scoping, it is possible to provide default variants of the MDRs.

For more information, see Mass Data Runs (MDR).

Tasks

Create a Run

1. Choose the Automated Actions view.
2. Under Automated Actions, select one of the following subviews:
   - Preparation Runs
   - Rolling Runs
   - Forecasting Runs
   - Release Runs
3. Click New to open the run editor.
4. In the General Data section, enter an ID and a description for the run.
5. In the Control Parameters section, select appropriate parameters to update the plan.
The parameters in the Control Parameters section will vary according to the type of run that you are creating.

6. In the Selection Criteria table, click Add Row to add a new row.

7. Specify further selection criteria for the run. The system automatically includes or excludes plans based on these criteria. For example:
   - **Filter demand plans using a selection range**
     a. In the Inclusion/Exclude column, click the arrow and choose Including or Excluding.
     b. In the Search Pattern field, click the arrow and choose Between.
     c. In the Demand Plan ID From and Demand Plan ID To columns, select the start and end range for selection.
   - **Filter demand plans with reference to a particular selection**
     a. In the Inclusion/Exclude field, click the arrow and choose Inclusion or Exclusion.
     b. In the Search Pattern field, click the arrow and choose the appropriate operator, for example Less than or Equal To.
     c. In the Demand Plan ID From column, enter the document ID for the selection. For example Demand Plan ID 8186.

8. Optional: You can choose to activate the run immediately, or you can activate the run at a later time. For example, just before scheduling. Click Set to Activate to activate the run immediately.

To activate the run at a later time, select the run you want to activate in the Automated Actions view, click Actions, and then choose Set to Active.

9. Click Save and Close to return to the Automated Actions view.

**Schedule a Run**

1. Choose the Automated Actions view.

2. Under Automated Actions, select one of the following subviews:
   - Preparation Runs
   - Rolling Runs
   - Forecasting Runs
   - Release Runs

3. Select the run that you wish to schedule.

Before scheduling, you must click Actions, and then choose Set to Active to activate your run.

4. Click Schedule to open the Schedule Run quick activity.

5. Under Schedule, select one of the following scheduling options:
   - Start Immediately – to execute the run immediately.
   - Run After Job – and then select a particular job. The run will be executed immediately after the specified job has been completed.
   - Single Run – and set a date and time for the run.
Recurrence – to start the run at regular time intervals. In the recurrence list, choose a recurrence for the run. For example, daily, weekly, or monthly.

6. Click **Save and Close** to return to the Automated Actions view.

---

**Edit a Run**

1. Choose the Automated Actions view.
2. Under Automated Actions, select one of the following subviews:
   - Preparation Runs
   - Rolling Runs
   - Forecasting Runs
   - Release Runs
3. Select the run that you wish to edit.
4. Click **Edit** and maintain settings as appropriate.
5. Click one of the following:
   - **Save and Close** – to save the run and close the Preparation Runs screen
   - **Save** – to save the run
   - **Close** – to close the Preparation Runs screen
   - **Schedule** – to schedule the run
   - **Set to Active** – to activate the run

---

**Copy a Run**

1. Choose the Automated Actions view.
2. Under Automated Actions, select one of the following subviews:
   - Preparation Runs
   - Rolling Runs
   - Forecasting Runs
   - Release Runs
3. Select the run that you want to copy.
4. Click **Copy** and maintain settings as appropriate.
5. Click **Save** to save the new run.
6. Optional: If you want to schedule your new run, click **Set to Active** and then click **Schedule** and select an appropriate scheduling option.
7. Click **Save and Close**.

---

**Export Business Data Using Microsoft Excel**

For more information about this task, see here [page 50].
3.3.2 Tasks

3.3.2.1 Export Business Data Using Microsoft Excel®

Overview
You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.
You can export data from a report or from a worklist.

Prerequisites
- You have installed the latest Add-in for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - Self Services Overview in the Home work center
  - Download Center in the Application and User Management work center
  - Download link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking Check My Computer Settings on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

Procedure
1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click Switch to Chart or Switch to Table.
   - For a worklist, select the worklist and click Go.
3. Click Export, then choose To Microsoft Excel.
4. Optional: Personalizing your excel export
   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click Personalize This screen
      b. In the side panel, select Display Settings.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting All in the Export Columns field.
      - The default value for this field is Visible, which exports only the currently displayed columns.
   2. To select the language for your excel export, do the following
      a. In the Display Settings dialog box, set the Language Selection field to Show and click OK.
      b. Click Save.
c. Click \textit{Export}, then choose \textit{To Microsoft Excel*}.
d. Select a language in the dialog box that opens.

\begin{itemize}
  \item The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.
\end{itemize}

5. Select the template in the dialog box that is displayed.

\begin{itemize}
  \item If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
  \item If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
  \item If there is more than one template in the system for this export scenario, the \textit{Template List} dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.
\end{itemize}

6. Click \textit{Download}.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click \textit{Open} or \textit{Save} depending on what you want to do with the exported data.

Depending on whether you click \textit{Open} or \textit{Save}, there are two possible results:

\begin{itemize}
  \item If you click \textit{Open}, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
  \item If you click \textit{Save}, a \textit{Save As} dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully. You can later navigate to the location where you have saved the template and open it.
\end{itemize}
4 Supply Planning

4.1 Business Background

4.1.1 Material Planning

Overview

To ensure the availability of products by the required time and in the correct quantity, you can either interactively perform planning runs, or set up automated planning runs that can be scheduled to run at regular intervals. The creation of production, purchase or stock transfer proposals as a result of these planning runs is possible for products at all levels - for both input products and finished products. What is more, you have the option of creating and adjusting production, purchase or stock transfer proposals manually.

You influence the exact details of your company’s material planning processes with the settings you make in the product master and business configuration. Access to material planning details allows you to analyze exactly how demand is matched with supply at any given time. You can also monitor key figures such as the total demand, total supply, and days of supply. The material flow, which provides an overview of the pegging relationships network, allows you to check the effects of late supply and adapt your planning accordingly.

You can organize your work by querying for products that have not been verified after the last planning run in the Products view of the Supply Planning work center. This, along with the exception overview list in the Exceptions view of the same work center, serves as your main work list as supply planner.

A planner checks the products he or she is responsible for in the Products view of the Supply Planning work center to see if any planning exceptions exist and selects a product that has a high priority exception from the list due to a stock shortage caused by a large sales order. He or she then navigates to the Details screen to examine the available stock and all the supply and demand for that product and from here decides to interactively run planning for the product. This results in a planning proposal (receipt) being created to cover the demand, causing the exception to disappear. The planner therefore sets an indicator that shows this product as Verified. Subsequently, he or she selects the new planning proposal and navigates to the material flow to check the pegging between the original demand and the new planning proposal. Finally, the planner releases the proposal to execution.

The following sections provide detailed information about:

- Supply and demand elements considered by material planning
- Interactive, automated, and manual planning modes
- Regenerative and net-change planning methods for material planning runs
- Prerequisites for the creation of production, purchase and stock transfer proposals
- What happens when a planning run is executed
- Monitoring the material planning run

SAP Business ByDesign supports planning at the site level only. For planning across multiple sites, you have to run the planning at each site separately.
Supply and Demand Elements in Material Planning

The following types of demand (requirements) are taken into account for material planning:

- **Independent demand**
  - This type of demand is not dependent on other forms of demand. It can come in the form of:
    - Sales order
      - This is an order from a customer for products to be supplied in a specific quantity for an agreed price by a specified date.
    - Service order
      - This is an order from a customer for services to be rendered for an agreed price by a specified date.
    - Stock transfer order
      - This is an order created from a project to request for materials from stock.

- **Dependent demand**
  - This is calculated by the system and is a requirement for a product resulting from the demand for a higher-level item of a bill of material (BoM). Dependent demand comes in the form of:
    - Production proposal dependent demand
      - This is dependent demand for a proposal for production.
    - Production request dependent demand
      - This is dependent demand for a proposal for production that is released to the production department.

- **Negative available stock**
  - This occurs due to inventory inaccuracy if a quantity higher than the available stock is issued.

- **Safety stock**
  - This is stock that is planned to be in inventory and is used to protect against demand or supply fluctuations. A safety stock violation causes a new planning proposal to be created.

- **Reorder point quantity**
  - This quantity represents the forecasted consumption of the product during the replenishment lead time. If the projected stock falls below the reorder point quantity, the creation of a planning proposal is triggered.

The following types of supply (receipts) are considered by material planning:

- **Production proposal**
  - This is a proposal for production created by the planning run or created manually to meet a requirement.

- **Production request**
  - This is a proposal for production to meet a requirement that is released to the production department.

- **Purchase proposal**
  - This is a proposal for purchasing created by the planning run or created manually to meet a requirement.

- **Purchase request**
  - This is a proposal for purchasing to meet a requirement that is released to the purchasing department.

- **Purchase order**
  - This is an order for purchasing created by purchasing based on the purchase request received.
• Inbound delivery
  This is a delivery from an external location to a storage location or production area.

• Available stock
  This is on-hand stock without restricted stock (such as damaged stock or stock in quality inspection) less in-process quantity (in-process quantity includes outbound in-process, inbound in-process, and intermediate production quantity).

• Stock transfer proposal
  This is a proposal indicating the movement of stock between two sites of the same company, the release of which results in the creation of a stock transfer order.

Interactive, Automated, or Manual Planning Mode

You can perform interactive planning for a product by clicking Run Planning on the Product Planning Details screen, which you can access:

- From the Exceptions, Products, and Customer Demand views of the Supply Planning work center
- From the Customer Demand and Delivery Due List views of the Outbound Logistics Control work center

You can also click Run Planning from the Sales Order Item Planning Details screen from the Customer Demand view of the Supply Planning and Outbound Logistics Control work center.

In this interactive mode, you determine whether the planning run should be performed at a single, or a multiple bill of material (BoM) level. Single-level planning only processes those products selected, whereas multi-level planning processes the selected products as well as the products at all lower levels of the BoM.

The regenerative planning method is always used for interactive planning runs. For more information about planning methods, see the Regenerative or Net-Change Planning Method for Material Planning Runs section.

You can also specify whether planning proposals should be created in the past as a result of the planning run. If you create planning proposals in the past, exceptions will be raised to inform you about the deviation from the date when the proposals should have been released to execution. You can then easily determine which planning proposals are more urgent and decide what action to take.

Not creating proposals in the past means that less interaction is required of you to achieve a realistic plan. However, you have to assess whether the requirement date of the demand can be met. Exceptions alert you to any potential out-of-stock situations that might affect order fulfillment. Based on this information, you can decide what action you need to take. For example, it is possible to reschedule planning proposals to meet the requirement date.

If the demand is in the form of a sales order, you can configure the solution to decide whether you want to consider the requirement date or the confirmation date of the sales order during material planning. The default configuration selects the requirement date. For more information, see Material Planning Run [page 56].

As an alternative, or in addition to interactive planning, you can set up automated planning runs to be performed on a regular basis. You create new or edit existing automated planning runs from the Planning Run subview of the Automated Actions view in the Supply Planning work center. (For more information about the Planning Run subview, see Planning Run Quick Guide [page 156].) In this subview, you select the products, supply planning area(s), and planning groups for which the planning run should be scheduled and specify whether the run should:

- Allow proposal creation in the past
- Run multi-level planning
- Delete all proposals that are not firm
- Re-explode firm proposals
If you choose to re-explode firm proposals, any previous manual changes to input products are overwritten.

Usually it is not necessary to set the Delete all Proposals That Are Not Firm and Re-explode Firm Proposals indicators, but you can use these indicators to be sure that products are planned from scratch. You can also specify whether net changes should be considered by the planning run. For more information, see the Regenerative or Net-Change Planning Method for Material Planning Runs section.

In addition to interactive and automated planning, you have the option of manually creating and adjusting production, purchase and stock transfer proposals where you see necessary to cover demand. This way, you do not have to rely solely on the system to create planning proposals as a result of a planning run.

For more information about production, purchase and stock transfer proposals, see:

- Handover to Production  [page 191]
- Handover to Purchasing  [page 194]
- Planning Stock Transfers  [page 200]

Regenerative or Net-Change Planning Method for Material Planning Runs

For automated planning runs, you can specify whether a net-change or regenerative planning method should be applied to a run. You do so by checking or not checking the Consider Net Change indicator in the New Planning Run screen from within the Automated Actions view of the Supply Planning work center.

For interactive planning runs, the regenerative planning method is always applied. You are not presented with an option when you click Run Planning from the Product Planning Details screen.

The following provides detailed information about each planning method:

- Regenerative planning
  This method performs a complete planning of all products within the selection criteria, for example, you can choose to plan all products under your responsibility as planner. With regenerative planning, products are planned at a multi-level in an automated planning run and at a single- or multi-level (based on your selection) in an interactive planning run.

- Net-change planning
  With this method, only products within your selection criteria and that have undergone a change relevant to material planning (known as net changes) since the last planning run are considered. Relevant changes are changes to supply or demand (for example, a new sales order, a modified planning proposal, or an updated production request from manufacturing), or changes to the product master (for example, the planning parameters, or the released production model).
  Products are planned at a multi-level in the automated planning run with this method. The advantage of working with this planning method is that you can execute the planning run in short intervals, for example, on a daily basis. This allows you to always work with the most up-to-date planning result. This method is also less time-consuming than the regenerative planning method.

Prerequisites for the Creation of Planning Proposals

The following elements must exist for the creation of production proposals:

- Product master
  If a product is to be considered by a planning run, the procurement type and lot-sizing method must be maintained in the Materials view of the Product Development work center.

  For more information about planning-relevant product master settings, see Material Planning Settings  [page 79].
- Released planning model (RPM)
  Provided that you have enabled the production model for planning in the Production Models view of the Planning and Production Master Data work center, the RPM is automatically created upon releasing the production model. The system also always creates a source of supply when it creates an RPM. The production bill of material is used in material planning and the bill of operations for capacity planning based on the RPM.
  For more information about the production model, see Production Models.

The following prerequisites must be fulfilled for the creation of purchase proposals:
- The product master must exist.
- External procurement must be selected as the procurement type and the lot-sizing method must be maintained within the product master.

A purchasing contract or list price is not a prerequisite, since planning is able to create proposals without a source of supply. However, if a purchasing contract or a list price exists, this is preferably used as the source of supply.

For more information about source of supply determination, see Sourcing in Planning [page 58].

The following prerequisites must be fulfilled for the creation of stock transfer proposals:
- The product master exists.
- Internal procurement is selected as the procurement type and the lot-sizing method is maintained within the product master.
- Transportation lanes exist between the sending site and the receiving site.
- The information in all the tabs is maintained for the material in the sending site and the receiving site in the Materials view of the Product Data work center.
- You, as supply planner, are assigned the Outbound Logistics Control work center with unrestricted write access.

Material Planning Run

When a material planning run is started, the system first determines which receipts already exist and are firmed for the planning run. It then assigns these firmed receipts to the existing demand and determines which demand has not been covered by these firmed receipts (that is, the net requirements).

The system subsequently calculates new lots for the uncovered demand. It calculates the quantity and date of these lots based on the lot-sizing method (lot for lot, fixed lot size, periodic lot size, target stock level, or target days of supply) and other settings you made in the product master, such as fixed lot size quantity, target stock quantity, and planning time fence). For more information about planning-relevant settings in the product master, see Material Planning Settings [page 79].

The system then calculates lots for the uncovered demand, but does not take existing receipts that are not firmed into account. As many receipts as possible are reused instead of being deleted and new ones being created. All existing receipts that are not firmed and that cannot be reused are deleted by the system. New receipts are only created for any outstanding uncovered demand. The planning run schedules production proposals based on infinite capacities, but taking the requirement date of the demand into account.
If the demand is in the form of a sales order, you can configure the solution to decide whether you want to consider the requirement date or the confirmation date of the sales order during material planning. Accordingly, the sales order demands are based on the requirement schedule lines or the confirmation schedule lines. To find the business option to configure this, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Supply Planning is selected within Supply Chain Planning and Control. In the Questions step, expand the Supply Planning scoping element and select Material Planning. Under Group: Planning Date, select and answer one of the questions. Note that you can select only one question at a time, and not both. The default selection for this business option is the requirement date.

Based on the results of the net requirements and lot-size calculation, the material flow is created. This shows the pegging relationship between supply and demand.

Monitoring the Material Planning Run

In the Products view of the Supply Planning work center, you are provided with the planning run status for a product. This tells you whether the given product has been planned successfully. The following statuses exist:

- **Planning Run with Errors**
  This indicates that the product could not be planned and is always accompanied by the Error Occurred During Planning Run exception. This exception explains why the planning run could not plan the product, usually due to missing master data such as a source of supply or lot-sizing method. For more information about planning exceptions, see Exception-Based Planning [page 66].

- **Planning Run with Warnings**
  This indicates that the product was planned, but that the planning run was not able to cover all demands on time. That is, due dates have been violated.

- **Planning Run OK**
  This indicates that the planning run has been performed successfully. This involves covering all product shortages on time if there were any.

You can access the detailed results of an automated planning run by selecting a run from the overview list in the Automated Actions view of the Supply Planning work center. The details of that run are then presented below in the Details table. On the General Data tab of this table, you see administrative data such as when the run was started and ended, the recurrence pattern of the run, and by whom it was created. From the Execution Details tab of this table, you can then click on a log ID for the Application Log screen to open.

The Overview tab of the Application Log screen provides an overall status for the planning run, the number of messages, errors, and warnings created, and administrative data such as when the run started and ended. The Setting tab summarizes the parameters maintained for the run such as whether the creation of receipts in the past was permitted, and the Results tab provides a comprehensive list of all the messages and their statuses produced for that planning run.

The results of automated planning runs are stored by the system and can therefore always be accessed at a later date using a log ID.

You find the same detailed results for interactive planning runs on the Interactive Planning Log tab of the Product Planning Details screen from within the Products view of the Supply Planning work center.
The results of an interactive planning run can only be accessed immediately after the run has been performed. The results are not stored as they are for automated planning runs.

See Also

Quick Guide for Products in Supply Planning  [page 73]
Exceptions Quick Guide  [page 62]
Capacity Planning  [page 19]

4.1.2  Source Determination in Planning

Overview

As supply planner, you have to make sure that all types of demand for a product and planning area combination, such as customer demand, forecast demand, and dependent demand, are fulfilled on time and in the quantity required. The system helps you to achieve this by finding the most adequate sources of supply irrespective of whether you plan your products in an interactive or automated planning run, or create planning proposals manually. Based on the availability date and planning quantity of a planning proposal to be created, sourcing first searches among the sources of supply that match the procurement type specified on the Planning tab of the Materials view in the Product Development work center. The following procurement types are available:

- In-house production
- Internal procurement
- External procurement
- Source of supply priority rule

Depending on the procurement type, the system looks through the following internal and external sources of supply to determine the most suitable source:

<table>
<thead>
<tr>
<th>Procurement Type</th>
<th>Type of Source of Supply</th>
<th>Sources of Supply for Automated Sourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal procurement</td>
<td>Internal</td>
<td>Transport lanes</td>
</tr>
<tr>
<td>In-house production</td>
<td>Internal</td>
<td>Released planning models</td>
</tr>
<tr>
<td>External procurement</td>
<td>External</td>
<td>Purchasing contracts</td>
</tr>
<tr>
<td>Source of supply priority</td>
<td>Internal</td>
<td>Transport lanes</td>
</tr>
<tr>
<td>Source of supply priority</td>
<td>External</td>
<td>Purchasing contracts</td>
</tr>
</tbody>
</table>

If the system finds an internal source of supply (based on a transport lane), it creates a stock transfer proposal that you can release to trigger the creation of a stock transfer order. For more information, see Planning Stock Transfers [page 200].

If the system finds an internal source of supply (based on a released planning model), it creates a production proposal that you can release to trigger production. For more information, see Handover to Production [page 191].
If the system finds an external source of supply (based on a purchasing contract or list price), it creates a purchase proposal that you can release to trigger purchasing. For more information, see Handover to Purchasing [page 194].

As long as the planning proposal has not been released, you can easily switch between the sources of supply assigned to a planning area, irrespective of the procurement type.

Determining the Most Suitable Source of Supply

The following sections provide a more detailed description of the sourcing process for the different procurement types.

Sourcing for Internal Procurement

In this case, the system only looks for internal sources of supply (based on transport lanes) that match the product, quantity, and availability date that you either entered when you created a planning proposal manually or that the planning run determined based on the lot-sizing method selected for the product. When the system finds an internal source of supply based on these criteria, it determines the proposal start date and checks if the internal source is still valid on that date.

If more than one internal source of supply exists, the system takes the source of supply with the highest priority. Note that if only one internal source of supply has a value for a priority assigned, the system takes the one with the priority value as it considers an internal source of supply with no priority value as a low-priority source. You define priorities for internal sources of supply in the Source Determination view of the Planning and Production Data work center.

Example

The following internal sources of supply are available for your product 01:

<table>
<thead>
<tr>
<th>Source of Supply</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Lane 01</td>
<td>3</td>
</tr>
<tr>
<td>Transport Lane 02</td>
<td>1</td>
</tr>
<tr>
<td>Transport Lane 03</td>
<td>2</td>
</tr>
<tr>
<td>Transport Lane 04</td>
<td></td>
</tr>
</tbody>
</table>

In this case, the system takes Transport Lane 02 since it has the highest priority.

If more than one internal source of supply exists and no priorities have been defined at all, the system uses the source of supply that best ensures that the requested delivery date is met (lowest delay in delivery).

If the system does not find any internal source of supply at all, it does not create a stock transfer proposal. If sourcing was triggered during the planning run, the system raises a high-priority exception. If sourcing was triggered while you created a planning proposal manually, the system issues an error message.

Sourcing for In-House Production

In this case, the system only looks for internal sources of supply (based on released planning models) that match the product, quantity, and availability date that you either entered when you created a planning proposal manually or that the planning run determined based on the lot-sizing method selected for the product. When the system finds an internal source of supply based on these criteria, it determines the proposal start date and checks if the internal source is still valid on that date.
If more than one internal source of supply exists, the system takes the source of supply with the highest priority. Note that if only one internal source of supply has a value for a priority assigned, the system takes the one with the priority value as it considers an internal source of supply with no priority value as a low-priority source. You define priorities for internal sources of supply in the Source Determination view of the Planning and Production Data work center.

**Example**

The following internal sources of supply are available for your product 01:

<table>
<thead>
<tr>
<th>Source of Supply</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Released Planning Model 01</td>
<td>3</td>
</tr>
<tr>
<td>Released Planning Model 02</td>
<td>1</td>
</tr>
<tr>
<td>Released Planning Model 03</td>
<td>2</td>
</tr>
<tr>
<td>Released Planning Model 04</td>
<td></td>
</tr>
</tbody>
</table>

In this case, the system takes Released Planning Model 02 since it has the highest priority.

If more than one internal source of supply exists and no priorities have been defined at all, the system uses the source of supply that best ensures that the requested delivery date is met (lowest delay in delivery).

If the system does not find any internal source of supply at all, it does not create a production proposal. If sourcing was triggered during the planning run, the system raises a high-priority exception. If sourcing was triggered while you created a planning proposal manually, the system issues an error message.

**Sourcing for External Procurement**

In this case, the system only looks for external sources of supply (based on purchasing contracts or list prices) that match the product, quantity, and availability date that you either entered when you created a planning proposal manually or that the planning run determined based on the lot-sizing method selected for the product. When the system finds an external source of supply based on these criteria, it determines the order date and planned delivery date, and checks if the external source is still valid on the order date.

If more than one external source of supply exists, the system finds the best source of supply according to the following criteria:

1. Fixed sources of supply always have the highest priority. If more than one contract or list price is available, one of the contracts or one of the list prices can be defined as the fixed source of supply. You do this in the Source Determination view of the Sourcing and Contracting work center. The fixed source of supply is used as the default for automated sourcing. The other contracts and list prices can be used as alternatives for manual sourcing.

2. If no fixed source of supply has been assigned, the system prefers purchasing contracts over list prices. Note that if it finds a purchasing contract for which a quota arrangement is defined, the system creates a purchase proposal without a source of supply. When this purchase proposal is released, source determination in purchasing then finds the relevant source of supply according to the quota arrangement.

**Example**

The following external sources of supply are available for your product 02:

<table>
<thead>
<tr>
<th>Source of Supply</th>
<th>Fixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing Contract 01</td>
<td></td>
</tr>
<tr>
<td>Purchasing Contract 02</td>
<td>X</td>
</tr>
</tbody>
</table>
In this case, the system takes Purchasing Contract 02 since this is the fixed source of supply.

If the system does not find any external sources of supply at all, it creates a purchase proposal without a source of supply. Purchasing can then assign a source of supply to this purchase proposal once it has been released from planning.

For more information about determining a source of supply for a product to be purchased, see Source Determination.

### Sourcing According to Source of Supply Priority Rule

In this case, the system looks for both internal and external sources of supply that match the product, quantity, and availability date that you either entered when you created a planning proposal manually or that the planning run determined based on the lot-sizing method selected for the product. It then sorts these possible sources of supply according to the following rules:

1. Internal sources of supply are preferred over external sources of supply. If more than one internal source of supply is available, the system finds the best source of supply in the same way as described for the procurement types Internal Procurement and In-House Production. Among the procurement types for internal sources of supply, Internal Procurement is preferred over In-House Production. If you do not want the system to create a planning proposal based on Internal Procurement, you can either deactivate the transport lanes for the product between the ship-from and ship-to location, or change the source of supply for the product.

2. If the system does not find an internal source of supply to cover the demand, it tries to find an external source of supply in the same way as described for the procurement type External Procurement.

### Example

The following sources of supply are available for product 03:

<table>
<thead>
<tr>
<th>Source of Supply</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Released Planning Model 01</td>
<td>2</td>
</tr>
<tr>
<td>Released Planning Model 02</td>
<td>1</td>
</tr>
<tr>
<td>Transport Lane</td>
<td></td>
</tr>
<tr>
<td>List price</td>
<td></td>
</tr>
</tbody>
</table>

In this case, the system takes Transport Lane since it is an internal source of supply of internal procurement type.

If the system does not find any sources of supply at all, it does not create a stock transfer proposal, but creates a purchase proposal without a source of supply with which purchasing can deal once it has been released from planning.

To get an overview of the sources of supply for a product and planning area combination, you can go to the Source Determination view of the Planning and Production Master Data work center. Note that you can also change the priority of internal sources of supply in this view.
Changing Sources of Supply

After the system has selected the most suitable source of supply according to the sourcing rules, you can still manually change the source of supply. As long as the planning proposal has not been released, you can select any of the alternative sources of supply assigned to the planning area as follows:

- To get an overview of the different types of demand and the sources of supply for a product and change these sources if required, you can go to the Product Planning Details screen. You can access the screen as follows:
  - From the Process Production Proposals, Monitor Production Requests, Process Purchase Proposals, Monitor Purchase Request, and Monitor Purchase Orders views of the Supply Control work center
  - From the Exceptions, Products, and Customer Demand views of the Supply Planning work center
  - From the Customer Demand and Delivery Due List views of the Outbound Logistics Control work center
- To change the source of supply for several planning proposals, you can go to the following views of the Supply Control work center:
  - Process Production Proposals view for production proposals
  - Process Purchase Proposals view for purchase proposals
  - Process Stock Transfer Proposals view for stock transfer proposals
- To change the source of supply of a specific planning proposal, you can go to the following screens in the Supply Control work center:
  - Production Proposal screen of the Process Production Proposals view
  - Purchase Proposal screen in the Process Purchase Proposals view
  - Stock Transfer Proposals screen in the Process Stock Transfer Proposals view
- To check the capacity load situation before releasing a production proposal, you can go to the Resource Planning Details screen in the Resource Load view of the Supply Planning work center. If a resource is loaded by 100%, you may want to shift this load to a different internal source of supply or you may even consider external procurement.

You can change the source of supply for a stock transfer proposal to a transport lane only, and not to a released planning model, a purchasing contract, or any other source of supply.

See Also

Supply Planning [page 14]
Exception-Based Planning [page 66]
Ship-From Determination and Shipment Scheduling for Customer Demand [page 118]

4.2 Exceptions View

4.2.1 Exceptions Quick Guide

The Exceptions view in the Supply Planning work center, enables you to focus on planning issues that the system raises as exceptions and to analyze each planning issue to find the appropriate solution. The view is divided into the following subviews:
- **Products**
  This subview allows you to focus solely on planning exceptions for products. For example, exceptions are raised if a stock shortage exists or if an error occurs during a planning run.

- **Resources**
  This subview allows you to concentrate on planning exceptions for resources. Planning exceptions for resources occur, for example, if the capacity load of a resource is higher than the capacity defined in the resource master.

The exceptions displayed to you always reflect the current supply and demand situation. In addition, exceptions are prioritized by the system according to the severity of the problem and are labeled as high, medium, or low priority, helping you to organize your daily work.

You can also use this view to access further information about each exception, as well as its related product or resource by opening the *Product Planning Details* or the *Resource Planning Details* screen respectively. From these screens, you can then take action to resolve the planning issue alerted to you. Typical options for resolving product exceptions include starting a planning run and modifying planning proposals. Resource exceptions can be resolved, for instance, by performing load leveling or manually shifting the load of a planning operation to an alternative resource that has available capacity.

### Business Background

#### Supply Planning

As supply planner, your main objective is to balance demand with supply within your company’s supply chain. The system enables you to create feasible production and procurement plans to cover demand by the requested date and in the correct quantity. Independent demand in the form of sales orders, service orders, and forecast demand, as well as dependent demand in the form of input products for production orders are considered.

Not only is the actual stock and supply situation taken into account during planning, but constraints such as lead times and resource capacities are also considered. You are provided with an up-to-date view of the supply and demand situation for monitoring purposes and with the tools to adjust your production or procurement plans to solve planning issues that may arise.

In addition, supply planning is closely integrated with production and purchasing to facilitate the seamless handover of production and purchasing proposals for execution. The level of detail in planning, however, can still be defined differently from that in execution. For example, while capacity planning is at an aggregated level to enable you to focus on overall sufficient capacity, manufacturing can create a detailed resource schedule.

With effective supply planning, your company is able to optimize inventory levels and resource utilization, as well as achieve customer satisfaction with the on-time delivery of orders. These functions are available in the *Supply Planning* work center.

For more information, see Supply Planning  [page 14].

#### Exception-Based Planning

The solution enables your company to adopt an exception-driven approach to supply planning. To help you perform your daily tasks as supply planner more efficiently, you carry out and prioritize your work based on the planning issues – exceptions – automatically brought to your attention by the system. Exceptions occur when there are deviations between planning and reality, such as a planned key figure or threshold that has a shortfall. Such planning issues cannot always be solved automatically and may require your interaction.

With one entry point for assessing planning issues related to products or resources, managing the supply planning of a large number of products and resources is made easier. However, exception-based planning is a fully integrated concept, so exceptions are displayed consistently across all relevant product and resource planning user interfaces. In addition, the exceptions displayed to you are real-time based and independent of planning runs, so they always reflect the current supply and demand situation. For any given exception, the system provides you with all the
planning information necessary to enable you to resolve the problem. The Exceptions view in the Supply Planning work center has two subviews: Products and Resources.

For more information, see Exception-Based Planning [page 66].

Tasks

Set an Exception to Acknowledged

By default, exceptions are given the status Pending, but you change this status to Acknowledged once you have analyzed and resolved the issue, as follows:

1. Select a product in the overview table of the Products subview or a resource in the overview table of the Resources subview in the Exceptions view of the Supply Planning work center.
   The exceptions list for that product or resource is then visible in a table at the bottom of the screen.
2. Click [Acknowledged] to change the status from Pending.
   NOTE: You can also click [Reset] to change the status back at any time.
3. Use this status as a parameter when searching for exceptions to distinguish between exceptions you have not yet assessed and exceptions you have already dealt with.

It is also possible to set a product to acknowledged in the Product Exception List or the Resource Exception List screen respectively. (You access these screens by clicking [Open] directly from the Products or Resources subview. The exceptions list for that product or resource then opens in its own window.

Access Product or Resource Planning Details

1. Select a product in the overview table of the Products subview or a resource in the overview table of the Resources subview in the Exceptions view of the Supply Planning work center, and click [Open Product Planning Details] or [Open Resource Planning Details].
2. The Product Planning Details or Resource Planning Details screen opens accordingly. For details about which tasks you can perform in the Product Planning Details screen, see Quick Guide for Products in Supply Planning [page 73].
   For details about which tasks you can perform in the Resource Planning Details screen, see Resource Load Quick Guide [page 96].

The following common tasks are available in the Exceptions view:

New Planning Proposal

1. Start the New Planning Proposal common task.
2. In the New Planning Proposal screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date.
   To create more than one planning proposal, click [Add Row] and enter the details as required. To remove a planning proposal, click [Remove].
3. Optional: Select one or more planning proposals and click [Release] to release the proposals to production or purchasing. The proposals then become requests.
4. Click [Save and Close] to save the new planning proposal(s) and close the screen.
5. To view the new planning proposal, open the associated product in the Product Planning Details screen in the Products view of the Supply Planning work center, or in the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals views of the Supply Control work center.

New Stock Transfer

1. Start the New Stock Transfer Order common task.

2. Specify a ship-from site ID, a ship-to site ID, and a ship-to location ID. The ship-to site and ship-to location may have been modeled in your system as follows:
   - The ship-to site is also the ship-to location:
     In this case, the ship-to-site also has the role of the ship-to location. The ship-to location ID (which is the same as the ship-to site ID) is entered automatically when the user enters the ship-to site ID and presses Enter.
   - The ship-to site and ship-to location are different and there is only one ship-to location:
     In this case, the ship-to location ID is entered automatically when the user enters the ship-to site ID and presses Enter.
   - The ship-to site and ship-to location are different and there are more than one ship-to locations:
     In this case, the ship-to location ID cannot be entered automatically when the user enters the ship-to site ID as the assignment is not unique. If, however, the user enters the ship-to location ID, the ship-to site ID is entered automatically as this assignment is unique.

For more information, see Locations and Location Layouts.

3. Optional: Select a delivery priority. Note that if you select Immediate as the priority, the system automatically releases the stock transfer order to outbound logistics provided that the order can be confirmed today.

4. Optional: To specify that you want to ship all items with the same requested date, ship-to address, and delivery rule together in one outbound delivery, select the Complete Delivery Order checkbox.

5. On the Line Items tab, click Add Row and enter the product ID and the requested quantity of the product that you want to ship.

6. Repeat this step for each product you want to ship.

7. Click Release to release the stock transfer order and save your entries.

Maintain a Demand Forecast

For more information about this task, see here [page 72].
4.2.2 Business Background

4.2.2.1 Exception-Based Planning

Overview

The solution enables your company to adopt an exception-driven approach to supply planning. To help you perform your daily tasks as supply planner more efficiently, you carry out and prioritize your work based on the planning issues – exceptions – automatically brought to your attention by the system. Exceptions occur when there are deviations between planning and reality, such as a planned key figure or threshold that has a shortfall. Such planning issues cannot always be solved automatically and may require your interaction.

With one entry point for assessing planning issues related to products or resources, managing the supply planning of a large number of products and resources is made easier. However, exception-based planning is a fully integrated concept, so exceptions are displayed consistently across all relevant product and resource planning user interfaces. In addition, the exceptions displayed to you are real-time based and independent of planning runs, so they always reflect the current supply and demand situation. For any given exception, the system provides you with all the planning information necessary to enable you to resolve the problem. The Exceptions view in the Supply Planning work center has two subviews: Products and Resources.

Exception-Based Planning in Detail

In the following sections, information is provided about:

- Where to access exception-based planning information in the system
- How the system prioritizes exceptions and how it is also possible to acknowledge exceptions
- The different exception types and how they can be categorized

Accessing Exception-Based Planning Information

The exception-based planning approach is applied consistently so that access is available in all work center views relevant to planning. Whilst the Exceptions view of the Supply Planning work center provides exception-centric planning information for either products or resources, exception information is also integrated elsewhere to form part of your normal daily planning tasks. This means you can access exception-based planning information directly or indirectly from the Products, Resource Load, and Customer Demand views of the Supply Planning work center, as well as from the Process Production Proposals, Monitor Production Requests, Process Purchase Proposals, Monitor Purchase Requests, and Monitor Purchase Order views of the Supply Control work center. In each of these cases, the exceptions relevant to that context are displayed.

Prioritization and Acknowledgement of Exceptions

The exceptions in the system are qualified according to the severity of the problem and labeled as high (red), medium (yellow), or low (gray) priority exceptions. As a result, you are able to focus on and analyze those more critical planning issues first.

You can filter to view only the products or resources with the most critical issues (high-priority exceptions) or simply view all. By selecting one product or resource, details of each exception (that is, the type, status, and date of, and the reason for each exception) are displayed.

The priority of each exception is predetermined by the system. This priority depends on the exception type and the deviation value. The deviation value can be calculated in terms of time or as a percentage. For example, if the
availability date for a product is in the past, the deviation that has occurred is a time deviation and so the value is displayed in days, but if a capacity overload occurs for a resource, the capacity deviation value is given as a percentage.

What is more, to help you organize your work, resolved exceptions disappear automatically, allowing you to concentrate on those exceptions that still require your attention.

Specifically when in the Exceptions, Resource Load, or Products view of the Supply Planning work center, it is also possible to set the status of an exception. As default, exceptions are set to Pending, but you change the status to Acknowledged if you have solved the problem in reality. You can then use this status as a parameter when querying exceptions to distinguish between exceptions you have not yet assessed and exceptions you have already analyzed and resolved.

If the priority of an exception that you have acknowledged increases, for example, changes from medium to high because the deviation value has increased, the system automatically resets the Acknowledged status that you had selected so that you are able to see this exception again when you query all exceptions for which you are responsible.

Exception Categories
The system provides different exception types. Each exception type then falls into one of the following categories:

- **Product-related exceptions**
  These exceptions help you to monitor key figures and thresholds that are maintained in the product master, such as safety stock levels, inventory days of supply, and receipt days of supply. They also alert you to stock shortage issues.

- **Receipt-related exceptions**
  These exceptions help you to monitor carefully supply and demand matching in terms of date and valid source of supply.

- **Resource load-related exception**
  This exception helps you to monitor resource overload situations.

- **Availability check-related exceptions**
  These exceptions help you to monitor the availability status of sales order items, service order items, stock transfer order items, and sales quote items in terms of quantity and date.

- **Planning run-related exception**
  This exception enables you to see whether an error occurred during a planning run.

Product-Related Exceptions
The following sections provide more detailed information about product-related exceptions:

**Safety Stock Violation**
This exception is only relevant for products that have a safety stock value defined in the product master and is always raised as a high-priority exception. The system raises it if the unrestricted stock falls below the safety stock threshold maintained in the product master.

**Stock Shortage**
This exception is raised if the projected stock (including the safety stock) falls below zero. It can occur for several reasons; some of which are only relevant to either in-house production or external purchasing. The system determines the priority of the exception according to this reason.

The following figure illustrates an example of when a Stock Shortage exception would be raised by the system:
In the system, the safety stock is considered as demand and is subtracted from the available stock when calculating the initial projected stock.

The following reasons for a stock shortage apply to in-house production:

- **Shortage within planning time fence**
  This is given a high priority by the system and of course can only occur if a planning time fence has been defined.

- **Shortage outside planning time fence**
  This is given a medium priority by the system and again can only occur if a planning time fence has been defined.

- **Planned stock shortage**
  This can only occur if production has no planning time fence. It occurs when the projected stock falls below zero and is assigned a medium priority by the system.

The following reasons for a stock shortage apply to external procurement (purchasing):

- **Shortage within procurement lead time**
  This is given a high priority by the system.

- **Shortage outside procurement lead time**
  This is given a medium priority by the system.

- **Planned stock shortage**
  This can only occur if purchasing has no planning time fence. This is assigned a medium priority by the system.

The following reason for a stock shortage applies to inventory postings:

- **Negative stock**
  This is given a low priority by the system. Since physically stock cannot be negative, this can only occur if the postings in the system are not in the same sequence as in reality.

**Inventory Days of Supply below Minimum**

This exception can only be raised for products that have a minimum inventory days of supply maintained in the product master. The inventory days of supply of a material indicates how long material demand is covered by current stock. This exception therefore occurs if the stock cannot cover the demand within the minimum inventory days of supply. This exception is always given a high priority by the system and is shown as a deviation from the minimum inventory days of supply.

You define the type of supply and demand to be taken into account in the **Fine Tune** step of business configuration. (To find this activity, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Open Activity List**. Select the **Fine Tune** phase, then select the **Inventory and Receipt Days of Supply** activity from the activity list). Default configuration dictates that only available stock and not restricted stock is considered as supply. It also specifies that dependent demand (requests), sales orders,
forecasts, service orders, sales and service orders in execution, stock transfer demand, stock transfer demand in execution, and dependent demand (proposals) are considered as demand.

The following figure illustrates an example of when an **Inventory Days of Supply below Minimum** exception would be raised:

**Receipt Days of Supply below Minimum**

This exception can be raised for all products that have a minimum receipt days of supply maintained in the product master. The receipt days of supply of a material indicates how long material demand is covered by current stock and certain receipts. This exception is therefore raised by the system if the stock and receipts cannot cover the demand for the minimum receipt days of supply. It is always given a medium priority and is shown as an absolute deviation from the minimum receipt days of supply.

You define the type of supply and demand to be taken into account in the **Fine Tune** step of business configuration. (To find this activity, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Open Activity List**. Select the **Fine Tune** phase, then select the **Supply Chain Planning and Control -> Inventory and Receipt Days of Supply** activity from the activity list.) The system default setting considers available stock, inbound deliveries (advised and arrived), purchase orders, and production requests as supply. It considers sales orders, service orders, forecasts, sales or service orders in execution, stock transfer demand, stock transfer demand in execution, dependent demand (proposals), and dependent demand (requests) as demand.

**Receipt-Related Exceptions**

The following sections provide more detailed information about receipt-related exceptions:

**Start Date in Past**

This exception is relevant for production or purchase proposals. It is raised if the start date of a production or purchase proposal is in the past, but production or purchasing has not yet been requested. This exception is raised if the time deviation is greater than one day and it is always given a medium priority.

**Availability Date in Past**

This exception is relevant for production requests, purchase requests, or purchase orders. It is raised if their availability date is in the past, but production or purchasing has not yet been completely confirmed. Depending on the time deviation, the exception is given a different priority: Less than one day has low priority, between one and two days has medium priority, and more than two days has high priority.

The following figure illustrates when an **Availability Date in Past** exception would be raised by the system:
Proposal Outside Validity Period
This exception type is relevant for production or purchase proposals. It is raised if the start date of a production proposal or purchase proposal is outside of the validity period of the assigned source of supply. A deviation value is not provided and the exception is always given a high priority.

The following figure illustrates when a Proposal Outside Validity Period exception would be raised by the system:

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Resource Load-Related Exception
The following section provides more detailed information about the resource load-related exception:

Resource Overloaded
This exception only applies to resources that are defined as being relevant to supply planning. It is raised if the capacity load of a resource within a bucket is higher than the capacity defined for the resource. The capacity load of a resource is calculated based on the capacity requirements of every operation of a production proposal and request per resource.

This exception is illustrated by a percentage deviation of overload from the resource capacity. Its priority depends on this deviation value: Greater than 20% is high, between 11% and 20% is medium, and less than or equal to 10% is low.

The following figure illustrates when a Resource Overloaded exception would be raised by the system:
Availability Check-Related Exceptions

The following sections provide more detailed information about availability check-related exceptions:

**ATP: Excess Confirmations**

This exception is related to the available-to-promise (ATP) check and is therefore only relevant for sales and service orders. It is issued as a high-priority exception and arises if more confirmed demand exists than receipts. That is, if confirmed demand quantity is not covered by the receipts. The scope of the availability (ATP) check is defined in the *Fine Tune* step of business configuration (To find this activity, go to the *Business Configuration* work center and choose the *Implementation Projects* view. Select your implementation project and click *Open Activity List*. Select the *Fine Tune* phase, then select the *Supply Chain Planning and Control —> Product Availability Check* activity from the activity list.) For more information, see: Availability Checks  [page 16]

The following figure illustrates an example of when an *ATP: Excess Confirmations* exception would be raised by the system:

![ATP: Excess Confirmations Exception](image)

**ATP: Late or Insufficient Confirmation**

This exception is issued by the system if a deviation between the requested and confirmed date and/or quantity occurs during the availability check for a sales or service order. The system gives this exception a high priority. More specifically, the deviation occurs for the following reasons:

- The confirmation is late
- The confirmation is insufficient
- There is no confirmation

**Planning Run-Related Exception**

The following section provides more detailed information about the planning run-related exception:

**Error Occurred During Planning Run**

This exception is raised if an error occurs during a planning run and is always given a high priority. The error is one of the following:

- Source of supply is not found
- Re-explosion of an existing proposal failed
- Lot-size procedure is not maintained
- Planning procedure is not maintained
- Field overflow in lot-size calculation

**See Also**

- Supply Planning  [page 14]
- Material Planning  [page 52]
- Material Planning Run  [page 90]
4.2.3  Maintain Demand Forecast

Overview
You can access the Maintain Demand Forecast screen under Common Tasks in the following views of the Supply Planning work center:

- Products
- Resource Load
- Exceptions
- Automated Actions

A demand forecast represents an estimation of the future demand for a particular product or service. On the Maintain Demand Forecast screen, you can create and also delete demand forecasts.

For more background and concept information about demand forecasting in general, see Forecasting [page 10].

Procedure
1. Create a Demand Forecast
   a. In the Show menu, select All Demand Forecasts by Month if you want to maintain demand forecasts by month or All Demand Forecasts by Week if you want to maintain them by week. Depending on what you select here, Monthly or Weekly is automatically entered in the Period Type field under Demand Forecast Data.
   b. If you want to create demand forecasts for a product and planning area combination, enter the Product ID, Product Description, and Planning Area ID under Product Data.
      If you want to create demand forecasts for a product group and planning area combination, enter the Planning Group ID and the Forecasting Group ID under Product Groups.
   c. Under Demand Forecast Data, select the time period (month or week) in which you want to create demand forecasts in the Period Type field. Note that this is only necessary if the time period you want to work with should now differ from the Show selection you already made. Also enter a start date for the product (or product group) and planning area combination in the Start Date field.
   d. Click Go to see the results in the Forecast Planning Table. Each row in the table shows the demand forecasts for the particular product and planning area combination you entered.
      Note that the Period Type is displayed as Initial if you have not yet entered a demand forecast for this particular product (or product group) and planning area combination. As soon as you enter a demand forecast, the period type changes to Weekly or Monthly depending on the period type setting you made.
   e. In the relevant row of the Forecast Planning Table, enter the desired number of demand forecasts for the relevant time periods (or buckets) and click Save.
Note that demand forecasts are shown in the Forecast Planning Table for both monthly and weekly periods, regardless of your period type setting, but you can only actually edit fields for the period type (month or week) you selected. Also note that to create new demand forecasts using a new selection you must click Save before clicking Go.

f. The details (consumption key figures) for the selected row in the Forecast Planning Table appear in the Details table at the bottom of the screen.

g. Click Close to exit the screen.

Even if a demand management procedure is not defined for the selected product, you can enter a demand forecast, but the demand forecast will not be valid for supply planning and will therefore not be visible in the Products view.

2. Delete a Demand Forecast

a. Select the product (or product group) and planning area combination for which you want to delete a demand forecast by selecting the relevant row in the Forecast Planning Table.

b. Click Delete and then confirm this deletion by clicking Delete again in the dialog box that appears.

c. The period type for this particular product and planning area combination in the table changes to Initial.

When you delete demand forecasts, the forecasts for the complete time series is deleted.

Alternatives

You can also work with demand forecasts in the Demand Plans view of the Demand Planning work center. For more information, see Create a New Demand Plan [page 37].

4.3 Products View

4.3.1 Quick Guide for Products in Supply Planning

The Products view of the Supply Planning work center acts as a central access point to the current planning status of all products within a supply planning area. It provides a summary of your products, brings your attention to any planning issues for these products, and enables you to access more detailed information about the individual products and exceptions.

For each product listed in the overview table, you can see whether an exception or several exceptions exist, as well as product and planning area IDs and descriptions, and, if applicable, product specification details.

To obtain further product planning information, you can navigate to the Product Planning Details screen. Here, you can view planning-relevant key figures such as total demand, total supply, available stock, safety stock, days of supply, and net requirements. The net requirement key figure, for instance, allows you to see instantly if demand and supply are not in balance and react accordingly. In addition, the Supply and Demand List section of this screen displays all the supply and demand elements for the selected product.
Business Background

Forecasting

Demand planning enables the demand planner to make forecasts and use statistical models to create a demand plan used during planning for anticipated product demand. Demand plans are critical to supply chain planning, the more transparent and accurate they are, the more efficiently you can plan for future supplies.

For more information, see Forecasting [page 10].

Supply Planning

As supply planner, your main objective is to balance demand with supply within your company’s supply chain. The system enables you to create feasible production and procurement plans to cover demand by the requested date and in the correct quantity. Independent demand in the form of sales orders, service orders, and forecast demand, as well as dependent demand in the form of input products for production orders are considered.

Not only is the actual stock and supply situation taken into account during planning, but constraints such as lead times and resource capacities are also considered. You are provided with an up-to-date view of the supply and demand situation for monitoring purposes and with the tools to adjust your production or procurement plans to solve planning issues that may arise.

In addition, supply planning is closely integrated with production and purchasing to facilitate the seamless handover of production and purchasing proposals for execution. The level of detail in planning, however, can still be defined differently from that in execution. For example, while capacity planning is at an aggregated level to enable you to focus on overall sufficient capacity, manufacturing can create a detailed resource schedule.

With effective supply planning, your company is able to optimize inventory levels and resource utilization, as well as achieve customer satisfaction with the on-time delivery of orders. These functions are available in the Supply Planning work center.

For more information, see Supply Planning [page 14].

Material Planning

To ensure the availability of products by the required time and in the correct quantity, you can either interactively perform planning runs, or set up automated planning runs that can be scheduled to run at regular intervals. The creation of production, purchase or stock transfer proposals as a result of these planning runs is possible for products at all levels - for both input products and finished products. What is more, you have the option of creating and adjusting production, purchase or stock transfer proposals manually.

You influence the exact details of your company’s material planning processes with the settings you make in the product master and business configuration. Access to material planning details allows you to analyze exactly how demand is matched with supply at any given time. You can also monitor key figures such as the total demand, total supply, and days of supply. The material flow, which provides an overview of the pegging relationships network, allows you to check the effects of late supply and adapt your planning accordingly.

You can organize your work by querying for products that have not been verified after the last planning run in the Products view of the Supply Planning work center. This, along with the exception overview list in the Exceptions view of the same work center, serves as your main work list as supply planner.

For more information, see Material Planning [page 52].

Material Planning Run

The material planning run aims to create sufficient receipts (supply) to cover existing requirements (demand). The run can either be triggered automatically and on a regular basis, or interactively and on an ad-hoc basis. Planning proposals are created as a result of the planning run based on the procurement type you select in the product master
– production proposals for in-house production, purchase proposals for external procurement, and stock transfer proposals for internal procurement. These functions are available in the Supply Planning work center. For more information, see Material Planning Run [page 90].

Material Planning Settings
In the Materials view of the Product Development work center, you can make planning-relevant settings for your products. These settings determine how your products are to be handled by the planning run. You make your settings at a product and supply planning area level. The supply planning area is the grouping of demand and supply for products within a site from a planning perspective. For more information, see Material Planning Settings [page 79].

Source Determination in Planning
As supply planner, you have to make sure that all types of demand for a product and planning area combination, such as customer demand, forecast demand, and dependent demand, are fulfilled on time and in the quantity required. The system helps you to achieve this by finding the most adequate sources of supply irrespective of whether you plan your products in an interactive or automated planning run, or create planning proposals manually. Based on the availability date and planning quantity of a planning proposal to be created, sourcing first searches among the sources of supply that match the procurement type specified on the Planning tab of the Materials view in the Product Development work center. The following procurement types are available:

- In-house production
- Internal procurement
- External procurement
- Source of supply priority rule

For more information, see Source Determination in Planning [page 58].

Tasks

Set a Product to Verified
You can organize your daily work by setting your products to Verified once you have performed planning for them, as follows:

1. Select a product that you want to set to Verified from the products overview list and click Set Verified to Yes to choose the Set Verified to Yes option.
2. Yes then appears in the Verified column for this product. You can then filter this column to see at a glance which products you have already performed planning for.
Run Interactive Planning

You can configure the solution to decide whether you want to consider the requirement date or the confirmation date of a sales order during material planning. Accordingly, the sales order demands are based on the requirement schedule lines or the confirmation schedule lines. To find the business option to configure this, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Supply Planning is selected within Supply Chain Planning and Control. In the Questions step, expand the Supply Planning scope element and select Material Planning. Under Group: Planning Date, select and answer one of the questions. Note that you can select only one question at a time, and not both. The default selection for this business option is the requirement date.

1. Select a product that you want to perform interactive planning for from the products overview list and click Open to open the Product Planning Details screen.

2. Click Run Planning, and then choose one of the following options:
   - Single BoM Level to run planning only for those products selected
   - Multi BoM Level to run planning for the selected products as well as the products at all lower levels of the bill of material (BoM)

3. In the dialog box that opens, if required, select the Allow Planning Proposals Creation in Past checkbox to enable the planning run to create planning proposals with dates in the past, and click OK. Note that if you select this option, exceptions will be raised to inform you about the deviation from the date when the proposals should have been released to execution.

4. The system runs planning: creating, updating, or deleting production, purchase and stock transfer proposals to rectify supply and demand imbalances.

If you cannot perform interactive planning because the planning procedure is missing, you can assign a planning procedure to the selected product.

For more information about planning procedures, see Material Planning Settings [page 79] under Planning Procedures.

For more information about assigning a planning procedure to a product, see Assign Supply Planning Details to a Material.

Create a New Planning Proposal

1. Select a product that you want to create a planning proposal for from the products overview list and click Open to open the Product Planning Details screen.
Note that you can also create a new planning proposal by clicking New Planning Proposal under Common Tasks. For more information about how to perform the task there, see the New Planning Proposal common task description below.

The system then creates a new line in the table that represents the new planning proposal.

3. Enter the date and quantity required for the planning proposal.

4. Click Save and Close to return to the Products view itself.
Note that you can also view the new planning proposal created in either the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals view of the Supply Control work center.

Delete a Planning Proposal

1. Select the product you want to delete a planning proposal for from the products overview list and click Open to open the Product Planning Details screen.
2. Select the planning proposal you want to delete from the Supply and Demand List and click Delete.

Firm a Planning Proposal

1. Select the product that you want to firm a planning proposal for from the products overview list and click Open to open the Product Planning Details screen.
2. Select the planning proposal you want to firm from the Supply and Demand List and click Firm.
3. The planning proposal is then protected against any automatic changes during the planning run and load leveling.
   Note that you can also undo the firming of a proposal by clicking Undo Firm. By default, all production proposals that you created and changed manually are firmed.

Change the Source of Supply for a Planning Proposal

1. Select the product that you want to perform planning for from the products overview list and click Open to open the Product Planning Details screen.
2. Select the planning proposal for which you want to change the source of supply in order to resolve a resource overload situation, and click Change Source of Supply.
3. In the Change Source of Supply screen that opens, select the desired source of supply and click Assign.
   Note that you can remove the source of supply that the system assigned and not assign a source of supply at all, in which case it is up to the production department to assign a suitable source of supply when you have released the production proposal.

You can also make other changes to a planning proposal in the Supply Control work center. For more information, see the Tasks section of the Quick Guide for Process Production Proposals [page 207].

Release a Planning Proposal

1. Select the product that you want to release a planning proposal for from the product overview list, and click Open to open the Product Planning Details screen.
2. Select the planning proposal you want to release to production or purchasing and click Release. You can release multiple planning proposals simultaneously by pressing the CTRL key and selecting the proposals that you want to release.
When you have multiple planning proposals for a product for which a quota arrangement is maintained, you must release the planning proposals one by one. For example, if you maintain a quota arrangement for a product P1, and there are five planning proposals for P1, you must release the proposals one by one, and not all at once.

For information about quota arrangements, see the following:

- Quota Arrangements section in Source Determination
- Create a Quota Arrangement, Edit a Quota Arrangement, and Delete a Quota Arrangement tasks in Source Determination Quick Guide

3. The production or purchasing proposal becomes a production or purchasing request respectively in execution. The stock transfer proposal becomes a stock transfer order.

Open Material Flow

1. Select the product you want perform planning for and click Open to open the Product Planning Details screen.
2. Select either a demand element or a supply element from the Supply and Demand List and click Open Material Flow.
3. In the screen that opens, you can see an overview of the multilevel pegging relationships of the demand and supply related to the element you selected. Note that if you entered the Material Flow screen with a demand element, the demand is displayed in the upper part of the screen, and the exact pegging network for the selected demand is shown in the Details section in the lower part of the screen. However, if you entered the Material Flow screen with a supply element, all the demand relevant for the selected supply is displayed in the upper part of the screen, and the pegging network of the demand that is selected in the upper part of the screen is shown in the Details section.
4. For details about which tasks you can perform in the Material Flow screen, see the Tasks section of Quick Guide for Process Production Proposals [page 207].

The following common tasks are available in the Products view:

New Planning Proposal

1. Start the New Planning Proposal common task.
2. In the New Planning Proposal screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date. To create more than one planning proposal, click Add Row and enter the details as required. To remove a planning proposal, click Remove.
3. Optional: Select one or more planning proposals and click Release to release the proposals to production or purchasing. The proposals then become requests.
4. Click Save and Close to save the new planning proposal(s) and close the screen.
5. To view the new planning proposal, open the associated product in the Product Planning Details screen in the Products view of the Supply Planning work center, or in the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals views of the Supply Control work center.
New Stock Transfer

1. Start the **New Stock Transfer Order** common task.
2. Specify a ship-from site ID, a ship-to site ID, and a ship-to location ID. The ship-to site and ship-to location may have been modeled in your system as follows:
   - The ship-to site is also the ship-to location:
     In this case, the ship-to-site also has the role of the ship-to location. The ship-to location ID (which is the same as the ship-to site ID) is entered automatically when the user enters the ship-to site ID and presses **Enter**.
   - The ship-to site and ship-to location are different and there is only one ship-to location:
     In this case, the ship-to location ID is entered automatically when the user enters the ship-to site ID and presses **Enter**.
   - The ship-to site and ship-to location are different and there are more than one ship-to locations:
     In this case, the ship-to location ID cannot be entered automatically when the user enters the ship-to site ID as the assignment is not unique. If, however, the user enters the ship-to location ID, the ship-to site ID is entered automatically as this assignment is unique.

For more information, see Locations and Location Layouts.

3. Optional: Select a delivery priority.
   Note that if you select **Immediate** as the priority, the system automatically releases the stock transfer order to outbound logistics provided that the order can be confirmed today.

4. Optional: To specify that you want to ship all items with the same requested date, ship-to address, and delivery rule together in one outbound delivery, select the **Complete Delivery Order** checkbox.

5. On the **Line Items** tab, click **Add Row** and enter the product ID and the requested quantity of the product that you want to ship.

6. Repeat this step for each product you want to ship.

7. Click **Release** to release the stock transfer order and save your entries.

Maintain a Demand Forecast

For more information about this task, see [page 72].

### 4.3.2 Business Background

#### 4.3.2.1 Material Planning Settings

**Overview**

In the **Materials** view of the **Product Development** work center, you can make planning-relevant settings for your products. These settings determine how your products are to be handled by the planning run. You make your settings at a product and supply planning area level. The supply planning area is the grouping of demand and supply for products within a site from a planning perspective.
The following material planning-relevant settings exist and are described in detail in the subsequent sections:

- Demand management procedures
- Procurement types
- Planning procedures
- Lot-sizing methods
- Lot-size limitations
- Safety buffers
- Reorder point quantity
- Planning time fence

In addition, there are some settings that need to be made as part of the Fine Tune step of business configuration. These are also described in the following sections.

**Demand Management Procedures**

The demand management procedure determines how forecast demand and actual demand is considered by the planning run. The All Demand Consumes Forecast demand management procedure considers all demand types, whilst the All Demand Reduces Forecast demand management procedure only takes forecast demand into account.

For more information about demand types, see Material Planning [page 52].

For more information about demand management procedures, see Demand Management and Forecast Consumption [page 30].

**Procurement Types**

You choose how your product should be procured by selecting one of the following options:

- **In-house production**
  By selecting this option, you indicate that you want to produce internally the products required to fulfill demand.
  If multiple sources of supply exist for a product, the one with the highest priority is chosen by the system.

- **Internal procurement**
  By selecting this option, you indicate that you want to move stock from one site to another in the same company.
  If multiple sources of supply exist for a product, the one with the highest priority is chosen by the system.

- **External procurement**
  By selecting this option, you indicate that you want to purchase from an external vendor the products that you require to fulfill demand.
  You must also enter a procurement lead time in days. From a planning perspective, this represents the period from informing the supplier until the inbound delivery takes place.
  With this procurement type, you should also enter a procurement lead time in days.

While you specify the procurement type in the product master, it is still possible to manually change the source of supply for a production, purchase or stock transfer proposal as long as the planning proposal is still only planned. It is always possible to switch from internal production to external procurement and vice versa, but it is only possible...
to switch from external procurement to production if a RPM exists. This provides you with the flexibility to react quickly to unexpected planning situations that may arise.

For more information about source determination rules, see Source Determination in Planning. [page 58]

Planning Procedures

You must specify which planning procedure should be applied to your product during the planning run from the following options:

- **Demand-driven planning**
  This procedure considers all types of demand (both independent and dependent) and creates receipts for uncovered demand.
  You should use demand-driven planning if demand is volatile, lead times are long, or the product is expensive and you therefore want to avoid keeping it in stock in high quantities. Demand-driven planning is also applicable if the lead time of the product is shorter than the expected delivery time of the customer. If this is not the case, you can still use demand-driven planning, but you need to forecast the demand at either finished product level or assembly level.

- **Consumption-based planning**
  This procedure only considers the following elements as demand:
  - Negative available stock
  - Safety stock
  - Reorder point quantity
  Production or purchase proposals are created if the available stock is below a threshold value such as a reorder point quantity. This means that you are required to specify a reorder point quantity when you select consumption-based planning.
  The advantage of using the consumption-based planning procedure is simplicity. It is useful in a make-to-stock environment if demand is relatively constant, lead times are short, or the product and storage is so inexpensive that a generous quantity can be placed in stock. For example, inexpensive input products that are only ordered a few times per year.

- **Manual planning**
  With manual planning, receipts (production, purchase and stock transfer proposals) can only be created by you. This approach is useful for products that require your close attention. Products that fall into this category are products that are no longer to be procured, are expensive, are new, or require your interaction before they can be released to execution, for example, in an engineering-to-order environment.

Lot-Sizing Methods

The following lot-sizing methods and their relevant planning parameters exist:

- **Lot-for-lot**
- **Fixed lot size and fixed lot size quantity**
- **Periodic lot size and period type**
- **Target stock level and target stock quantity**
- **Target days of supply and target days of supply**

The lot-sizing methods available to you depend on the planning procedure you are working with. If you have selected consumption-based planning, you can only select one of the following lot-sizing methods:

- **Lot-for-lot**
- **Fixed lot size**
- Target stock level

If you have selected the demand-driven planning procedure, you can choose from all of the lot-sizing methods. For more information about planning procedures, see Material Planning [page 52].

The following sections provide you with information about the implications of choosing each lot-sizing method:

**Lot-for-lot**

Depending on the planning procedure you have selected, planning proposals are created as follows with this lot-sizing method:

- If you have selected demand-driven planning as your planning procedure, all planning proposals are created by date and quantity for each requirement.
- If you have selected consumption-based planning as your planning procedure, planning proposals are created if the available stock falls below a threshold value such as a reorder point.

You work with this method if you want to minimize the carrying costs of inventory.

The following figure shows the impact of the lot-for-lot lot-sizing method without a reorder point:

The lot-for-lot lot-sizing method is automatically applied for products with a product specification in a make-to-order scenario.

**Fixed Lot Size**

With this method, all planning proposals are created with the same quantity.

If demand-driven planning is selected as your planning procedure, planning proposals are created when the projected stock falls below zero, or if a safety stock is maintained, when the projected stock falls below the safety stock.

In the system, the safety stock is considered as demand and is subtracted from the available stock when calculating the initial projected stock. Therefore, with a demand-driven planning procedure and a safety stock greater than zero, planning proposals are created if the projected stock falls below zero.

The following figure illustrates the impact of the fixed lot size without a reorder point quantity:
If consumption-based planning has been selected as your planning procedure, planning proposals are created if the available stock is below a threshold value such as a reorder point or safety stock.

The following figure demonstrates the impact of the fixed lot size with a reorder point quantity:

Applying a fixed lot size is particularly useful if products are to be produced in a fixed quantity in order to minimize the combined costs of production setup and carrying inventory.

**Periodic Lot Size**

With the periodic lot-sizing method, a planning proposal is created for all requirements within a fixed period. You use periodic lots to reduce the number of orders and ordering costs.

The following figure shows the impact of the periodic lot-sizing method:
Target Stock Level

With this method, all planning proposals are created with a quantity that ensures that the target stock level is reached. If demand-driven planning has been selected as your planning procedure, planning proposals are created when the projected stock falls below zero, or if a safety stock is maintained, when the projected stock falls below the safety stock.

In the system, the safety stock is considered as demand and is subtracted from the available stock when calculating the initial projected stock. Therefore with a demand-driven planning procedure and a safety stock greater than zero, planning proposals are created if the projected stock falls below zero.

If consumption-based planning has been selected as your planning procedure, planning proposals are created if the available stock is below a threshold value such as reorder point or safety stock.

A target stock level is useful if you have limited warehouse capacity.

The following figure illustrates the impact of the target stock level with a reorder point quantity:
Target Days of Supply

With this method, the planning proposal quantity is high enough to cover all demand within a number of days after the due date of the planning proposal (that is, within the target days of supply).

You use target days of supply to reduce the number of orders and the cost per order.

The following figure shows the impact of the target days of supply lot-sizing method:

Lot-Size Limitations and Rounding Value

The lot size, regardless of the lot-sizing method, can additionally be restricted with the following parameters:

- Maximum lot size
- Minimum lot size
• Rounding value

The following sections provide information about each parameter:

**Maximum Lot Size**
This ensures that a receipt quantity does not exceed a certain quantity. The following figure shows the impact of the lot-for-lot lot-sizing method with a maximum lot size:

**Minimum Lot Size**
This ensures that a receipt quantity does not fall below a certain quantity. The following figure shows the impact of the lot-for-lot lot-sizing method with a minimum lot size:

**Rounding Value**
This ensures that receipts only of this value or multiples of this value are calculated.
The following figure shows the impact of the lot-for-lot lot-sizing method with a rounding value:

Safety Buffers

The following safety buffers, considered by all lot-sizing methods, can also be introduced into your material planning to improve on-time delivery performance:

- Safety stock
- Safety lead time

The following sections provide more information about these safety buffers:

Safety Stock

This acts as a quantity buffer for your stock levels to help you deal with uncertainties in demand. Receipts are calculated to cover the demand as well as maintain a stock quantity buffer.

The following figure shows the impact of the lot-for-lot lot-sizing method and safety stock:
Safety Lead Time

Entering a value enables you to implement a time buffer for considering uncertainties in vendor lead times. Receipts are created to cover the demand minus the safety lead time for each demand.

The following figure shows the impact of the lot-for-lot lot-sizing method and safety lead time:

Reorder Point Quantity

The reorder point quantity represents the forecasted consumption of the product during the replenishment lead time. If the projected stock falls below the reorder point quantity, the creation of a planning proposal is triggered. The reorder point quantity is only applicable for consumption-based planning.

The following figure demonstrates the impact of the fixed lot size method with a reorder point quantity:
Planning Time Fence

The planning time fence is considered by all lot-sizing methods, but is relevant only for demand-driven planning. This is a period starting from the current day for which you can maintain the duration. Within this period, the system does not automatically create, change, or delete production, purchase and stock transfer proposals as part of the planning run, but it is possible for you to manually create or modify such proposals. In effect, you can use the planning time fence to protect a certain period of time from any automatic changes by the planning run.

Receipts for uncovered demand are created beyond the planning time fence but not inside it.

The following figure shows the impact of the lot-for-lot lot-sizing method and the planning time fence:

Material Planning-Relevant Settings in Business Configuration

There are some settings affecting material planning that are made in business configuration. These settings are related to the following:
Demand Management Procedures

You activate demand management procedures in the scoping step. To find this activity, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Open Activity List. Select the Fine Tune phase, then select the All Demand Reduces Forecast / All Demand Consumes Forecast activity from the activity list. It is then in the product master that you actually apply the demand management procedure you want to use.

Inventory and Receipt Days of Supply

You can maintain a minimum inventory and receipt days of supply for your products in the product master. This directly influences when the Inventory Days of Supply below Minimum and Receipt Days of Supply below Minimum exceptions are raised by the system. However, you define the category of supply and demand to be taken into account for the inventory and receipt days of supply in the fine tune step of business configuration.

To find this activity, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Open Activity List. Select the Fine Tune phase, then select the Inventory and Receipt Days of Supply activity from the activity list.

For more information, see Exception-Based Planning [page 66].

Availability Checks

The availability check is activated in the scoping step. An optional go live activity exists for informational purposes to see the details of the scope. You then actually apply the availability check method you want to use in the product master.

For more information, see Availability Checks [page 16].

See Also

Supply Planning [page 14]
Material Planning Run [page 90]

4.3.2.2 Material Planning Run

Overview

The material planning run aims to create sufficient receipts (supply) to cover existing requirements (demand). The run can either be triggered automatically and on a regular basis, or interactively and on an ad-hoc basis. Planning proposals are created as a result of the planning run based on the procurement type you select in the product master – production proposals for in-house production, purchase proposals for external procurement, and stock transfer proposals for internal procurement. These functions are available in the Supply Planning work center.

For more information about material planning modes, see Material Planning [page 52].

For more information about planning-relevant settings in the product master, see Material Planning Settings [page 79].

The following figure illustrates the key steps performed by the system when a planning run is initiated:
The process flow illustrated represents what happens when the demand-driven planning procedure has been selected. Instances where the planning run process deviates if a consumption-based planning procedure has been selected are indicated in the step descriptions given below.

Process Flow
The following sections provide detailed descriptions of each of the process steps performed by the system as part of a material planning run:

1. **Net Requirements Calculation**
   - The system determines which receipts already exist and are firmed for the planning run. Firmed receipts are as follows:
     - Available stock
     - Firmed production proposals
     - Production proposals within the planning time fence
     - Production requests
     - Firmed purchase proposals
     - Purchase proposals within the planning time fence
     - Purchase requests
     - Purchase orders
     - Inbound deliveries
     - Firmed stock transfer proposals
   - The system then assigns these firmed receipts to the existing demand using a first-in first-out (FIFO) strategy and determines which demand has not been covered by these firmed receipts (that is, the net requirements).
   - The following figure illustrates the assignment of firmed receipts to existing demand:
2. **Lot-Size Calculation**  
The system calculates new lots for the uncovered demand. It calculates the quantity and date of these lots based on the lot-sizing method (lot for lot, fixed lot size, periodic lot size, target stock level, or target days of supply) and other material planning-relevant settings maintained in the product master, such as fixed lot size quantity, target stock quantity, and safety stock. For more information about material planning-relevant settings in the product master, see Material Planning Settings [page 79].

3. **Reuse Calculation**  
The system calculates lots for the uncovered demand without considering existing receipts that are not firmed. It can be the case that the quantities and dates of the calculated lots are equal to the existing receipts that are not firmed. The system works on the basis that it is more time-efficient to reuse as many receipts as possible instead of deleting them and creating new ones.

4. **Deletion of Obsolete Receipts**  
The system deletes all existing receipts that are not firmed and cannot be reused.

5. **Creation of New Receipts**  
The system creates new receipts (planning proposals) for the uncovered demand. The production, purchase and stock transfer proposal normally have the released planning model (RPM), purchasing contract or list price, and transport lane as sources of supply respectively. However, if a valid source of supply is not available, the planning run reacts according to the procurement type as follows:
   - In-house production: no production proposals are created
   - External procurement: purchase proposals and stock transfer proposals without a source of supply are created
   - Source of supply priority rule: purchase proposals and stock transfer proposals without a source of supply are created
   
The system creates production proposals based on infinite capacities, but taking the requirement date of the demand into account. This can, of course, result in resource overload situations. For more information about capacity planning issues and how to resolve them, see Capacity Planning [page 19].
If the demand is in the form of a sales order, you can configure the solution to decide whether you want to consider the requirement date or the confirmation date of the sales order during material planning. Accordingly, the sales order demands are based on the requirement schedule lines or the confirmation schedule lines. To find the business option to configure this, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Supply Planning is selected within Supply Chain Planning and Control. In the Questions step, expand the Supply Planning scoping element and select Material Planning. Under Group: Planning Date, select and answer one of the questions. Note that you can select only one question at a time, and not both.

The system schedules production proposals based on the operating hours of the location calendar. The duration of a production proposal is calculated using planning operations. Planning operations comprise the detailed operations from production execution in a simplified manner. For more information about planning operations, see Capacity Planning [page 19]. The system schedules purchase proposals based on the procurement lead time maintained in the product master. The planning time fence you maintained in the product master influences this stage of the planning run. Within this time period, the planning run is not allowed to create receipts to ensure that the short-term plan remains stable. Instead, receipts are automatically scheduled beyond the planning time fence.

If you have selected the consumption-based planning procedure in the product master, the planning run only creates receipts if the available stock is below the reorder point or safety stock quantity.

For more information about production, purchase and stock transfer proposals, see:
- Handover to Production [page 191]
- Handover to Purchasing [page 194]
- Planning Stock Transfers [page 200]

6. Creation of Material Flow

Based on the results of the net requirements and lot-size calculation, the system creates the material flow that shows (in tabular or graphical form) the multi-level pegging relationships between the supply and demand related to a document such as a sales order or a production proposal.

If you have selected a consumption-based planning procedure in the product master, the material flow is not generated for those products.

The following figure shows the pegging of the top-level demand and the receipts on the first BOM level:
4.3.3 Tasks

4.3.3.1 Maintain Demand Forecast

Overview

You can access the Maintain Demand Forecast screen under Common Tasks in the following views of the Supply Planning work center:

- Products
- Resource Load
- Exceptions
- Automated Actions

A demand forecast represents an estimation of the future demand for a particular product or service. On the Maintain Demand Forecast screen, you can create and also delete demand forecasts.

For more background and concept information about demand forecasting in general, see Forecasting [page 10].

Procedure

1. Create a Demand Forecast
   a. In the Show menu, select All Demand Forecasts by Month if you want to maintain demand forecasts by month or All Demand Forecasts by Week if you want to maintain them by week.
Depending on what you select here, Monthly or Weekly is automatically entered in the Period Type field under Demand Forecast Data.

b. If you want to create demand forecasts for a product and planning area combination, enter the Product ID, Product Description, and Planning Area ID under Product Data.
If you want to create demand forecasts for a product group and planning area combination, enter the Planning Group ID and the Forecasting Group ID under Product Groups.

c. Under Demand Forecast Data, select the time period (month or week) in which you want to create demand forecasts in the Period Type field. Note that this is only necessary if the time period you want to work with should now differ from the Show selection you already made. Also enter a start date for the product (or product group) and planning area combination in the Start Date field.

d. Click Go to see the results in the Forecast Planning Table. Each row in the table shows the demand forecasts for the particular product and planning area combination you entered. Note that the Period Type is displayed as Initial if you have not yet entered a demand forecast for this particular product (or product group) and planning area combination. As soon as you enter a demand forecast, the period type changes to Weekly or Monthly depending on the period type setting you made.

e. In the relevant row of the Forecast Planning Table, enter the desired number of demand forecasts for the relevant time periods (or buckets) and click Save.

Note that demand forecasts are shown in the Forecast Planning Table for both monthly and weekly periods, regardless of your period type setting, but you can only actually edit fields for the period type (month or week) you selected. Also note that to create new demand forecasts using a new selection you must click Save before clicking Go.

f. The details (consumption key figures) for the selected row in the Forecast Planning Table appear in the Details table at the bottom of the screen.

g. Click Close to exit the screen.

Even if a demand management procedure is not defined for the selected product, you can enter a demand forecast, but the demand forecast will be not valid for supply planning and will therefore not be visible in the Products view.

2. Delete a Demand Forecast

a. Select the product (or product group) and planning area combination for which you want to delete a demand forecast by selecting the relevant row in the Forecast Planning Table.

b. Click Delete and then confirm this deletion by clicking Delete again in the dialog box that appears.

c. The period type for this particular product and planning area combination in the table changes to Initial.

When you delete demand forecasts, the forecasts for the complete time series is deleted.

Alternatives

You can also work with demand forecasts in the Demand Plans view of the Demand Planning work center. For more information, see Create a New Demand Plan [page 37].
4.4 Resource Load View

4.4.1 Resource Load Quick Guide

The Resource Load view in the Supply Planning work center, enables you to monitor the capacity situation of your resources. It provides you with a table of equipment and labor resources and their associated key figures, such as the number of overloaded periods and the average load as a percentage value. In addition, exception indicators are used to alert you to overloaded resources so that you can focus on these resources first. You can also choose to view load details for a selected resource in either a graph or table form.

This view also provides you with access to the Resource Planning Details screen, where you can obtain more detailed information about a selected resource or resource group. It shows the resource’s current load situation broken down by time bucket (in both table and graph form). Here, you can react to and solve overloads on a resource or resource group while considering the capacity in each time period, for example, by performing load leveling on a resource or changing the source of supply for a production proposal.

Business Background

Capacity Planning

The solution supports you when planning the load of resources required to fulfill demand on time and in the correct quantities with in-house production. Capacity requirements are automatically determined and updated during material planning when production proposals are being created. You are therefore able to monitor the most up-to-date resource load for your equipment and labour resources, and also given the flexibility to react to capacity issues such as resource overload by, for example, performing load leveling or rescheduling production proposals. These functions are available in the Supply Planning work center.

For more information, see Capacity Planning [page 19].

Load Leveling

The planning run schedules production proposals based on infinite resources using the location calendar. The system then evaluates the capacity requirements of the planning operations in buckets (shifts, days, weeks, or months) using the resource calendar in order to determine the capacity supply. This means that resource overload situations can arise within buckets.

Load leveling is one of the options available to you to solve resource overload situations. It aims to shift load between buckets while taking various constraints such as finite capacity into account. To perform interactive load leveling, you select Run Load Leveling from the Resource Planning Details screen within the Resource Load view of the Supply Planning work center.

For more information, see Load Leveling [page 101].

Tasks

Run Load Leveling to Resolve a Resource Overload

You can perform load leveling to distribute the load of a resource over a selected time period, taking the due dates of the scheduled production proposals into consideration, as follows:
1. Select an overloaded resource from the overview list, and click [Open] to open the Resource Planning Details screen.

2. On the Resource Load tab, select an item from the Resource Load table with a load percentage above one hundred and click [Run Load Leveling].

3. In the Input Parameters for Run Load Leveling dialog box that opens, provide the start and end date for the load leveling horizon and the resource utilization percentage.

4. Optional: If you want the planning time fence or the material cumulative lead time to be considered during load leveling, select the appropriate checkboxes in this dialog box.

5. Click [OK] to execute load leveling.

6. Click [Save] to save the updated resource load to the system and [Close] to return to the Resource Load view itself.

**Edit a Production Proposal to Resolve a Resource Overload**

1. Select an overloaded resource from the overview list, and click [Open] to open the Resource Planning Details screen.

2. On the Resource Load tab, select an item from the Resource Load table with a load percentage above one hundred.

3. On the Operations List tab, edit the Planning Quantity field to reduce the production proposal quantity, or edit the Operation Start Date and Operation End Date fields to reschedule the production proposal.

4. Click [Save] and view your changes in the Resource Load table of the Resource Load tab. Here, you can see that the load percentage of the production proposal has been reduced.

**Change Source of Supply for a Production Proposal to Resolve a Resource Overload**

1. Select an overloaded resource from the overview list, and click [Open] to open the Resource Planning Details screen.

2. On the Resource Load tab, select an overloaded period in the Resource Load table. Details of the selected period are then displayed in the Operation List section.

3. In the Operation List section, select a production proposal.

4. To open the Change Source of Supply screen, click [Actions] and choose Change Source of Supply.

5. In the dialog box that opens, select a new source of supply from the list and click [Assign].

6. Click [Save] and then [Close] to exit the Change Source of Supply screen and return to the Resource Planning Details screen.

**Select an Alternative Resource for a Production Proposal to Resolve a Resource Overload**

1. Select an overloaded resource from the overview list, and click [Open] to open the Resource Planning Details screen.

2. In the Resource Load tab, select an item with an exception in the Resource Load table. Details of the selected item are then displayed in the Operation List section.

3. In the Operation List section, select a production proposal and click its Document ID link to open the Production Proposal screen.
4. On the **Proposal Structure** tab, select the planning operation that you want to move from the table.

5. Click **Show** and choose **All Alternatives** to show all alternative resources.

6. Select an alternative resource and click **Activate Alternative**. The planning operation is then moved to the alternative resource.

7. To save the changes you have made to the production proposal, click **Save** at the top of the **Production Proposal** screen.

8. Click **Close** to close the **Production Proposal** screen. Return to the **Resource Load** view itself to see the resolved overload.

### Reschedule a Production Proposal (Bottom-Up or Top-Down) to Resolve a Resource Overload

1. Select an overloaded resource from the overview list and click **Open** to open the **Resource Planning Details** screen.

2. In the **Resource Load** tab, select an item with an exception in the **Resource Load** table.

3. Click **Reschedule Top-Down** to propagate changes from load leveling to affected production proposals on lower levels of the product structure. Alternatively, click **Reschedule Bottom-Up** to propagate changes from load leveling to affected production proposals on higher levels of the product structure.

4. In the **Input Parameters** screen that opens, enter the start and the end date for the rescheduling of the production proposal and click **OK**.

5. Potential planning issues are propagated to the lowest level of the pegging network with top-down scheduling, or to the top level with bottom-up scheduling.

### Extend Capacity of a Resource to Resolve a Resource Overload

You can adjust the capacity of a resource by changing its operating times in the resource master, as follows:

1. Select an overloaded resource from the overview list. Note that you must select a single resource and not a resource group in order to extend the capacity.

2. Click on the **Resource ID** or **Resource Description** link for the selected resource to open the **Equipment Resource Overview** screen.

3. At the top left corner of the screen, click **Edit** to open the **Edit Equipment Resource** screen. Alternatively, you can open this screen by clicking **View All** in the top right corner.

4. On the **Operating Times** tab, select **Downtimes and Additional Times**. In the **Additional Times** table, click **Add Row** to create a new additional operating time for the resource.

5. In the **Additional Times** table, use the drop-down menus in the **Reason**, **Start Date**, and **End Date** columns to select the reason and times for the additional capacity. Note that you can permanently extend the resource capacity by using the **Standard Operating Times** tab, or extend the resource capacity during certain times of the year using the **Time-Dependent Operating Times** tab.

6. At the top of the **Edit Equipment Resource** screen, click **Save and Close** to save the changes and exit the screen.
Explode Released Planning Model

You can update the structure of a planning proposal by exploding the released planning model, as follows:

1. Select an overloaded resource from the overview list and click Open to open the Resource Planning Details screen. Details of the selected period are then displayed in the Operation List section of this screen.
2. In the Operation List section, select one or several production proposals.
3. Click Actions and choose Explode RPM.

Note that any changes related to input products (or components), such as changes in quantities or additional capacity, will be lost when you explode the released planning model.

Open Material Flow

After bottom-up or top-down rescheduling, you can see the impact of the rescheduling on the pegging network by opening the material flow for a production proposal or production request as follows:

1. Select the relevant resource from the overview list and click Open to open the Resource Planning Details screen.
2. Select the required production proposal or production request from the Details: Operation List in the lower part of the screen. Click Navigate To and select Material Flow.
3. In the screen that opens, you can see an overview of the multilevel pegging relationships of the demand and supply related to the production proposal you selected. For details about which tasks you can perform in the Material Flow screen, see Open Material Flow in the Tasks section of Quick Guide for Process Production Proposals [page 207].

Release a Production Proposal

1. Select the resource you want to release a production proposal for from the overview list, and click Open to open the Resource Planning Details screen.
2. Select the planning proposal you want to release from the Operation List and click Release.
3. The production proposal becomes a production request in production execution.

Firm a Production Proposal

1. Select the resource you want to firm a production proposal for from the overview list and click Open to open the Resource Planning Details screen.
2. Select the production proposal you want to firm from the Operation List and click Firm.
3. The production proposal is protected against automatic changes during the planning run and load leveling.

Note that you can also undo the firming of a production proposal using Undo Firm. By default, all production proposals that you created and changed manually are firmed.

The following common tasks are available in the Exceptions view:
New Planning Proposal

1. Start the New Planning Proposal common task.
2. In the New Planning Proposal screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date.
   To create more than one planning proposal, click Add Row and enter the details as required. To remove a planning proposal, click Remove.
3. Optional: Select one or more planning proposals and click Release to release the proposals to production or purchasing. The proposals then become requests.
4. Click Save and Close to save the new planning proposal(s) and close the screen.
5. To view the new planning proposal, open the associated product in the Product Planning Details screen in the Products view of the Supply Planning work center, or in the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals views of the Supply Control work center.

New Stock Transfer

1. Start the New Stock Transfer Order common task.
2. Specify a ship-from site ID, a ship-to site ID, and a ship-to location ID. The ship-to site and ship-to location may have been modeled in your system as follows:
   - The ship-to site is also the ship-to location:
     In this case, the ship-to-site also has the role of the ship-to location. The ship-to location ID (which is the same as the ship-to site ID) is entered automatically when the user enters the ship-to site ID and presses Enter.
   - The ship-to site and ship-to location are different and there is only one ship-to location:
     In this case, the ship-to location ID is entered automatically when the user enters the ship-to site ID and presses Enter.
   - The ship-to site and ship-to location are different and there are more than one ship-to locations:
     In this case, the ship-to location ID cannot be entered automatically when the user enters the ship-to site ID as the assignment is not unique. If, however, the user enters the ship-to location ID, the ship-to site ID is entered automatically as this assignment is unique.

   For more information, see Locations and Location Layouts.
3. Optional: Select a delivery priority.
   Note that if you select Immediate as the priority, the system automatically releases the stock transfer order to outbound logistics provided that the order can be confirmed today.
4. Optional: To specify that you want to ship all items with the same requested date, ship-to address, and delivery rule together in one outbound delivery, select the Complete Delivery Order checkbox.
5. On the Line Items tab, click Add Row and enter the product ID and the requested quantity of the product that you want to ship.
6. Repeat this step for each product you want to ship.
7. Click Release to release the stock transfer order and save your entries.
4.4.2 Business Background

4.4.2.1 Load Leveling

**Overview**

The planning run schedules production proposals based on infinite resources using the location calendar. The system then evaluates the capacity requirements of the planning operations in buckets (shifts, days, weeks, or months) using the resource calendar in order to determine the capacity supply. This means that resource overload situations can arise within buckets.

Load leveling is one of the options available to you to solve resource overload situations. It aims to shift load between buckets while taking various constraints such as finite capacity into account. To perform interactive load leveling, you select *Run Load Leveling* from the *Resource Planning Details* screen within the *Resource Load* view of the *Supply Planning* work center.

To understand how the planning run itself works, see Material Planning Run [page 90].

The following figures illustrate how load leveling aims to rectify a reasonable resource overload situation:
Process Flow

The following figure illustrates the key steps of capacity planning when load leveling is performed as part of this process:

- **Scheduling by Planning Run**
- **Load Leveling**
- **Top-Down/Bottom-Up Propagation**

**Scheduling by Planning Run**

The following process steps are performed by the planning run as part of scheduling:
1. The planning run schedules production proposals based on infinite resources using the location calendar. The planning operations are thereby continuously scheduled along the time horizon.

2. The system evaluates the capacity requirements of the planning operations in buckets using the resource calendar. The load is assigned to each bucket depending on the scheduling of the planning operations.

**Load Leveling**

The following process steps are performed by the system as part of load leveling:

1. Initially, all demands are sorted according to their requirement dates.
2. The capacity requirements of the planning operations are then sorted according to this demand prioritization within the load leveling horizon in the following phases:
   - In the first phase, the planning operations are rescheduled forward within the load leveling horizon, starting with the first bucket provided that there is some available capacity.
   - In the second phase, if a planning operation is scheduled too early, load leveling starts a backward scheduling from the requested date of the demand to find a later slot.
   - If the available capacity is not sufficient, the planning operation is infinitely scheduled in the first bucket after the load leveling horizon.
3. Compact scheduling automatically adjusts the planning operation relationships for a production proposal after a certain planning operation is rescheduled.

Production proposals that are firmed are not affected by load leveling.

**Top-Down/Bottom-Up Propagation**

The impact of rescheduled production proposals to the pegging net can be propagated in top-down and bottom-up directions. This functionality reschedules the production proposals on other levels that have been affected by the load leveling result. Potential planning issues are propagated to either the top level or the lowest level.

A finished product that is required to fulfill a sales order has three bill of material (BoM) levels. The production proposal on resource 2 is rescheduled forward by load leveling. The related production and purchase proposals are then rescheduled accordingly without checking the capacity of resource 3. The following figure illustrates this example:
Load Leveling Parameters

When you select Run Load Leveling from the Resource Planning Details screen, you must provide the following details:

- Start date: this determines the start date of the load leveling horizon
- End date: this determines the end date of the load leveling horizon
- Resource utilization as a percentage value: this determines up to which level resource capacity can be utilized. Load leveling tries to achieve this as a target percentage of load for one resource.

You can also specify whether the following values should be considered by load leveling:

- Consider planning time fence
  If this indicator is checked, load leveling will not touch any planning operation of a production proposal where the availability date of the proposal is inside the planning time fence. This proposal (production proposal 1) will be considered as firm for the load leveling. If capacity is available within the planning time fence, a production proposal can be rescheduled partially or completely into the planning time fence. If sufficient capacity is available for the complete proposal, it is rescheduled in such a way that the availability date of the proposal (production proposal 2) is at the planning time fence. Capacity and load (production proposal 3) beyond the planning time fence is considered as usual by load leveling.
  The following figures show the impact of the planning time fence on load leveling:

- Consider material cumulative lead time
  If this indicator is checked, load leveling reschedules planning operations considering the cumulative lead time for elements of the pegging net on lower Bill of Material (BoM) levels. The cumulative lead time includes...
replenishment lead time for purchase items and production items as well as the durations of planning operations of the affected production proposal. The cumulative lead time is calculated from today. The following figures show the impact of the material cumulative lead time to load leveling:

To learn about alternative ways to load leveling in which you can resolve a capacity overload situation, see Capacity Planning [page 19].

See Also
Supply Planning [page 14]
Resource Load Quick Guide [page 96]
4.4.3 Tasks

4.4.3.1 Maintain Demand Forecast

Overview

You can access the Maintain Demand Forecast screen under Common Tasks in the following views of the Supply Planning work center:

- Products
- Resource Load
- Exceptions
- Automated Actions

A demand forecast represents an estimation of the future demand for a particular product or service. On the Maintain Demand Forecast screen, you can create and also delete demand forecasts.

For more background and concept information about demand forecasting in general, see Forecasting [page 10].

Procedure

1. Create a Demand Forecast
   a. In the Show menu, select All Demand Forecasts by Month if you want to maintain demand forecasts by month or All Demand Forecasts by Week if you want to maintain them by week. Depending on what you select here, Monthly or Weekly is automatically entered in the Period Type field under Demand Forecast Data.
   b. If you want to create demand forecasts for a product and planning area combination, enter the Product ID, Product Description, and Planning Area ID under Product Data.
      If you want to create demand forecasts for a product group and planning area combination, enter the Planning Group ID and the Forecasting Group ID under Product Groups.
   c. Under Demand Forecast Data, select the time period (month or week) in which you want to create demand forecasts in the Period Type field. Note that this is only necessary if the time period you want to work with should now differ from the Show selection you already made. Also enter a start date for the product (or product group) and planning area combination in the Start Date field.
   d. Click Go to see the results in the Forecast Planning Table. Each row in the table shows the demand forecasts for the particular product and planning area combination you entered. Note that the Period Type is displayed as Initial if you have not yet entered a demand forecast for this particular product (or product group) and planning area combination. As soon as you enter a demand forecast, the period type changes to Weekly or Monthly depending on the period type setting you made.
   e. In the relevant row of the Forecast Planning Table, enter the desired number of demand forecasts for the relevant time periods (or buckets) and click Save.
Note that demand forecasts are shown in the Forecast Planning Table for both monthly and weekly periods, regardless of your period type setting, but you can only actually edit fields for the period type (month or week) you selected. Also note that to create new demand forecasts using a new selection you must click Save before clicking Go.

f. The details (consumption key figures) for the selected row in the Forecast Planning Table appear in the Details table at the bottom of the screen.

g. Click Close to exit the screen.

Even if a demand management procedure is not defined for the selected product, you can enter a demand forecast, but the demand forecast will be not valid for supply planning and will therefore not be visible in the Products view.

2. Delete a Demand Forecast

a. Select the product (or product group) and planning area combination for which you want to delete a demand forecast by selecting the relevant row in the Forecast Planning Table.

b. Click Delete and then confirm this deletion by clicking Delete again in the dialog box that appears.

c. The period type for this particular product and planning area combination in the table changes to Initial.

When you delete demand forecasts, the forecasts for the complete time series is deleted.

Alternatives

You can also work with demand forecasts in the Demand Plans view of the Demand Planning work center. For more information, see Create a New Demand Plan [page 37].

4.5 Customer Demand View

4.5.1 Customer Demand Quick Guide

The Customer Demand view provides an overview of your demand that can result from sales orders that are fulfilled internally or externally, from sales orders that contain sales kits, as well as from service orders, stock transfer orders, and project stock orders. Information on the availability status, release status, and delivery status helps you to monitor and optimize the fulfillment of demand from a supply chain perspective.

The view enables you to quickly identify confirmation issues, as schedule lines for the order line items provide detailed information about the dates and quantities that are requested, confirmed, released, not confirmed, or fulfilled. You can also use this view to release confirmed order items to logistics execution to trigger the delivery of the products requested.

You can access the Customer Demand view from the following locations:

- Supply Planning work center
**Business Background**

**Ship-From Determination and Shipment Scheduling for Customer Demand**

As supply planner, you can use ship-from determination and shipment scheduling for customer demand to determine the following:

- A site or supplier from which the product is delivered to the customer
- The date when the product must be available to ship (execution start date)
- The date on which the product is shipped to the customer (shipment date)
- The date on which the product arrives at the customer site (delivery date)

This information is used by planning, production, and logistics to ensure the customer order is fulfilled on time. Ship-from determination is triggered when a customer demand, such as a sales order, service order, project stock order, or sales quote is entered in the system. It determines the ship-from site or supplier for the products requested and is a prerequisite, for example, for planning runs and availability checks. Ship-from determination uses several sources of information (transport lanes, purchasing contracts, and list prices) to determine the site or supplier from which the product is delivered.

For more information, see **Ship-From Determination and Shipment Scheduling for Customer Demand** [page 118].

**Availability Checks**

Availability checks enable you, as a supply planner, to answer the question of whether or not a requested quantity of a product is available at a certain place at a certain point in time. Confirmations as a result of these checks not only give a reliable answer to this question, they are also required for the follow-on processes in logistics execution.
Providing a reliable delivery date at the very time when a quote or order is entered in the system, helps you to improve customer satisfaction.

The system allows you to check the availability for sales orders, service orders, stock transfer orders, project stock orders, and sales quotes.

For more information, see Availability Checks [page 16].

**Complete Delivery Orders**

You can use complete delivery orders to ensure that the complete quantity of all material items of a sales order or stock transfer order, or the complete quantity of all spare part items of a service order is shipped together on the same date and in a single delivery. This avoids partial deliveries, which often result in a product that is useless for your customer. In addition, complete delivery orders help you save logistics costs.

The complete delivery requirements must be adhered to in planning but the system offers enough flexibility for special situations. In execution, the process is not as strict and the request for complete delivery may be overruled.

For more information, see Complete Delivery Orders [page 128].

**Third-Party Order Processing**

You, as supply planner, sales representative, or buyer working as the third-party order processing coordinator of your company, can use third-party order processing to coordinate and monitor the direct shipment of a product to your customer by a supplier rather than your own company. This can be an external supplier or a partner company in an intercompany scenario.

For more information, see Third-Party Order Processing [page 150].

**Intracompany Stock Transfer Processing**

Intracompany stock transfer processing enables you to plan and process the transfer of products from one site to another of the same company. As supply planner, you can plan your intracompany stock transfers using stock transfer proposals. As warehouse manager, you can process your intracompany stock transfers with or without task support from the system.

This document provides an example of a typical process flow describing the stock transfer planning using stock transfer proposals, and the stock transfer process using stock transfer orders either by posting the goods issue and goods receipt directly or by creating the warehouse request and processing warehouse tasks. For the outbound process, the example with tasks uses one-step shipping and for the inbound process, the example with tasks also uses one-step receiving.

For more information, see Intracompany Stock Transfer Processing.

**Sales Kit Process Flow**

A kit is defined as a logical group of items that can be sold or purchased together as one unit. Wholesale and component manufacturing industries like to offer product bundles as single selling units. In the Business ByDesign system a single selling or purchasable unit comprising of various components is called a kit.

For more information, see Sales Kit Process Flow [page 274].

**Sourcing Material from Stock for Projects**

During the execution of a project, you may need to procure material for use in the project. You can choose to either source the material from stock or purchase the material.

For more information, see Sourcing Material from Stock for Projects.

**Business Scenario: Order-to-Cash (Sell-from-Stock)**

The Order-to-Cash (Sell-from-Stock) business scenario enables you to sell goods from stock using a wide range of standard features to handle sales quotes, sales orders, deliveries, customer invoices, and payments. This scenario
includes features, such as, available-to-promise (ATP) check, pricing, credit card, credit limit check, and automatic order creation.

For more information, see Order-to-Cash (Sell-from-Stock).

**Business Scenario: Order-to-Cash (Make-to-Order)**

The Order-to-Cash (Specified Products) business scenario enables your company to produce and sell products for a specific customer demand.

You can create a sales quote or sales order with a product specification that includes customer-specific requirements, plan the multilevel demand for a sales order item, and create supply for the required products. You can order and receive materials based on requirements from the customer, release the production order, and create production tasks. During task confirmation, it is ensured that only those materials that were replenished for a specific customer demand are consumed. Output products are always confirmed as specified stock. A final inspection identifies if any of the units do not conform to the customer requirements.

You can post a goods issue. The system creates an outbound delivery and the products are shipped to the customer. An invoice is created based on the outbound delivery and the system updates financial accounting.

For more information, see Order-to-Cash (Make-to-Order).

**Business Scenario: Order-to-Cash (Third-Party Order Processing - Material)**

The Order-to-Cash (Third-Party Order Processing - Material) business scenario enables your company to create sales orders that are used to ship products with or without a product specification to your customer directly from a supplier rather than from your own company. A third-party purchase request is created automatically when you release a sales order for a product to which purchasing contracts and/or list prices have been assigned in the system. The third-party purchase order can be created automatically or manually. You can enter the supplier’s confirmation data in the system when they send the delivery notification. Based on this third-party delivery, supplier invoicing and customer invoicing is triggered. You can use the Order-to-Cash (Third-Party Order Processing – Material) scenario if you always ship directly from a supplier or if you only ship directly from a supplier in exceptional cases.

For more information, see Order-to-Cash (Third-Party Order Processing - Material).

**Business Scenario: Intracompany Stock Transfer**

The Intracompany Stock Transfer business scenario enables you to transfer stock from one site to another site within the same company. You create the stock transfer proposal in the receiving site to plan the shipping of stock. You create the stock transfer order in the sending site manually, or by releasing the stock transfer proposal. You complete the outbound processing steps in the sending site in the same way as you would complete outbound processing when based on sales orders. When you create the outbound delivery, an advised inbound delivery notification is created in the receiving site automatically. You then complete the inbound processing steps in the receiving site in the same way as you would complete inbound processing when based on purchase orders.

For more information, see Intracompany Stock Transfer.

**Business Scenario: Field Service and Repair**

The Service and Repair business scenario enables your service department to provide repair and maintenance to your customers on-site, at your own service center, or at the service center of a supplier. It provides functions to handle service requests, plan service orders and related activities, and fulfill, confirm, and invoice services. There are also enhanced functions for:

- Customer warranties, to bring transparency to your warranty business, to allow you to meet any legal requirements, and provide information on warranty-related cost and profit.
- Service levels, to define reaction times, specify and measure performance objectives, and designate milestones and operating hours.
• Outsourcing, to offer and sell third-party services, whether you outsource your field service organization partially or completely.

Service and Repair incorporates business functions from related areas that directly support service delivery, such as from Supply Chain Management for spare part logistics, warehousing, and inventory; and from Financial Accounting for processing due items and payments.

For more information, see Field Service and Repair.

Business Scenario: Materials in Projects

The Materials in Projects business scenario is relevant for project-based service providers who handle materials in addition to services (for example, infrastructure service providers, IT, or energy infrastructure as gas pipeline or wind power). They need to plan and schedule materials on projects, procure these materials from within the project, and sell these materials along with the project services within one project invoice. This scenario enables you to source materials from your own inventories by creating project stock orders. You can choose to either source the material from stock or purchase the material.

For more information, see Materials in Projects.

Tasks

Any action that is performed at the sales kit level applies to all the sales kit items. For example, if you release the confirmed schedule lines for a sales kit, the system will release the confirmed schedule lines for all the sales kit items.

Display Order Logistics Details for a Sales Order, Service Order, or Project Stock Order

1. To open the Order Logistics Details screen for the relevant order category, select the row for a sales order, service order, or project stock order and click Edit.
2. To display general information about the order, including contact details, sales organization details, and delivery information, choose the General tab.
3. To display a line-by-line breakdown of all line items from the selected order, choose the Line Items tab.
4. Optional: Select a row and click the relevant button to release the confirmed schedule lines for an order item, open the product planning details, open the order item planning details, check the availability, force a confirmation, or cancel a confirmation as required. For sales orders of delivery type Third-Party, you can use this screen to release confirmed schedule lines and check the availability. Note that you can also perform these tasks on the customer demand list.

If the sales order contains a sales kit, you can perform these tasks only for the sales kit and not for individual sales kit items.

5. Optional: To change the source of supply for an order that has not been released, select a row and choose the Alternative Sources tab. For more information about this task, see the Manually Re-Source a Sales Order, Service Order, or Project Stock Order task below.

If the sales order contains a sales kit, you can change the source of supply for individual sales kit items and not for the sales kit.
6. To display the document flow for the selected order through the supply chain, choose the Document Flow tab. For more information, see Document Flow.

Note that you cannot change most of the information on this screen. To change order data, click You can Also -> Open Sales Order Overview to navigate to the Sales Order Overview screen from Sales.

Manually Re-Source a Sales Order, Service Order, or Project Stock Order

1. To open the Order Logistics Details screen for the relevant order category, select the row for a sales order, service order, or project stock order line item that has not been released and click Edit. Note that you cannot re-source stock transfer orders.

2. Choose the Line Items tab and select the line item for which you want to change the source of supply.

3. To view the transport lanes, purchasing contracts, or list prices that are available as sources of supply for an order line item, choose the Alternative Sources tab. Note that the system has performed a simulative availability check, that is, without confirming quantities for the alternative sources listed here. The Currently selected Source of Supply column indicates which source is used at the moment.

4. Select the transport lane, purchasing contract, or list price from which you want to source the order and click Deliver from Selected Source of Supply. The system performs a binding availability check with confirmed quantities for the source you selected. The result is displayed in the Availability Status column in the line item table.

5. Save your entries.

Export Customer Demand to Microsoft Excel*

For more information about this task, see here [page 50].

Open Product Planning Details

This action is only available if you are authorized to view the planning details of a specific product.

It is not available for order line items with delivery type Third-Party.
It is also not available for sales kits.
Select the row for the sales order, service order, stock transfer order, or project stock order for which you want to view the product planning details and click **Open Product Planning Details**.

You obtain detailed information about the supply and demand situation for the selected product. For details about which tasks you can perform on the **Product Planning Details** screen, see the Tasks section of the Quick Guide for Products in Supply Planning [page 73].

**Open Order Item Planning Details**

![Note](https://image.pollinations.ai/prompt/note%20icon%20in%20a%20box%20next%20to%20text)

This action is not available for orders line items with delivery type **Third-Party**.

It is also not available for sales kits.

1. Select the row for the sales order, service order, stock transfer order, or project stock order for which you want to open the order item planning details and click **Open Order Item Planning Details**.

The screen shows the multilevel product structure of the requested product based on the valid bill of material (BoM) and provides planning-relevant supply and demand information for every item of the product structure.

2. Define which levels of the product structure are shown in the list as required:
   - To display all levels of the product structure that are affected by an exception, click **Show Path with Exceptions**.
     
     All other levels are hidden.
   - To display all levels of the product structure, click **Show Entire Path**.

3. Open the material flow for the order item, navigate to the product planning details, or start an interactive planning run as required:
   - To get an overview of the multilevel pegging relationships of the demand and supply related to the selected item and identify planning issues due to lateness and insufficiently pegged quantities, click **Open Material Flow**.
     
     For details about which tasks you can perform on the **Material Flow** screen, see the Tasks section of the Quick Guide for Process Production Proposals [page 207].
   - To get detailed information about the supply and demand situation for the selected product and to solve existing exceptions, for example, by changing the source of supply, click **Open Product Planning Details**.
     
     For details about which tasks you can perform on the **Product Planning Details** screen, see the Tasks section of the Quick Guide for Products in Supply Planning [page 73].
   - To start an interactive planning run to plan the supply for the actual demand or to resolve existing planning issues, click **Run Planning**.
     
     Note that if you choose **Single BoM Level**, the system performs the planning run for the selected level of the product structure only. If you choose **Multi BoM Level**, the planning run is carried out for the selected level of the product structure and all levels below this level.
     
     For details about interactive planning, see the Tasks section of the Quick Guide for Products in Supply Planning [page 73].
Release a Sales Order, Service Order, Stock Transfer Order, or Project Stock Order

Sales order line items with delivery type Third-Party are released automatically when the sales order is released. For this reason, the action is only available if purchasing canceled the open quantity of the purchase request and you can now re-source the customer demand and then release it again.

1. Do the following:
   - You can configure the solution to do a second availability check based on stock alone. To find the business option to configure this, select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control. In the Questions step, expand the Demand Management and Order Confirmation scoping element and select Product Availability Check. Under Group: Stock-Based Availability Check, select and answer the question.
   - If you have configured the solution to do a second availability check based on stock, do the following:
     - If you want the system to do a second availability check based on stock while releasing the customer demand, select the corresponding customer demand item, whose confirmed schedule lines you want to release, so that execution can start. Click Release With Stock Check.
     - In case of multiple delivery, the confirmed schedule line is split based on the stock availability when this check is performed and the confirmed schedule line is released accordingly for available stock. However, in case of any single delivery rule, the confirmed schedule line is not split and only released when the check confirms that the entire confirmed quantity of that schedule line is available for execution.
     - If you do not want the system to do a second availability check based on stock while releasing the customer demand, select the corresponding customer demand item, whose confirmed schedule lines you want to release so that execution can start. Click Release Without Stock Check.
   - Select the row for the sales order, service order, stock transfer order, or project stock order line item whose confirmed schedule lines you want to release so that execution can start and click Release.

If you select an item that is part of a complete delivery order and therefore belongs to a delivery group, the system releases all other items of the delivery group along with the item that you selected. If not all items of the delivery group can be released, the system releases none of the items.

If a sales order contains a sales kit, you can release the confirmed schedule lines only for the sales kit and not for individual sales kit items.

To get an overview of your complete delivery orders and check the availability status of the delivery groups, use the Complete Delivery Orders show option or group the list by delivery group. For more information, see Complete Delivery Orders [page 128]. If the item that you selected has more than one confirmed schedule line or if you selected several items to be released, the Release Schedule Lines dialog box appears.
2. In the Release Schedule Lines dialog box, choose one of the following options:
   - Enter a date so that the system releases all confirmed schedule lines of the selected order line item with an execution start date up until the date you entered.
   - Do not enter a date so that the system releases all confirmed schedule lines of the selected order line item.

   The order line item is released and a delivery proposal is created, which you can see in the Delivery Control view of the Outbound Logistics work center. The warehouse manager can then create a warehouse request for the delivery proposal or post a goods issue.

   When you release a sales orders of delivery type Third-Party, a purchase request is created in the Purchase Request view of the Purchase Requests and Orders work center.

You can also release the confirmed schedule lines of a sales order, service order, stock transfer order, or project stock order on the Order Logistics Details screen for the relevant order category.

### Check Availability

1. Select the row for the sales order, service order, stock transfer order, or project stock order line item for which you want to perform an availability check, and find out when and in what quantity the requested products will be available. Note that this action is only available for order line items that have been partially released or not released.

2. Click Actions and then choose Check Availability. The system carries out the availability check for the line item you selected, saves the result of the check, and updates the availability status information accordingly.

   Note that if you want to get an earlier confirmation date for a line item that is part of a complete delivery order, you must check the availability for all items of the order since the item with the latest confirmation date determines the confirmation date for the entire delivery group. For more information, see Availability Checks for Complete Delivery Orders [page 130].

   Note that for sales orders of delivery type Third-Party, a yellow availability status indicates late delivery. The requested quantity is always fully confirmed.

### Force a Confirmation

1. Note that this action is not available for order line items with delivery type Third-Party.

   If a sales order contains a sales kit, this action is available only for the sales kit and not for individual sales kit items.

Select the row for the sales order, service order, stock transfer order, or project stock order line item for which you want to force a confirmation, click Actions, and then choose Force Confirmation. Note that this action is only available for order line items that have been partially released or not released.

The system confirms the requested quantity on the requested date for the order line item selected. If the requested date is in the past, the system confirms the requested quantity on the present day. Only use this action if you are entirely sure that a demand can be confirmed as requested.
Note that if you force the confirmation for a line item that is part of a complete delivery order, you can only solve quantity issues, for example, overwrite a confirmation with zero quantity. If you want to force the confirmation to improve the confirmed delivery date, you must first switch off complete delivery temporarily. For more information, see the task Temporarily Switch Off Complete Delivery below.

Customer demand that was manually confirmed in a forced confirmation is not included in confirmation update runs.

Note that you can undo a forced confirmation by canceling the confirmation or by checking the availability again.

**Cancel a Confirmation**

Note that this action is not available for order line items with delivery type *Third-Party*.

If a sales order contains a sales kit, this action is available only for the sales kit and not for individual sales kit items.

Select the row for the sales order, service order, stock transfer order, or project stock order line item for which you want to cancel the confirmation, click **Actions**, and then choose **Cancel Confirmation**. Note that this action is only available for order line items that have been partially released or not released.

The system sets the confirmed quantity on the requested date back to zero for this order line item. The availability status is set to *Not Confirmed*. The quantity that becomes available in this way can now be allocated to another order for the same product when you check the availability again.

**Temporarily Switch Off Complete Delivery**

This action is only available for line items that are part of a complete delivery order.

If a sales order contains a sales kit, this action is available only for the sales kit and not for individual sales kit items.

1. To open the **Order Logistics Details** screen for the relevant order category, select the row for a sales order or service order line item that has not been released and click **Edit**.

2. To see what the confirmed dates and quantities of the individual items of an order would look like if they were not combined in a delivery group, that is, if their dates were not aligned, choose the **Line Items** tab, select any of the line items, click **Actions**, and then choose **Temporarily Switch Off Complete Delivery**. The system switches off complete delivery and checks the availability for all line items of the order again. You can now change the availability situation for individual items without taking the other items of the delivery group into account. Note that you must switch on complete delivery again to be able to save your changes.

3. Optional: Re-source an item that is late to any of the alternative sources of supply listed on the **Alternative Sources** tab. Note that you must assign the same source of supply to all order line items. Otherwise, the system will not let you save your entries.

4. Optional: Force the confirmation for an item that is late to the requested date. Note that forcing the confirmation for one item, does not necessarily mean that the confirmed delivery date for the entire delivery group moves to the requested date or at least to an earlier date than before. When you switch complete delivery back on, the
system realigns the confirmed delivery dates of all items and the item with the latest confirmation date determines the confirmation date for the entire delivery group.

5. To check how your changes affect the availability situation of your delivery group and to be able to save your changes, click [Actions] and then choose Switch On Complete Delivery.

The system recalculates the availability status on delivery group level.

6. If you are satisfied with the result, save your entries.

**Edit Order Logistics Details for a Stock Transfer Order**

1. Select the row for a stock transfer order line item and click [Edit] to open the Edit Stock Transfer Order Logistics Details screen.

2. On the General Data tab, change the ship-from site, ship-to site/ship-to location, or delivery priority, or select the Complete Delivery Order checkbox as required.

Note that these changes are only possible if all order line items have the status Not Released.

3. For order line items that have the status Not Released, make the following changes on the Line Items tab as required:
   - Change the product, requested quantity, requested delivery date, or freight forwarder for an existing line item.
   - Add new line items and remove line items that have not been saved.
   - Cancel and release line items.

Note that for order line items that have the status Partially Released or Released, you can only add new line items and remove line items that have not been saved.

4. Save your entries and return to the customer demand list.

The system changes the stock transfer order accordingly.

**Maintain the Freight Forwarder for a Stock Transfer Order**

1. Select the row for a stock transfer order that has not been released and click Maintain Freight Forwarder.

2. In the Maintain Freight Forwarder dialog box that appears, enter a freight forwarder ID for the selected stock transfer order item and click [OK] to save the changes and return to the customer demand list.

Note that you can also maintain the freight forwarder for a stock transfer order item on the Line Items tab of the Edit Stock Transfer Order Logistics Details screen.

The following common tasks are available in the Customer Demand view:

**Stock Overview**

For more information about this task, see here [page 26].

**New Stock Transfer Order**

1. Start the New Stock Transfer Order common task.

2. Specify a ship-from site ID, a ship-to site ID, and a ship-to location ID.

   The ship-to site and ship-to location may have been modeled in your system as follows:
   - The ship-to site is also the ship-to location:
In this case, the ship-to-site also has the role of the ship-to location. The ship-to location ID (which is the same as the ship-to site ID) is entered automatically when the user enters the ship-to site ID and presses Enter.

- The ship-to site and ship-to location are different and there is only one ship-to location:
  In this case, the ship-to location ID is entered automatically when the user enters the ship-to site ID and presses Enter.

- The ship-to site and ship-to location are different and there are more than one ship-to locations:
  In this case, the ship-to location ID cannot be entered automatically when the user enters the ship-to site ID as the assignment is not unique. If, however, the user enters the ship-to location ID, the ship-to site ID is entered automatically as this assignment is unique.

For more information, see Locations and Location Layouts.

3. Optional: Select a delivery priority.
   Note that if you select Immediate as the priority, the system automatically releases the stock transfer order to outbound logistics provided that the order can be confirmed today.

4. Optional: To specify that you want to ship all items with the same requested date, ship-to address, and delivery rule together in one outbound delivery, select the Complete Delivery Order checkbox.

5. On the Line Items tab, click Add Row and enter the product ID and the requested quantity of the product that you want to ship.

6. Repeat this step for each product you want to ship.

7. Click Release to release the stock transfer order and save your entries.

4.5.2 Business Background

4.5.2.1 Ship-From Determination and Shipment Scheduling for Customer Demand

Overview

As supply planner, you can use ship-from determination and shipment scheduling for customer demand to determine the following:

- A site or supplier from which the product is delivered to the customer
- The date when the product must be available to ship (execution start date)
- The date on which the product is shipped to the customer (shipment date)
- The date on which the product arrives at the customer site (delivery date)

This information is used by planning, production, and logistics to ensure the customer order is fulfilled on time. Ship-from determination is triggered when a customer demand, such as a sales order, service order, project stock order, or sales quote is entered in the system. It determines the ship-from site or supplier for the products requested and is a prerequisite, for example, for planning runs and availability checks. Ship-from determination uses several
sources of information (transport lanes, purchasing contracts, and list prices) to determine the site or supplier from which the product is delivered.

For stock transfer orders that you use to ship goods from one site of your company to another, the system uses the information about the sending and receiving sites that you enter to find the relevant transport lane, which is required for scheduling. As a prerequisite, you must have created a transport lane pointing from a ship-from site to a ship-to-site of the same company.

Master Data for Ship-From Determination

Different master data is required depending on whether you want to deliver the product requested by your customer from your own ship-from site or have it delivered to the customer by an external supplier (third-party order processing).

Shipment from Your Own Site

To find a ship-from site to deliver the product to the customer, the system uses the following data created in the Supply Chain Design Master Data work center:

- **Transport zone**
  Transport zones are geographical regions. You can use them to group customers according to their ship-to addresses, or according to their customer IDs. You can define transport zones for the following:
  - A single country
  - Several countries
  - One or more regions within a country
  - Ranges of postal codes within a country
  - Combinations of the above
  - A single customer
  - Several customers

When you define a country, a region, and a postal code range in a transport zone, this transport zone is valid for all ship-to addresses matching either the country, or the country and region, or the country and postal code range.

For more information on this task, see Transport Zones Quick Guide.

- **Transport lane**
  In transport lanes, you define connections as follows:
  - Between ship-from sites and transport zones
  - Between ship-from sites and ship-to sites of the same company (only relevant for intracompany stock transfer scenarios)

You can define transport lanes for all products, or specify a set of products or product categories for which they may be used. Transport lanes also contain information about the shipping duration, which is required for shipment scheduling. Note that you can define a default shipping duration in business configuration, which is then used as the default value when you create a transport lane. You do this in the Supply Chain Setup Management activity group of the Activity List view in the Business Configuration work center.

In addition, you can prioritize transport lanes. You may want to do this if there are multiple ship-from sites available to deliver products to the same transport zone. Note that you always maintain transport lane priorities for the combination of lane and product. This means that a transport lane can have a different priority depending on the product that is shipped using the lane.
For more information on how to create and edit transport lanes, see Transport Lanes Quick Guide.

**Shipments by an External Supplier**

To find an external supplier to deliver the product to the customer, a purchasing contract or list price must have been created for the product in the Sourcing and Contracting work center or in the Product Portfolio work center respectively. When ship-from determination finds the purchasing contract or list price, the system creates a purchase order that you can send to the supplier. If the product can also be shipped from your own site but you do not want this site to be the default ship-from site, you can exclude the relevant ship-from site from automatic ship-from determination for this product. To do so, you select the Disable Automatic Ship-From Determination checkbox on the Availability Confirmation tab of the Materials view in the Product Development work center.

For more information on the direct shipment of products by an external supplier, see Third-Party Order Processing [page 150].

**Ship-From Determination for Sales Orders and Sales Quotes**

When determining sources from which to deliver products for sales orders and sales quotes, the system first finds all the transport zones in your company whose country, country and region, or country and postal code range matches the ship-to address information (country, region, postal code) given in the sales order or sales quote. If the system does not find anything among the transport zones you created, it uses the global transport zone that is delivered with the solution.

Note that the system does not check if a postal code given in the ship-to address matches a region in a transport zone or if a region given in a ship-to address matches a postal code range in a transport zone.

Once matching transport zones have been found, the system looks for sources from which to deliver the product requested by the customer. Since internal sources, that is ship-from sites of the same company, always take priority over external sources, that is suppliers, the system determines the following types of sources in the following sequence:

1. Transport lanes
   - Based on the transport zone, the system finds possible transport lanes for the product. If it finds more than one matching transport zone, it uses all of them to find transport lanes and then takes the transport lane with the highest priority. If it finds more than one transport zone but no priorities have been maintained for the transport lanes, it uses the one that is more specific. This means that a lane that is to be used to transport the product requested in the order would be preferred over a lane for all products. If no priorities are maintained and none of the transport lanes is more specific than the others, the system selects any of the transport lanes found.
   - The information from the transport zone and the transport lane selected determines the ship-from site. Note that the system always checks whether the ship-from site belongs to the seller company before it uses it as a source to deliver a product for a sales order or sales quote.
   - Transport lanes also contain information on the shipping duration, which is necessary for scheduling the order.
2. Purchasing contracts
   - If the system does not find any ship-from sites, it searches for external sources to cover the demand. The system checks all purchasing contracts that are valid for the product to be sold. If more than one contract is available, the system takes the contract that is defined as the fixed source of supply in the Source Determination view of the Sourcing and Contracting work center in purchasing and determines a supplier. This results in a third-party order processing scenario where your company sells products directly from a supplier to a customer.
3. List prices
If the system does not find any suitable purchasing contracts, it searches for list prices. If more than one list price is available, the system takes the list price that is defined as the fixed source of supply in the Source Determination view of the Sourcing and Contracting work center in purchasing and determines a supplier. This also results in a third-party order processing scenario.

**Ship-From Determination for Service Orders**

In pick-up scenarios where a service performer picks up the spare parts from the seller party directly, the party information about the service performer contains the address information that the system uses to find a transport zone and available transport lanes. Note that if no service performer address is maintained, the system uses the address of the ship-to party entered in the service order. The system then takes the transport lane with the highest priority and determines a ship-from site, that is, the pick-up site. Note that the system always checks if a logistics area of the type Storage Area with logistics use Movable Storage has been defined for the pick-up site before it uses it for a service order.

In pre-delivery scenarios where the spare parts are delivered to the service requester, the system uses the address information of the ship-to party given in the service order to determine a matching transport zone. Based on the transport zone and transport lane information, it finds a ship-from site in the same way as described for sales orders and sales quotes.

**Ship-From Determination for Stock Transfer Orders**

In intracompany stock transfer scenarios where you transport goods between the stocks of two sites belonging to the same company, you must enter information about the sending site and the receiving site in the stock transfer order. This means that the system does not need to find a ship-from site. It uses the information you entered to find the transport lane. In this way, the shipping duration required for shipment scheduling is determined.

**Ship-From Determination for Project Stock Orders**

In the Consumption at Site scenario where the project consumes the materials from a particular site, the system takes the ship-from site from the project stock order. In the absence of a ship-from site, the system uses the address information of the ship-to party given in the project stock order to determine a matching transport zone, and finds a ship-from site based on the transport zone and transport lane information. The system always checks if a logistics area of logistics use Project Stock has been defined for the ship-from site before it uses it for a project stock order.

In the Pick-up scenario where a service performer carries the material to the site of consumption, the party information about the person responsible contains the recipient address information that the system uses to find a transport zone and available transport lanes. If no recipient address is maintained, the system uses the address of the ship-to party entered in the project stock order. The system then takes the transport lane with the highest priority and determines a ship-from site, that is, the pick-up site. The system always checks if a logistics area of logistics use Movable Storage has been defined for the pick-up site before it uses it for a project stock order.

In the Pre-delivery scenario where the materials are pre-delivered to the site of consumption, the system uses the address information of the ship-to party given in the project stock order to determine a matching transport zone. Based on the transport zone and transport lane information, it finds a ship-from site in the same way as described for sales orders and sales quotes.

For any customer, transport lanes comprising of customer-specific transport zones take priority over other transport lanes. For example, when the system finds a transport lane with a customer-specific transport zone, that transport lane is picked up by sourcing, and not the transport lane with a transport zone based on the customer’s country, region, or postal code.

The following table gives an overview of the possible results of ship-from determination for customer demand:
Ship-From Determination Results

<table>
<thead>
<tr>
<th>Sales Orders</th>
<th>Sales Quotes</th>
<th>Service Orders</th>
<th>Stock Transfer Orders</th>
<th>Project Stock Orders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transport lanes</td>
<td>1. Transport lanes</td>
<td>* Pick-up scenario:</td>
<td>Transport lanes required for scheduling</td>
<td>* Consumption at Site scenario:</td>
</tr>
<tr>
<td>leading to ship-from</td>
<td>leading to ship-from</td>
<td>Transport lanes leading to pick-up sites (using the transport zone of the service performer)</td>
<td>(using the ship-to site and ship-from site information)</td>
<td>Transport lanes leading to ship-from sites (or the ship-to location)</td>
</tr>
<tr>
<td>sites (or the ship-to</td>
<td>sites (or the ship-to</td>
<td>* Pre-delivery scenario:</td>
<td></td>
<td>* Pick-up scenario:</td>
</tr>
<tr>
<td>location)</td>
<td>location)</td>
<td>Transport lanes leading to ship-from sites (or the ship-to location)</td>
<td></td>
<td>Transport lanes leading to pick-up sites (using the transport zone of the person responsible)</td>
</tr>
<tr>
<td>2. Purchasing</td>
<td>2. Purchasing contracts</td>
<td></td>
<td></td>
<td>Pre-delivery scenario:</td>
</tr>
<tr>
<td>contracts</td>
<td>contracts</td>
<td></td>
<td></td>
<td>Transport lanes leading to ship-from sites (or the ship-to location)</td>
</tr>
<tr>
<td>3. List prices</td>
<td>3. List prices</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ship-From Determination for Complete Delivery Sales Orders or Service Orders

If the Complete Delivery checkbox is selected for a sales order or service order, the source of supply must be the same for all order items in the same delivery group. The system therefore determines all alternative sources of supply for each item of a delivery group to find the one source that is valid for all items. If one of the items cannot be delivered from the same source as the other items, a warning message is displayed on the order screen and the availability check cannot be performed.

If the source is changed manually for one item on order screen, ship-from determination is repeated for all items to verify that they can all be delivered from the selected source. If this is not possible, a warning message is displayed and the confirmations are canceled.

Manual Ship-From Selection

If you want to use a different ship-from site or supplier for a customer demand than the one determined by the system, you can select any of the alternative sources displayed in the Sales Order Logistics Details screen before you release the customer demand. You can access the screen from the Customer Demand view of the Outbound Logistics Control work center or the Supply Planning work center.

Examples for Ship-From Determination

The following examples illustrate how you create transport zones and transport lanes in the system to meet your company’s requirements and how the system finds the site from which to ship your goods to your customers in a sell-from stock scenario.
Example A

Your company has customers all over the United States and a smaller number of customers in Canada. You have two warehouses in the United States (Texas and Massachusetts) from which you ship goods and one ship-from site in Canada (British Columbia). For this reason, you have created the following transport zones for your company:

<table>
<thead>
<tr>
<th>Transport Zone</th>
<th>Regions</th>
<th>Postal Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Country</td>
<td>Country</td>
</tr>
<tr>
<td>A</td>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Canada</td>
<td></td>
</tr>
</tbody>
</table>

To be able to ship goods from your ship-from sites to your customers in the different transport zones, you have created the following transport lanes between your ship-from sites and transport zones:

<table>
<thead>
<tr>
<th>Transport Lane</th>
<th>Ship-From Site</th>
<th>Transport Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>Texas, US</td>
<td>A (United States, all regions)</td>
</tr>
<tr>
<td>002</td>
<td>Massachusetts, US</td>
<td>A (United States, all regions)</td>
</tr>
<tr>
<td>003</td>
<td>British Columbia, Canada</td>
<td>B (Canada)</td>
</tr>
</tbody>
</table>

If your company receives a sales order with the ship-to party address “New York NY 10001, United States”, the system finds transport zone A as it is valid for all ship-to addresses in the United States. Transport zone A, in turn, leads to transport lanes 001 and 002, that is, to your ship-from sites in Texas and Massachusetts. Since you have not prioritized any of the two lanes and none of them is more specific, the system selects any of the two. Note that if you do not want to leave it entirely up to the system which ship-from site is selected, you would need to prioritize one of the two transport lanes.

Example B

Your company’s customers in New York are becoming more important and you want to makes sure that they receive the products they order as quickly as possible. For this reason, you create transport zone C for the New York region and transport lane 004 between your ship-from site in Massachusetts and transport zone C. To ensure that this transport lane is always used to ship goods to your customers in New York, you prioritize this lane over the two lanes for all US regions.

The transport zones in your system are now as follows:

<table>
<thead>
<tr>
<th>Transport Zone</th>
<th>Regions</th>
<th>Postal Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Country</td>
<td>Country</td>
</tr>
<tr>
<td>A</td>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Canada</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>United States New York</td>
<td></td>
</tr>
</tbody>
</table>

If your company now receives another sales order with the ship-to party address “New York NY 10001, United States”, the system finds transport zone A since it is valid for all ship-to addresses in the United States and transport zone C since the ship-to address matches the region defined for this zone. Again, transport zone A leads to transport lanes 001 and 002 and transport zone C leads to transport lane 004. Since you prioritized transport lane 004, the system selects this transport lane. This is illustrated in the following table:
Example C

Several of your company’s new customers are located in Alaska. Since Alaska is so close to Canada, you want to be able to use your Canadian ship-from site to ship goods to these customers. Therefore, you add the US postal code range of Alaska to your existing transport zone B for Canada and prioritize transport lane 003 over the two lanes for all US regions.

The transport zones in your system are now as follows:

<table>
<thead>
<tr>
<th>Transport Zone</th>
<th>Regions</th>
<th>Postal Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Canada</td>
<td>United States</td>
</tr>
<tr>
<td>C</td>
<td>United States</td>
<td>New York</td>
</tr>
</tbody>
</table>

If your company receives a sales order with ship-to address “Anchorage, AK 99518, United States”, the system finds transport zone A since it is valid for all ship-to addresses in the United States and transport zone B since the postal code of the ship-to party address matches the US postal code range defined for this zone. Transport zone A leads to transport lanes 001 and 002 and transport zone B leads to transport lane 003, that is to your ship from site in Canada. Since you prioritized transport lane 003, the system selects this lane. This is illustrated in the following table:

<table>
<thead>
<tr>
<th>Transport Lane</th>
<th>Ship-From Site</th>
<th>Transport Zone</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>Texas, US</td>
<td>A (United States, all regions)</td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>Massachusetts, US</td>
<td>A (United States, all regions)</td>
<td></td>
</tr>
<tr>
<td>003</td>
<td>British Columbia, Canada</td>
<td>B (Canada)</td>
<td>1</td>
</tr>
</tbody>
</table>

Shipment Scheduling

Following ship-from determination, the customer demand must be scheduled. Starting from the requested delivery date in the sales order, sales quote, service order, or stock transfer order, backward scheduling determines the following dates:

- The requested shipment date, based on the shipment duration maintained in the transport lane. This is the date when the product must be shipped to guarantee on-time delivery.
- The requested execution start date, based on the goods issue processing time maintained in the product master data. This is the date when the products must be available from production or procurement so that the logistics process can begin.

If you only schedule the order and do not want to check the demand against your supply, the system sets the requested delivery date as the confirmed delivery date, that is the date when the products will be delivered to the customer. For more information, see Availability Checking Based on Scheduling. [page 125].
If you want to check the demand against your supply, a product availability check is performed after backward scheduling. It checks if the requested execution start date from backward scheduling can be confirmed. The check is based on the availability check scope determined in the product master data. For more information, see Availability Checks [page 16].

Note that if ship-from determination found a supplier from which the product is to be delivered (third-party order processing scenario), the system takes the supplier lead time (from the purchasing contract or from the product master if you do not have a purchasing contract with your supplier) into account to determine the order date. Since the system does not know the goods issue processing time, the requested execution start date is the same as the order date. Based on the confirmed execution start date, which is the same as the requested execution start date, the system determines the confirmed delivery date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

**Example for Shipment Scheduling**

Your company receives a sales order requesting 100 units of boilers to be delivered on October 10, 2009. After the sales order is entered into the system, ship-from determination finds from which of your sites the order will be delivered. Starting from the requested delivery date (October 10, 2009), the system runs backward scheduling to find the requested execution start date when the products have to be available from your production or purchasing department to deliver on time. The requested execution start date generated by backward scheduling is October 1, 2009.

Your company has chosen to use availability checking with availability check scope and so the system executes an availability check for the boilers. The availability check cannot confirm the requested execution start date (October 1, 2009) because there are not enough supplies and therefore creates a late confirmation for October 5, 2009 (confirmed execution start date).

The system then executes forward scheduling using the confirmed execution start date (October 5, 2009) as its starting point. Forward scheduling provides your planning department with the confirmed delivery date (October 14, 2009) when the boilers should arrive at the customer site.

The key figures determined by ship-from determination and scheduling are then used by your planning, production, and logistics departments to plan and execute their functions. Note that material planning uses the requested dates and outbound delivery logistics uses the confirmed dates.

**4.5.2.2 Availability Checking Based on Scheduling**

**Overview**

If you use availability checking based on scheduling, the system does not match the demands with your supplies but schedules the quote or order and confirms the requested quantity at the dates determined through scheduling. You may want to use this availability check method if you are not interested in exact availability check results and only need rough transport estimations since you know, for example, that all products requested are on stock.

You can access the availability check function from the following locations:

- **Sales Quote** view of the New Business work center
- **Sales Orders** view of the Sales Orders work center
- **Service Order Processing** view of the Service Orders work center
- **Customer Demand** view of the Outbound Logistics Control work center or the Supply Planning work center
- **Confirmation Update Runs** view of the Outbound Logistics Control work center or the Supply Planning work center
Prerequisites

Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

One of the following settings must have been made if you want to use availability checks based on scheduling:

- The product availability check has not been activated in the Business Configuration work center.
- The product availability check has been activated in the Business Configuration work center but you have not specified an availability check scope on the Availability Confirmation tab of the Materials view in the Product Development work center. For more information, see Availability Checking with Availability Check Scope [page 137].

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control.

In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

Process Flow

The process flow for checking the availability based on scheduling consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. **Ship-From Determination**
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For sales orders, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. **Backward Scheduling**
   Starting from the requested delivery date that the customer entered in the sales order, service order, project stock order, or sales quote and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.

This is illustrated in the following figure:
Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.

Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. **Confirmation Determination**
   When checking the availability based on scheduling, the system sets the requested execution start date as the confirmed execution start date and confirms the requested quantity at that date.

4. **Forward Scheduling**
   Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.
   This is illustrated in the following figure:

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks [page 16].

**See Also**

Sales Orders Quick Guide
4.5.2.3 Complete Delivery Orders

Overview

You can use complete delivery orders to ensure that the complete quantity of all material items of a sales order or stock transfer order, or the complete quantity of all spare part items of a service order is shipped together on the same date and in a single delivery. This avoids partial deliveries, which often result in a product that is useless for your customer. In addition, complete delivery orders help you save logistics costs.

The complete delivery requirements must be adhered to in planning but the system offers enough flexibility for special situations. In execution, the process is not as strict and the request for complete delivery may be overruled.

You can access this function from the following locations:

- Sales Orders view of the Sales Orders work center
- Service Order Processing view of the Service Orders work center
- New Stock Transfer Order common task of the Outbound Logistics Control or the Supply Planning work center

Prerequisites

The Complete Delivery checkbox has been selected in the sales order or the service order or the Complete Delivery Order checkbox has been selected in the stock transfer order. For more information, see Sales Orders Quick Guide, Quick Guide for Service Order Processing, or Customer Demand Quick Guide [page 107].

Order Processing

Delivery Rules and Delivery Groups

When you create a sales order, service order, or stock transfer order for complete delivery, you want all items to be shipped together in one outbound delivery. In the standard process, all items therefore have the same requested date, ship-to address, and freight forwarder, which you enter in the order header. In addition, the system assigns the same delivery rule, which by default is Single-Delivery - Full Quantity to all items and treats the entire order as one delivery group.

If you change the default delivery rule to any of the other “single delivery” rules for an item, it is still included in the same delivery group. If, however, you select Multiple Deliveries for an item, this item is still included in the complete delivery order but is not assigned to any delivery group. You may want to do this, to take an item that cannot be confirmed on time out of the order and still be able to create a delivery proposal for the other items.

If you change the requested date, ship-to address, or freight forwarder for an order item, the system assigns this item to a different delivery group. This means that you can have a complete delivery order containing several delivery groups.
You create a sales order for complete delivery with a requested date of October 20 and ABC100 as the ship-to party. The three line items 0010, 0020, and 0030 all inherit this information. You now decide that you do not need item 0020 on October 20 but 5 days later and change the requested date for this item to October 25. As a result, items 0010 and 0030 remain in one delivery group and item 0020 is assigned to another delivery group within the complete delivery order.

Note that the spare part items in a service order that the service performer must pick up at the warehouse are assigned to a different delivery group than the spare part items that are pre-shipped to the customer.

**Ship-From Determination and Availability Check**

Depending on your system settings, you carry out an availability check for the sales order either immediately when you enter an item or by clicking *Check Availability*. The system first tries to determine a common source of supply for all items of a delivery group in a complete delivery order. If one of the items cannot be delivered from the same source as the others, a warning message is displayed and the availability check cannot be performed. For more information, see *Ship-From Determination and Shipment Scheduling for Customer Demand* [page 118].

When a common source of supply is found, the system aligns the confirmed delivery dates of all the items of a delivery group and determines a common confirmed delivery date for these items. Based on this common confirmed date, the availability status is determined for each item. For more information, see *Availability Checks for Complete Delivery Orders* [page 130].

Note that for sales orders that are to be fulfilled externally (third-party order processing scenario), the complete delivery order information is not passed on to purchasing and therefore it is also not passed on to the external supplier.

If a sales order contains a sales kit, the system determines the source of supply for the sales kit based on the sources of supply for the sales kit items. The system also checks the availability of the sales kit based on the availability of the sales kit items.

You can display the *Simulated Confirmation Schedule* hidden column in the sales order to see earlier possible delivery dates calculated for each individual order item and, if necessary, remove a late item from the delivery group by assigning the *Multiple Deliveries* delivery rule.

**Supply Chain Planning and Control**

When you release the sales order or service order, or save the stock transfer order, a customer demand is created that needs to be released to execution. You can release a customer demand as follows:

- Manually in the *Customer Demand* view of the *Outbound Logistics Control* work center or the *Supply Planning* work center
- Manually in the *Delivery Due List* view of the *Outbound Logistics Control* work center
- Automatically in the *Release Due Deliveries Runs* view of the *Outbound Logistics Control* work center

Releasing a line item of a delivery group in a complete delivery order is only possible if all the items of the delivery group can be released. If one item of the delivery group could not be confirmed, you cannot release any item of the delivery group. At the same time, all other items of the delivery group are released when you release one item of a delivery group.

To get an overview of your complete delivery orders, you can use the *Complete Delivery Orders* show option in the *Customer Demand* view or the *Delivery Due List* view.

To get an overview of the availability statuses of the orders for which you are responsible, you can group the order line items in the *Customer Demand* view by delivery group. Note that the delivery group inherits the status from the item with the worst availability situation. This means, for example, that if the status of one item of a complete delivery order is red, the availability status of the entire delivery group is *Not Complete*. 
Note that on the Sales Order Logistics Details screen or the Service Order Logistics Details screen, you can temporarily switch off complete delivery. You can see how the confirmed dates and quantities of the individual items of an order would look if their confirmed delivery dates were not aligned and perform actions on item level without taking the other items of a delivery group into account. For more information, see Temporarily Switch Off Complete Delivery in the Tasks section of the Customer Demand Quick Guide [page 107].

Outbound Delivery Processing

When the items of a delivery group are released, a delivery proposal is created in the Delivery Proposals subview of the Outbound Logistics work center. All confirmed schedule lines of a delivery group are contained in the same delivery proposal.

If a schedule line of a delivery proposal is rejected in the Delivery Proposals subview of the Outbound Logistics work center, only the item you selected is rejected. The other items of the delivery group are not rejected automatically. Rejected items receive the release status Not Released in the Customer Demand view, where they can be reconfirmed within the same delivery group and released again. Alternatively, they can be changed in the sales order so that they are removed from the original delivery group.

Depending on whether you work without tasks or with tasks, the warehouse manager either posts a goods issue directly or creates a warehouse request for a complete delivery order.

When the warehouse manager posts a goods issue for the items of a complete delivery order, the request for complete delivery should not be violated but if necessary, partial quantities can be confirmed just as in the standard process.

When the warehouse manager creates a warehouse request for the items of a complete delivery order, all items belonging to the same delivery group are transferred to one warehouse request. If possible, the request for complete delivery should not be violated. However, you may still confirm partial quantities or split a delivery because an item is not available or because you need two trucks to ship all order items.

When the outbound delivery is released, the same follow-on activities are performed as in the standard process. For more information, see:

- Standard Outbound Delivery Processing for Sales Orders – Standard Shipping
- Intracompany Stock Transfer Processing

See Also

Sales Order Processing

4.5.2.4 Availability Checks for Complete Delivery Orders

Overview

Availability checks for complete delivery orders enable you, as a sales representative or supply planner, to check and align the availability of the items in a complete delivery order. In complete delivery orders, the system assigns all order items that are to be shipped together to one delivery group. In the straightforward complete delivery process, the order therefore only contains one delivery group. The availability check tries to find a common source of supply and aligns the confirmed dates of all items in a delivery group. This helps you ensure that the complete quantity of all material items of a sales order or stock transfer order, or the complete quantity of all spare part items of a service order is shipped on the same date and in a single delivery. Note that quantities are not aligned.
When you enter a sales kit as a line item for a sales order for complete delivery, the system checks the availability of the sales kit based on the availability of the sales kit items.

The availability check for complete delivery orders is available for sales orders, service orders, and stock transfer orders. You can access the availability check function from the following locations:

- **Sales Orders** view of the Sales Orders work center
- **Service Order Processing** view of the Service Orders work center
- **Customer Demand** view of the Outbound Logistics Control work center or the Supply Planning work center
- **Confirmation Update Runs** view of the Outbound Logistics Control work center or the Supply Planning work center

### Carrying Out Availability Checks

For complete delivery orders, you can use the product availability check or check the availability based on scheduling or with replenishment lead time as you would for other sales orders, service orders, or stock transfer orders. For more information, see Availability Checks [page 16].

Irrespective of the availability check method you choose, the system first carries out a ship-from determination for a customer demand to determine possible sources of supply. For complete delivery orders, this means that the system not only finds sources of supply for each item but also determines a common source for all the items of a delivery group. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

Note that for sales orders that are to be fulfilled externally (third-party order processing scenario), the complete delivery order information is not passed on to purchasing and therefore it is also not passed on to the external supplier.

You can check the availability, for example, before releasing the order to logistics control and before releasing the customer demand to logistics execution.

### Availability Checks in the Sales Order, Service Order, or Project Transfer Order

When you enter a line item for a sales order or service order for complete delivery, the system determines the source of supply for this item and checks the availability depending on whether the source that was found is internal or external. When you enter a second line item with the same requested date, ship-to address, and freight forwarder, the system tries to find a common source of supply for the two items and aligns the confirmation dates so that both items of the delivery group have a common confirmed delivery date. The item with the latest confirmation date determines the confirmation date for all items of the delivery group.

You create a complete delivery sales order with October 17 as the requested date. The availability check determines that item 10 is available on that date and therefore the item receives a green ATP status. You then enter item 20. The availability check determines that this item is available on October 19, that is, later than requested. Since the system now aligns the confirmed delivery dates, both items receive a yellow traffic light and the confirmed delivery date for both items is October 19.

Note that the following items are not considered when the confirmed delivery dates in a delivery group are aligned:

- Order items of a delivery group that cannot be confirmed at all (confirmation with zero quantity)
  Since there is no date for which this “zero confirmation” can be made, these items are not taken into account for the date alignment. They do, however, define the availability status of the delivery group and are the reason why none of the items of the delivery group can be released to logistics execution.
- Order items of a delivery group that were canceled
  Canceled items remain assigned to the delivery group but are ignored for the date alignment.
Order items of a delivery group that are released or partially released
If execution rejects individual items of a delivery group or if new items are added to a delivery group after the order has been released, items in the delivery group that are already released or partially released are ignored for the date alignment for the other items.

Changing the Result of the Availability Check in the Sales Order or Service Order
If you are not satisfied with the result of the availability check, you can change it in the sales order or service order before releasing the order. Note that you can display the Simulated Confirmation Schedule hidden column to help you identify late items as it simulates the earliest delivery date and quantity for each item to show earlier possible delivery dates.
To change the result of the availability check, you can do one of the following, for example:

- Remove an item that is late
  In this case, the availability is checked again for all items in the order.

- Change the requested date for an item that is late
  The item is assigned to a different delivery group. The availability is now checked again for the existing delivery group and for the new one.

- Assign a different source of supply by clicking Assign Source of Supply
  Since all items of a complete delivery order must have the same source of supply, ship-from determination is repeated for all items to verify that they can all be delivered from the selected source of supply. If this is not possible, a warning message is displayed and the confirmations are removed.

- Change the default delivery rule
  The default delivery rule for sales order or service orders for complete delivery is Single Delivery - Full Quantity. This means that the availability check tries to find a date on which the full quantity of all items in a delivery group can be confirmed. Changing the default delivery rule may solve your problem.

You create another complete delivery sales order with October 19 as the requested date. You want to order two pieces of item 10. Since both pieces are available on the requested day, the item receives a green ATP status. You then enter item 20, of which you want to order six pieces. The availability check determines that the four pieces would be available on the requested date but all six pieces are not available until October 25, that is, later than requested. For this reason, both items now receive a yellow ATP status. Since you only want to make sure that as much as possible is delivered on the requested date, you can change the default delivery rule to Single On-Time Delivery, which means that the requested delivery date has to be met, but the delivery may comprise less than the requested quantity. The item remains in the same delivery group and the availability is checked again for this item. Now four pieces can be confirmed on the requested date. The confirmed delivery dates of both items are aligned and both receive a green ATP status.

- Remove an item that is late from the delivery group by assigning the Multiple Deliveries delivery rule to this item
  You can now create a delivery proposal for the other items and no longer need to consider the late item. Note that in this case, the availability is checked again for all items in the order.

Availability Checks in the Customer Demand View
Before releasing the customer demand to logistics execution, you may want an overview of the availability statuses of your delivery groups. You can do this by grouping the order line items by delivery group in the Customer Demand view.
The following availability statuses exist on delivery group level:

- Complete
  The required quantity is fully confirmed on time for all items of the delivery group.
- **Complete - Late or Partial**
  The required quantity is partially confirmed or confirmed on a later date than requested for at least one of the items of the delivery group.

- **Not Complete**
  The required quantity cannot be confirmed at all (confirmation with zero quantity) for at least one of the items of the delivery group.

- **Confirmation Pending**
  The availability check was not performed, for example, if no common source of supply could be determined in the sales order.

If there are availability issues, you may want to check the availability again before releasing the customer demand. You can do this in the Customer Demand view or you can schedule a confirmation update run, provided that you use the product availability check.

Note that when you check the availability for an item that is part of a complete delivery order in the Customer Demand view, the system only checks the availability for this item but not for all other items of the complete delivery order. This means that the confirmed dates for the other items stay the same. Since a date alignment takes place for items of complete delivery orders, the availability situation for the whole group may stay as before.

You now check the availability again for item 20 of your first sales order in the Customer Demand view since you know that a goods receipt has taken place in the meantime. The confirmed delivery date for item 20 is now October 17 but since it is part of a delivery group, the confirmed dates are aligned and October 19 remains as the confirmed delivery date for both items of the group. If you want October 17 as the confirmed delivery date for the entire group, you must check the availability for all items of the group. Note that again this may not lead to the desired result as the availability situation for item 10 may have deteriorated in the meantime and it is always the item with the latest confirmed delivery date that determines the confirmation date for all items of the delivery group.

**Changing the Result of the Availability Check in the Customer Demand View**

If you want to change the result of the availability check manually, you can use the following functions:

- **Force a confirmation.**
  Note that forcing a confirmation in the Customer Demand view should only be used to solve quantity issues, for example, to overwrite a “zero confirmation”. If you want to force the confirmation to improve the confirmed delivery date, you must first switch off complete delivery temporarily (see below).

- **Cancel a confirmation.**
  Note that the system only cancels the confirmation of the item you selected. The confirmations of all other items of the delivery group remain as before.

**Availability Checks on the Sales Order Logistics Details Screen or Service Order Logistics Details Screen**

On the Sales Order Logistics Details screen or the Service Order Logistics Details screen, you can check the availability again, force a confirmation, or cancel a confirmation in the same way as in the Customer Demand view.

In addition, you can temporarily switch off complete delivery. The system now checks the availability again for the individual order items without taking the other items of the delivery group into account. In this way, you can see the confirmation of each and every item individually, for example, that only one item of a delivery group has a late delivery and this is why the entire delivery group has this late delivery status. In this case, you could, for example, force the confirmation of this one, late item. When you switch complete delivery on again, the system realigns the confirmed delivery dates of all items in the delivery group. Note that you must switch complete delivery back on to be able to save your changes.
You create another complete delivery sales order with October 20 as the requested date. Item 10 is confirmed on October 25, item 20 is confirmed on November 10, and item 30 is confirmed on October 21. Since all items belong to the same delivery group, the availability status for this group is Complete - Late or Partial and the confirmed delivery date is November 10.

When you temporarily switch off complete delivery, you see that item 20 is causing the problem because the confirmation date is much later than the requested date. You therefore force the confirmation of item 20 to the requested date (October 20) after you have checked that the item will be on stock then. When you switch complete delivery back on, the system realigns the confirmation dates and sets October 25 as the confirmed delivery date for all items of the group. Since the situation has improved considerably, you save your changes.

You must also first switch off complete delivery temporarily if you want to change the source of supply and assign any of the alternative sources to your sales order or service order. Note that the same source of supply must be assigned to all items of a delivery group. Otherwise, the system will not let you save your changes.

**Confirmation Update Runs for Complete Delivery Orders**

When you create a confirmation update run, you can select the sorting parameter *Items of Complete Delivery Orders First* to specify that these items are to be given priority over other items when it comes to reorganizing the confirmations. Note that the run also aligns confirmation dates for items of delivery groups in complete delivery orders. For more information, see [Quick Guide for Confirmation Update Runs](#)[page 160].

**Result of the Availability Check**

Confirmations are the result of availability checks. They are required for the follow-on processes in logistics execution. By ensuring that the dates of all items in a delivery group of a complete delivery order are aligned and a common source of supply is found, you make sure that all items are grouped in the same delivery proposal and eventually in one outbound delivery.

**See Also**

[Complete Delivery Orders](#)[page 128]

4.5.2.5 Availability Checking with Replenishment Lead Time

**Overview**

If you use availability checking with replenishment lead time, you specify the maximum length of time required for the in-house production or external procurement of a product. In this case, the system does not match the demand with your supply but confirms the requested quantity at the end of the replenishment lead time you specified. The system determines the end of the replenishment lead time by adding the replenishment lead time from the product master to the current date, taking into account the working day calendar of the ship-from location. When the availability is checked again for the same order a few days later, the system uses the order entry date as the current date and not the “real” current date. In this way, the end of the replenishment lead time stays the same and your confirmation date remains stable.

You may want to use this availability check method in make-to-order scenarios where you do not have any supply available.

You can access the availability check function from the following locations:
- **Sales Quote** view of the **New Business** work center
- **Sales Orders** view of the **Sales Orders** work center
- **Service Order Processing** view of the **Service Orders** work center
- **Customer Demand** view of the **Outbound Logistics Control** work center or the **Supply Planning** work center
- **Confirmation Update Runs** view of the **Outbound Logistics Control** work center or the **Supply Planning** work center

### Prerequisites

#### Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

One of the following settings must have been made if you want to use availability checks with replenishment lead time:

- The product availability check has **not** been activated in the **Business Configuration** work center and you have entered a replenishment lead time on the **Availability Confirmation** tab of the **Materials** view in the **Product Development** work center.
- The product availability check has been activated in the **Business Configuration** work center but you have only entered a replenishment lead time (without an availability check scope and availability check horizon) on the **Availability Confirmation** tab of the **Materials** view in the **Product Development** work center.

The product availability check is activated in your solution configuration. To find this business option, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Edit Project Scope**. In the Scoping step of the project, ensure that **Demand Management and Order Confirmation** is selected within **Supply Chain Planning and Control**. In the **Questions** step, expand the **Supply Chain Planning and Control** scoping element and select **Demand Management and Order Confirmation**. Select **Product Availability Check** and answer the questions related to product availability checks.

### Process Flow

The process flow for checking the availability with replenishment lead time consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. **Ship-From Determination**
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For sales orders, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. **Backward Scheduling**
   Starting from the requested delivery date that the customer entered in the sales order, service order, stock transfer order, project stock order, or sales quote and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the requested execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.

   Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does
not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.

Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. Confirmation Determination

When checking the availability with replenishment lead time, the system always confirms the requested quantity on the confirmed execution start date. How the system determines the confirmed execution start date is illustrated in the following graphics:

- If the requested execution start date is within the replenishment lead time, the system confirms the requested quantity at the end of the replenishment lead time.

- If the requested execution start date is beyond the replenishment lead time, the system confirms the requested quantity at the requested execution start date.

- If the requested execution start date and the end of the replenishment lead time are in the past, the system confirms the requested quantity on the current date.

4. Forward Scheduling
Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks [page 16].

See Also

Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time [page 144]
Sales Orders Quick Guide

4.5.2.6 Availability Checking with Availability Check Scope

Overview

If you use availability checking with availability check scope, the system checks the customer demand against the most up-to-date planning data, that is, the available stock and the product supply situation. This is to determine which products can be delivered to your customer in which quantities and at what times.

You can access the availability check function from the following locations:

- **Sales Quote** view of the New Business work center
- **Sales Orders** view of the Sales Orders work center
- **Service Order Processing** view of the Service Orders work center
- **Customer Demand** view of the Outbound Logistics Control work center or the Supply Planning work center
- **Confirmation Update Runs** view of the Outbound Logistics Control work center or the Supply Planning work center

By defining the availability check scope, you tell the system which types of supply are included in the check. If you do not specify an availability check scope, the system does not match demand and supply but schedules the quote or order. For more information, see Availability Checking Based on Scheduling [page 125].

You can choose from the following options for the availability check scope:

- **Stock**
  The available stock is considered as available supply for the product availability check.

- **Stock and all receipts**
  The available stock and all receipts from both purchasing and production are considered as available supply for the product availability check. This includes purchase proposals, firm purchase proposals, purchase requests, purchase orders, acknowledged purchase orders, production proposals, firm production proposals, production requests, inbound deliveries advised, and inbound deliveries received.

- **Stock and released receipts**
  The available stock and released receipts from both purchasing and production are considered as available supply for the product availability check. This includes purchase orders, acknowledged purchase orders, production requests, inbound deliveries advised, and inbound deliveries received.

- **Supply except unfirm receipts**
  The available stock, released receipts, and firm receipts from both purchasing and production are considered as available supply for the product availability check. This includes firm purchase proposals, purchase...
requests, purchase orders, acknowledged purchase orders, firm production proposals, production requests, inbound deliveries advised, and inbound deliveries received.

Prerequisites

Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

The product availability check has been activated in the Business Configuration work center and you have defined which availability check scopes you want to use in your company in general.

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control.

In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

Master Data Settings

You must repeat the settings you make in the Materials view of the Product Development work center for each planning area.

- The product for which you want to check availability has been created as a planning material on the Planning tab.
- The availability check scope has been set on the Availability Confirmation tab. This determines which types of supply the system includes in the check for the product.

Process Flow

The process flow for checking the availability with an availability check scope describes how the system uses the information about the product, quantity, ship-to location, and requested delivery date provided in the quote or order to match the demand with the types of supply specified in the availability check scope. It consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. Ship-From Determination
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For a sales order, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. Backward Scheduling
   Starting from the requested delivery date that the customer entered in the sales order, service order, stock transfer order, project stock order, or sales quote and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the requested execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.
   Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does
not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time. Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. **Confirmation Determination**

Starting from the requested execution start date, the system checks if the customer demand can be covered by the supply against which you decided to check (that is, the availability check scope you have entered). During the check, the system takes receipts in the past and all previously confirmed quantities into account. Note that this also includes temporarily confirmed quantities from orders that have not been saved. This means that new orders can only be confirmed when the total receipts exceed the total confirmed quantities.

Note the following general rules:

- If the requested execution start date cannot be confirmed on time, the system confirms at a later point in time according to the supply and demand situation.
- If the requested quantity cannot be confirmed by the requested execution start date, the system issues partial confirmations according to the supply and demand situation. If no quantity can be confirmed at all, the system issues a confirmation with zero quantity.
- If the confirmed execution start date determined by the system is earlier than the requested delivery date, the system confirms the requested delivery date (no early confirmation).
- If the confirmed execution start date determined by the system is in the past, the system sets it to the current date (no confirmation in the past).

**Example**

A customer wants 20 pieces on the requested delivery date. The receipt of 100 pieces is completely reduced by a different customer demand of 100 pieces. An additional receipt of 50 pieces is partly reduced by a different customer demand of 40 pieces. A further receipt of 6 pieces can still not fully cover the demand. In this case, the product availability check issues two confirmations: first, a partial confirmation of 10 pieces and then a second, late confirmation of 6 pieces.

The following graphic is used to illustrate this example:

4. **Forward Scheduling**

Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.
The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks  [page 16].

If the customer demand comes from a sales order, service order, stock transfer order, or project stock order, the system confirms the requested quantity temporarily and turns the temporary confirmation into a real confirmation once the sales order, service order, stock transfer order, or project stock order is saved. If the order is deleted, the temporarily reserved quantity is unlocked and can be used for other orders.

See Also
Sales Orders Quick Guide

4.5.2.7 Availability Checking with Availability Check Scope and Availability Check Horizon

Overview

If you use availability checking with availability check scope and availability check horizon, the system checks the customer demand against the supply within a certain period of time, the check horizon, and determines which products can be delivered to your customer in which quantities and at what times.

You can access the availability check function from the following locations:

- Sales Quote view of the New Business work center
- Sales Orders view of the Sales Orders work center
- Service Order Processing view of the Service Orders work center
- Customer Demand view of the Outbound Logistics Control work center or the Supply Planning work center
- Confirmation Update Runs view of the Outbound Logistics Control work center or the Supply Planning work center

By defining the availability check scope, you tell the system which types of supply are included in the check. You can choose from the following options for the availability check scope:

- Stock
- Stock and all receipts
- Stock and released receipts
- Supply except unfirm receipts

For more information, see Availability Checking with Availability Check Scope  [page 137].

In addition, you can enter an availability check horizon for all of the four check scopes to specify the number of days (today plus a certain number of days) within which the system checks the demand against the supply, taking the working day calendar of the ship-from location into account.

When defining an availability check horizon, you should bear in mind the following:

- The period you choose for your check horizon should match the check scope you selected. If you decide to check against more uncertain types of supply, such as production proposals, your check horizon should be considerably longer than when checking against stable types of supply, such as available stock.
- For products you manufacture in-house, the check horizon should cover your cumulative manufacturing lead time. For purchased products, the horizon should be greater than or equal to the purchasing lead time.
If you use a check horizon, you should carry out material planning in regular intervals, ideally on a daily basis since the confirmed quantities are then compared with actual receipts. This is necessary because orders for which there are no receipts within the check horizon are confirmed at the end of the check horizon. If the orders are checked again the following day and if material planning still has not determined receipts for them, the orders get a new confirmation date - the new end date of the check horizon.

**Prerequisites**

**Configuration Settings**

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

The product availability check has been activated in the Business Configuration work center and you have defined which availability check scopes you want to use in your company in general.

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control.

In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

**Master Data Settings**

You must repeat the settings that you make in the Materials view of the Product Development work center for each planning area.

- The product for which you want to check availability has been created as a planning material on the Planning tab.
- The availability check scope has been set on the Availability Confirmation tab. This determines which types of supply the system includes in the check for the product.
- The availability check horizon has been entered on the Availability Confirmation tab. This determines the number of days within which the system checks the demand against the supply.

**Process Flow**

The process flow for checking the availability with an availability check scope and horizon describes how the system uses the information about the product, quantity, ship-to location, and requested delivery date provided in the quote or order to match the demand with the types of supply specified in the availability check scope within the check horizon you specified. It consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. **Ship-From Determination**
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For sales orders, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. **Backward Scheduling**
Starting from the requested delivery date that the customer entered in the sales order, service order, stock transfer order, project stock order, or sales quote and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the requested execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.

Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.

Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. **Confirmation Determination**

Starting from the requested execution start date, the system checks if the customer demand can be covered by the supply against which you decided to check (that is, the availability check scope you have entered) within the check horizon specified. During the check within the check horizon, the system takes receipts in the past and all previously confirmed quantities into account. Note that this also includes temporarily confirmed quantities from orders that have not been saved. This means that new orders can only be confirmed when the total receipts exceed the total confirmed quantities. Remaining quantities are confirmed at the end of the check horizon. The following graphics are used to illustrate how the system finds the confirmed execution start date:

- If the requested execution start date is within the check horizon and there are enough supplies to cover the full demand in one delivery, the system confirms the requested execution start date.

![Diagram 1](image1)

- If the requested execution start date is within the check horizon and there are not enough supplies to cover the full demand in one delivery, the system issues partial confirmations according to the supply and demand situation.

![Diagram 2](image2)

- If the requested execution start date is within the check horizon and there are no supplies to cover the demand, the system confirms the total requested quantity at the end of the check horizon.

![Diagram 3](image3)
If the availability is checked again a few days later and the requested execution start date is still within the check horizon and there are still no supplies to cover the demand, the system confirms the requested quantity at the end of the check horizon, which has now moved accordingly. To obtain a stable confirmation date, you need to use a replenishment lead time in addition to the check horizon. For more information, see Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time (page 144).

* If the requested execution start date is beyond the check horizon, the system confirms the requested quantity on the requested execution start date.

**Example**
A customer wants 20 pieces on the requested delivery date. The receipt of 100 pieces is completely reduced by a different customer demand of 100 pieces. An additional receipt of 50 pieces is partly reduced by a different customer demand of 40 pieces. A further receipt of 6 pieces can still not fully cover the demand. In this case, the product availability check confirms three partial deliveries of 10 pieces, 6 pieces, and then the remaining 4 pieces at the end of the check horizon.

The following graphic is used to illustrate this example:
4. **Forward Scheduling**

Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks. [page 16].

If the customer demand comes from a sales order, service order, stock transfer order, or project stock order, the system confirms the requested quantity temporarily and turns the temporary confirmation into a real confirmation once the sales order, service order, stock transfer order, or project stock order is saved. If the order is deleted, the temporarily reserved quantity is unlocked and can be used for other orders.

**See Also**

Sales Orders Quick Guide

## 4.5.2.8 Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time

### Overview

If you use availability checking with availability check scope, availability check horizon, and replenishment lead time, the system checks the customer demand against the supply within a certain period of time and determines which products can be delivered to your customer in which quantities and at what times.

You can access the availability check function from the following locations:

- **Sales Quote** view of the New Business work center
- **Sales Orders** view of the Sales Orders work center
- **Service Order Processing** view of the Service Orders work center
- **Customer Demand** view of the Outbound Logistics Control work center or the Supply Planning work center
- **Confirmation Update Runs** view of the Outbound Logistics Control work center or the Supply Planning work center
By defining the availability check scope, you tell the system which types of supply are included in the check. For more information, see Availability Checking with Availability Check Scope [page 137].

By defining an availability check horizon, you specify the number of days (today plus a certain number of days) within which the system checks the demand against the supply, taking the working day calendar of the ship-from location into account. For more information, see Availability Checking with Availability Check Scope and Availability Check Horizon [page 140].

By defining a replenishment lead time, you specify the maximum length of time required for the in-house production or external procurement of a product.

The benefit of entering a replenishment lead time is that you obtain a confirmation date that does not move, as opposed to the confirmation date of the check horizon. The reason for this is that the system determines the end of the replenishment lead time by adding the replenishment lead time from the product master to the current date, taking into account the working day calendar of the ship-from location. When the product availability is checked again for the same order a few days later, the system uses the order entry date as the current date and not the “real” current date. In this way, the end of the replenishment lead time stays the same and your confirmation date remains stable.

The following two graphics are used to illustrate this:

- The requested delivery date is between the check horizon and the replenishment lead time. Therefore, the system confirms the requested quantity at the end of the replenishment lead time.

- If the availability is checked again a few days later and the requested delivery date is still between the check horizon and the replenishment lead time, the system confirms the requested quantity at the end of the replenishment lead time, that is, on the same date as during the first check.

If you enter the replenishment lead time without a check scope and check horizon, the system does not perform a product availability check but confirms the requested quantity at the end of the replenishment lead time. For more information, see Availability Checking with Replenishment Lead Time [page 134].
Prerequisites

Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

The product availability check has been activated in the Business Configuration work center and you have defined which availability check scopes you want to use in your company in general.

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control.

In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

Master Data Settings

You must repeat the settings you make in the Materials view of the Product Development work center for each planning area.

- The product for which you want to check availability has been created as a planning material on the Planning tab.
- The availability check scope has been set on the Availability Confirmation tab. This determines which types of supply the system includes in the check for the product.
- The availability check horizon has been entered on the Availability Confirmation tab. This determines the number of days within which the system checks the demand against the supply.
- The replenishment lead time has been entered on the Availability Confirmation tab. The replenishment lead time must be equal to or greater than the check horizon.

Process Flow

The process flow for checking the availability with an availability check scope, horizon, and replenishment lead time describes how the system uses the information about the product, quantity, ship-to location, and requested delivery date provided in the quote or order to match the demand with the types of supply specified in the availability check scope within the check horizon you specified. Beyond the check horizon the system creates or updates the confirmation based on the replenishment lead time you specified. The process consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. **Ship-From Determination**
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For sales orders, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. **Backward Scheduling**
   Starting from the requested delivery date that the customer entered in the sales order, service order, stock transfer order, project stock order, or sales quote and taking into account the shipping duration of the
transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the requested execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.

Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.

Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. **Confirmation Determination**

Starting from the requested execution start date, the system checks if the customer demand can be covered by the supply against which you decided to check, taking the availability check horizon and replenishment lead time into account. During the check within the check horizon, the system takes receipts in the past and all previously confirmed quantities into account. Note that this also includes temporarily confirmed quantities from orders that have not been saved. This means that new orders can only be confirmed when the total receipts exceed the total confirmed quantities. Remaining quantities are confirmed at the end of the replenishment lead time. The following graphics are used to illustrate how the system finds the confirmed execution start date:

- If the requested execution start date is beyond the replenishment lead time, the system confirms the requested quantity on the requested execution start date.

![Diagram](image1)

- If the requested execution start date is between the check horizon and the replenishment lead time, the system confirms the requested quantity at the end of the replenishment lead time.

![Diagram](image2)

- If the requested execution start date is within the timeframe between today and the check horizon, the system creates quantity confirmations between today and the end of the check horizon according to the current demand and supply situation. The remaining quantity that could not be confirmed is confirmed at the end of the replenishment lead time.

![Diagram](image3)
4. Forward Scheduling
Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks [page 16].

If the customer demand comes from a sales order, service order, stock transfer order, project stock order, the system confirms the requested quantity temporarily and turns the temporary confirmation into a real confirmation once the sales order, service order, stock transfer order, or project stock order is saved. If the order is deleted, the temporarily confirmed quantity is unlocked and can be used for other orders.

See Also
Sales Orders Quick Guide

4.5.2.9 Confirmation Update Run

Overview
You can access the confirmation update run function in the Outbound Logistics Control work center or in the Supply Planning work center. The confirmation update run is a variant of the product availability check that you can use to check the availability of a large number of different demand categories. This enables you to easily carry out the following, for example:

- Adjust your confirmations to changes in the product supply situation resulting from material planning
- Adjust your confirmations to changes in the material master, such as a different replenishment lead time for a product
- Give priority to a more recent sales order from a valuable customer

The confirmation update run reorganizes the confirmations to reallocate the available quantity to the customer demand selected for the update run. In the first step, the confirmations for each customer demand selected are reset, and in the second step, each customer demand selected is confirmed again based on the product availability check settings made for the products.

The product availability check uses the “first come, first served” principle, which means that the available quantity is allocated to the customer demand that is checked first. The confirmation update run enables you to define the sequence in which you want to check your customer demand and allocate available quantity.

Control Parameters, Sorting Parameters, and Selection Criteria
If you select the Update Source of Supply checkbox in the Control Parameters section, ship-from determination is performed again during the availability check for each item. As a result, new sources of supply may be assigned provided that the master data was changed. Note that the system may also change sources of supply that you selected manually on the Order Logistics Details screen in the Customer Demand view of the Outbound Logistics Control work center or Supply Planning work center.

Sorting parameters affect the sequence in which the customer demand is checked and confirmed. You can choose and combine the following parameters:

- Confirmed execution start date
- Delivery priority
- Document creation date
- Items for complete delivery first
- Requested delivery date

For example, you can define that all order items are first sorted in descending order according to delivery priority, which is the default sorting direction for the delivery priority, and that those with the same delivery priority are then sorted in ascending order according to the order creation date.

The selection criteria you enter specify for which customer demand the availability is checked by the confirmation update run. You can choose and combine the following criteria, for example:

- Product
- Planning area
- Product category
- Order
- Account

For example, you can define that you want to check any customer demand for products A and B, or only sales orders for product C that were ordered by a specific customer.

When entering the selection criteria for your confirmation update run, you can specify that the run checks the availability for a specific product only if material planning resulted in a changed planning situation or if the product master data was changed. If nothing has changed for a product since the last check, it is not included in the products to be checked during the next run. To specify this, you must select the Products with Availability-Relevant Changes Only checkbox on the Net Change Run tab.

**Prerequisites**

**Configuration Settings**

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

The confirmation update run is activated in your solution configuration. To find this function, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Outbound Logistics is selected within Manufacturing, Warehousing, and Logistics.
Other Settings

- You have made the settings required for carrying out a product availability check. For more information, see:
  - Availability Checking with Availability Check Scope  [page 137]
  - Availability Checking with Availability Check Scope and Availability Check Horizon  [page 140]
  - Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time  [page 144]
- You have created, activated, and scheduled a confirmation update run. For more information, see Quick Guide for Confirmation Update Run  [page 160].

Since the run usually takes a large number of objects into account, we recommend that you schedule the run at a time when there is not much activity in the system, for example, overnight.

Process Flow

1. The system selects the customer demand to be checked according to the selection criteria you entered. Customer demand that was manually confirmed in a forced confirmation as well as demand created in a third-party order processing scenario is not included in the confirmation update run.
2. The system sorts the customer demand selected according to the sorting parameters you entered.
3. The system first resets the actual confirmations for each customer demand selected and then reorganizes the confirmations according to the sorting parameters you specified and according to the product availability check settings you made for the product.
4. You can display the results of the update run in the application log. The Settings tab gives you information about the objects that were selected in the run and for which confirmations may have changed. Note that you can still change the confirmations manually.

If you do not want to use a confirmation run anymore, you can set it to obsolete. However, if you later decide that you want to use the run again, you can reset the status. Note that the run first needs to be activated again after you have reset the status.

See Also

Availability Checks  [page 16]

4.5.2.10 Third-Party Order Processing

Overview

You, as supply planner, sales representative, or buyer working as the third-party order processing coordinator of your company, can use third-party order processing to coordinate and monitor the direct shipment of a product to your customer by a supplier rather than your own company.

The following is an example of a typical process flow based on the business scenarios Order-to-Cash and Procure-to-Pay (Stock). Your company sells a product to a customer. However, you do not supply the product to the customer yourself. Instead you order it from a supplier and instruct this supplier to send it to the customer's address. The supplier then invoices your company accordingly. Based on the shipment information from your supplier, your company, in turn, invoices the customer. Variants of this process flow are possible.
For more information, see business scenarios:

- Order-to-Cash (Third-Party Order Processing — Material)
- Order-to-Cash (Sell-from-Stock)
- Procure-to-Pay (Stock)

This process supports materials bundled together into kits.

If you use kits in your sales processes, please note that the sales kits are now called kits in SAP Business ByDesign system.

Prerequisites

Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

Third-Party Order Processing is enabled in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope.

For this example business process, the settings for the business scenarios Order-to-Cash and Procure-to-Pay (Stock) have been made.

Additionally, for Third-Party Order Processing, the following has been defined:

**In Scoping, these business topics must be activated in the following sequence:**

- The Sell Standard Products business topic in the Product and Service Portfolio for Sales business package
- The Sales Orders business topic in the Selling Products and Services business package
- The Third-Party Procurement business topic in the Purchase Request and Order Management business package
- In the Purchase Requests business topic of the Purchase Request and Order Management business package, the scoping question *Do you want purchase orders to be created automatically from purchase requests?* has been answered with Yes.

If your company does not keep products in stock but always deliver them directly from your suppliers, you have to deselect the Shipping business topic in the Outbound Logistics business package. This business topic is automatically selected when the Sell Standard Products and Sales Orders business topics are selected.

**The following master data settings are fulfilled:**

- In the product master, the product is defined as a product to be purchased and sold, which means that both the status of the Purchasing tab and the status of the sales organizations in the Sales tab are set to Active. This is done in the Materials view of the Product Data work center.
- A purchasing contract or list price for one or more suppliers from which the product can be delivered has been created in the Sourcing and Contracting work center.
- The product is assigned to a product category for which automatic purchase order creation is activated. In this case, the purchase order is created automatically when the sales order is submitted. This is done in the Purchase Requests and Orders work center (Define Automatic Creation of Purchase Orders common task).
You can also **configure the solution to post third-party direct shipment documents to inventory in Financials**. To find the business option to configure this, select your implementation project and click **Edit Project Scope**. In the **Scoping** step of the project, ensure that **Inventory Valuation** is selected within **Financial and Management Accounting**. In the **Questions** step, expand the **Inventory Valuation** scoping element and select **Valuation of Purchases and Material Movements**. Under **Group: Valuation of Purchases and Material Movements**, select and answer the question for the **Activation of Inventory Postings for Third-Party Direct Shipment** business option.

### Process Flow

**Third-Party Order Processing**

1. **Creating the Sales Order**
   
   In the **Sales Orders** view of the **Sales Orders** work center, the sales representative creates a sales order for an account and enters an item for a product.

   **The system:**
   
   - Carries out sourcing to determine a source. For the purposes of this scenario, this product can be supplied only by a supplier. Therefore, the system sets the **Fulfillment** indicator to **External** and automatically proposes a supplier.
   - The sales representative can change the supplier by assigning a new source of supply.
   
   For more information, see Sales Orders Quick Guide.
• Triggers an availability check which is based on the supplier lead time. If you have a purchasing contract with the supplier, the supplier lead time is taken from this contract. Otherwise, the supplier lead time is taken from the product master where it could be defined supplier specific. For example, if the confirmed delivery date is later than the requested delivery date because of the supplier lead time, a yellow ATP traffic light is displayed. The requested quantity is either confirmed at the requested delivery date or at a later date depending on the supplier lead time. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

• Requests a product valuation to determine the purchasing price specific to the supplier and to calculate the profit margin of the sales order. For more information, see Profit Margin.

2. Creating the Purchase Order

The sales representative saves and releases the sales order and sends an order confirmation to the customer. Depending on the output settings, he or she uses e-mail, fax or print to do so or a B2B message is sent to the customer automatically.

The system:

• Sets both the status of the sales order and the delivery status in the sales order to In Process.

• Creates a customer demand with the delivery type Third-Party in the Customer Demand view of the Outbound Logistics Control work center. The release status of the customer demand is set to Released and the delivery status to Not Started. After you have released the sales order, you can no longer change the supplier in the sales order. For more Information, see Customer Demand Quick Guide [page 107].

• Creates a purchase request and a purchase order in the Purchase Requests and Orders work center as for the purpose of this scenario the automated purchase order creation has been defined. The purchase order has the process type Third-Party. The status of this purchase order is set to Sent, meaning that the supplier has been informed. For more information, see Purchase Orders Quick Guide.

• Displays the purchase order of the process type Third-Party in the Monitor Purchase Orders view of the Supply Control work center. Here, the supply planner can monitor the progress of the purchase order from a planning and logistics perspective. For more information, see Quick Guide for Monitor Purchase Orders [page 231].

3. Receiving the Supplier Confirmation

Once the supplier has replied to the purchase order, the buyer creates a purchase order acknowledgement to record the delivery quantity and the delivery date confirmed by the supplier. This is done in the Purchase Orders view of the Purchase Requests and Orders work center. For more information, see Create a Purchase Order Acknowledgement.

The system:

• Changes the status of the purchase order from Sent to Acknowledgment Received.

• Updates the customer demand with schedule lines containing the quantities and delivery dates based on the confirmation of the supplier.

• Creates a third-party purchase order in the Third-Party Purchase Orders view of the Third-Party Order Fulfillment work center. This third-party purchase order has the status Ordered.

4. Receiving the Delivery Acknowledgement

Once the supplier has shipped the product to the customer and sent you a copy of the delivery note, the buyer or the sales representative records it by going to the Third-Party Purchase Orders view of the Third-Party Order Fulfillment work center and creating the third-party delivery notification. For more information, see Quick Guide for Third-Party Purchase Orders. The buyer or the sales representative saves and releases the third-party delivery notification.

The system:
• Creates a third-party inbound delivery with the status Released.
• Creates a third-party outbound delivery with the status Released.
• Creates a goods and activity confirmation based on the information in the third-party outbound delivery. This confirmation is sent to financial accounting. Based on this outbound delivery, the system creates the outbound delivery invoice request. This is visible in the Invoice Requests view of the Customer Invoicing work center with the status To Be Invoiced.
For more information, see Quick Guide for Invoice Requests.

If you have selected the option of posting third-party direct shipment documents to inventory in the solution, the goods and activity confirmation is posted to Financials with two additional items for inventory that represents the third-party outbound and inbound deliveries.

• Updates the total goods receipt quantity in the purchase order. The items appear in the Purchasing Document Items view of the Inventory Valuation work center.
For more information, see Purchasing Document Items Quick Guide.
• Changes the purchase order status to Follow-up Document Created and the delivery status to Completely Delivered and updates it with the total delivery quantity.
• Updates the final delivery date in the sales order. The items appear in the Sales Document Items view of the Cost and Revenue work center.
For more information, see Sales Document Items Quick Guide.
• Changes the delivery status in the sales order to Finished and updates the quantity delivered. The overall status of the sales order remains In Process.
• Changes the delivery status of the customer demand to Finished.
• Updates the schedule lines of the customer demand with the fulfilled quantities and the shipment date.
• Informs supplier invoicing that an invoice for the purchase order can be verified.

5. Receiving the Supplier Invoice
Once the supplier has sent you the invoice, the accountant creates and posts a new supplier invoice with reference to the third-party purchase order in the Invoice Entry view of the Supplier Invoicing work center.
For more information, see Create an Invoice or Credit Memo with Reference to Preceding Documents.

The system:
• Saves the document in the Invoices and Credit Memos view of the Supplier Invoicing work center.
For more information, see Quick Guide for Invoices and Credit Memos (in Supplier Invoicing).
• Forwards the details of the transaction to the general ledger.
  The system creates a journal entry for the supplier invoice, posts the supplier invoice as payables in the general ledger, and releases the invoice for payment.
  For more information, see Journal Entries Quick Guide.
• Updates the purchase order status to Finished and sets the invoice completed status to Invoiced.

6. Creating the Customer Invoice
Based on the outbound delivery invoice request, the accountant creates and releases the customer invoice in the Invoice Requests view of the Customer Invoicing work center. Or, the accountant waits until the next scheduled invoice run when the system automatically processes the invoice requests and creates and releases the invoice.
For more information, see Quick Guide for Invoice Requests.

The system:
• The system creates a journal entry for the customer invoice and posts the customer invoice as revenues and receivables as journal entry in the general ledger. In addition, it creates an open item in the customer account. When the payment is received, this open item is cleared. The payment is posted as a cash receipt in the general ledger.
• Updates the sales order item invoice status to Finished. If no other items exist, the system sets the sales order status to Completed.

4.5.3 Tasks

4.5.3.1 Export Business Data Using Microsoft Excel®

Overview

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

Prerequisites

- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  ○ Self Services Overview in the Home work center
  ○ Download Center in the Application and User Management work center
  ○ Download link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking Check My Computer Settings on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

Procedure

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click Switch to Chart or Switch to Table.
   - For a worklist, select the worklist and click Go.
3. Click Export, then choose To Microsoft Excel.
4. Optional: Personalizing your excel export
   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click Personalize This screen
      b. In the side panel, select Display Settings.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting All in the Export Columns field

         The default value for this field is Visible, which exports only the currently displayed columns.

   2. To select the language for your excel export, do the following
a. In the Display Settings dialog box, set the Language Selection field to Show and click OK.
b. Click Save.
c. Click Export, then choose To Microsoft Excel.
d. Select a language in the dialog box that opens.

The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.

5. Select the template in the dialog box that is displayed.

- If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
- If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
- If there is more than one template in the system for this export scenario, the Template List dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.

6. Click Download.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click Open or Save depending on what you want to do with the exported data.

Depending on whether you click Open or Save, there are two possible results:

- If you click Open, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
- If you click Save, a Save As dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully.

You can later navigate to the location where you have saved the template and open it.

4.6 Automated Actions View

4.6.1 Planning Runs Quick Guide

The Planning Runs subview of the Automated Actions view in the Supply Planning work center, enables you to create, maintain, and monitor mass data runs for material planning to ensure the availability of products by the required time and in the correct quantity. The mass data run results in the creation of production, purchase or stock transfer proposals to cover demand.
Business Background

Mass Data Runs

A Mass Data Run (MDR) is the automatic mass processing of a task or a business transaction. MDRs enable mass processing of business data and are used in business processes, for example, invoice runs, payment authorization runs, or balance confirmation runs. When a user schedules an MDR the system represents it as a background job. During scoping, it is possible to provide default variants of the MDRs.

MDRs are created and maintained in the work centers. Using the Job Scheduler, users schedule the run to execute once or regularly at specified times.

In the Background Jobs view of the Application and User Management work center, you can monitor and reschedule MDR jobs that are created by users in other work centers.

For more information, see Mass Data Runs.

Material Planning

To ensure the availability of products by the required time and in the correct quantity, you can either interactively perform planning runs, or set up automated planning runs that can be scheduled to run at regular intervals. The creation of production, purchase or stock transfer proposals as a result of these planning runs is possible for products at all levels - for both input products and finished products. What is more, you have the option of creating and adjusting production, purchase or stock transfer proposals manually.

You influence the exact details of your company’s material planning processes with the settings you make in the product master and business configuration. Access to material planning details allows you to analyze exactly how demand is matched with supply at any given time. You can also monitor key figures such as the total demand, total supply, and days of supply. The material flow, which provides an overview of the pegging relationships network, allows you to check the effects of late supply and adapt your planning accordingly.

You can organize your work by querying for products that have not been verified after the last planning run in the Products view of the Supply Planning work center. This, along with the exception overview list in the Exceptions view of the same work center, serves as your main work list as supply planner.

For more information, see Material Planning [page 52].

Material Planning Run

The material planning run aims to create sufficient receipts (supply) to cover existing requirements (demand). The run can either be triggered automatically and on a regular basis, or interactively and on an ad-hoc basis. Planning proposals are created as a result of the planning run based on the procurement type you select in the product master – production proposals for in-house production, purchase proposals for external procurement, and stock transfer proposals for internal procurement. These functions are available in the Supply Planning work center.

For more information, see Material Planning Run [page 90].

Material Planning Settings

In the Materials view of the Product Development work center, you can make planning-relevant settings for your products. These settings determine how your products are to be handled by the planning run. You make your settings at a product and supply planning area level. The supply planning area is the grouping of demand and supply for products within a site from a planning perspective.

For more information, see Material Planning Settings [page 79].
Tasks

Create an Automated Planning Run

1. Click [New] to open the New Planning Run screen. Note that alternatively you can click [Copy] to copy an existing planning run. The New Planning Run screen then opens with the run description, control parameters, and selection criteria filled automatically by the system. You can then edit and add to this information, where appropriate.

2. In the General Data section of the New Planning Run screen that opens, enter an ID and, if required, a description for the run.

3. In the Control Parameters section, select the checkboxes according to the following criteria:
   - Select the Delete all Planning Proposals that Are Not Firm checkbox to allow the run to delete planning proposals that are not firm. This ensures that existing planning proposals are not reused.
   - Select the Allow Planning Proposals Creation in Past checkbox to enable the planning run to create planning proposals in the past.
   - Select the Re-Explode Firm Planning Proposals checkbox to allow the planning run to re-explode firm planning proposals. Note that if you choose to re-explode firm proposals, any previous manual changes to input products are not overwritten.
   - Select the Run Multi-Level Planning checkbox to enable the run to process not only the selected products but also products on lower levels of the same bill of material (BoM).

4. In the following tabs of the Selection Criteria section, specify accordingly whether the planning run should include or exclude particular products, planning areas, or planning groups:
   - Products
   - Planning Area
   - Planning Group

On these tabs, add a row for a product, planning area, or planning group ID by clicking [Add Row]. You can either filter using a selection range or by specifying a particular selection. For example:
   - Filter products using a selection range on the Products tab in the Include/Exclude field, click the arrow and choose Including or Excluding. In the Search Pattern field, click the arrow and choose Equal To. In the From and To fields, select the start and end range for selection.
   - Filter products with reference to a particular selection on the Products tab in the Include/Exclude field, click the arrow and choose Including or Excluding. In the Search Pattern field, click the arrow and choose the appropriate operator, for example, Less Than or Equal To. In the From field, select the product for the selection, for example Product ID MC61000.

5. In the Net Change tab of the Selection Criteria section, select the Consider Net Change checkbox if you want that the planning run only plans for products that have undergone a planning-relevant change since the last planning run.

6. At the top of the New Planning Run screen, click [Save] to save the new automated planning run to the system.
7. If you want to activate the planning run immediately, click [Set to Active] and click [Save and Close] to return to the Planning Runs subview. Note that alternatively, you can activate the planning run later (that is, just before scheduling) in the Planning Runs subview by clicking [Actions] and choosing Set to Active.

Schedule an Automated Planning Run

For the system to be able to execute an automated planning run, it must first be active and scheduled. Proceed as follows to schedule an automated planning run:

1. Select the row for the run you want to schedule, and click [Schedule] to open the Schedule Job screen. Note that a job is a scheduled instance of a mass data run.
2. Choose one of the following options as required:
   - Choose Start Immediately to run the job immediately.
   - Choose Run After Job and select a job. The job will then run immediately after the job you specify here.
   - Choose Single Run to define a date and time for the run. If you want to run the job at regular time intervals, choose Recurrence and choose a recurrence for the run, for example, daily, weekly, or monthly. We recommend that you do not schedule jobs in shorter intervals than one hour. In most cases, once a day should be enough. Since you may experience performance and locking issues if you schedule your runs for times when the system load is high, we also recommend that you schedule your jobs to run at night.

   Avoid scheduling parallel jobs. If you have to schedule the same run more than once, make sure that the jobs do not overlap as this may cause locking issues, and in exceptional cases the job may terminate. After scheduling your runs, double-check in the Job Monitor for parallel jobs. For more information, see the documentation about background jobs.

3. Click [Confirm] and then [Close] to return to the Planning Runs subview. The run has been scheduled and will be executed as specified.

Export Planning Runs to Microsoft Excel

For more information about this task, see here [page 50].

The following common tasks are available in the Planning Runs subview:

New Planning Proposal

1. Start the New Planning Proposal common task.
2. In the New Planning Proposal screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date.
   To create more than one planning proposal, click [Add Row] and enter the details as required. To remove a planning proposal, click [Remove].
3. Optional: Select one or more planning proposals and click [Release] to release the proposals to production or purchasing. The proposals then become requests.
4. Click [Save and Close] to save the new planning proposal(s) and close the screen.
5. To view the new planning proposal, open the associated product in the Product Planning Details screen in the Products view of the Supply Planning work center, or in the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals views of the Supply Control work center.

New Stock Transfer

1. Start the New Stock Transfer Order common task.
2. Specify a ship-from site ID, a ship-to site ID, and a ship-to location ID.
   The ship-to site and ship-to location may have been modeled in your system as follows:
   - The ship-to site is also the ship-to location:
     In this case, the ship-to-site also has the role of the ship-to location. The ship-to location ID (which is the same as the ship-to site ID) is entered automatically when the user enters the ship-to site ID and presses Enter.
   - The ship-to site and ship-to location are different and there is only one ship-to location:
     In this case, the ship-to location ID is entered automatically when the user enters the ship-to site ID and presses Enter.
   - The ship-to site and ship-to location are different and there are more than one ship-to locations:
     In this case, the ship-to location ID cannot be entered automatically when the user enters the ship-to site ID as the assignment is not unique. If, however, the user enters the ship-to location ID, the ship-to site ID is entered automatically as this assignment is unique.

   For more information, see Locations and Location Layouts.
3. Optional: Select a delivery priority.
   Note that if you select Immediate as the priority, the system automatically releases the stock transfer order to outbound logistics provided that the order can be confirmed today.
4. Optional: To specify that you want to ship all items with the same requested date, ship-to address, and delivery rule together in one outbound delivery, select the Complete Delivery Order checkbox.
5. On the Line Items tab, click Add Row and enter the product ID and the requested quantity of the product that you want to ship.
6. Repeat this step for each product you want to ship.
7. Click Release to release the stock transfer order and save your entries.

Maintain a Demand Forecast

For more information, see here [page 72].

4.6.2 Quick Guide for Confirmation Update Runs

The Confirmation Update Runs subview enables you to create, maintain, and monitor mass data runs for availability checks and the subsequent updating of sales orders, service orders, and stock transfer orders. The availability checks verify if the confirmed dates and quantities for sales orders items are still valid or need to be updated. This information is then updated accordingly.
You can access the **Confirmations Update Runs** subview from the following locations:

- **Supply Planning** work center
- **Outbound Logistics Control** work center

The **Confirmations Update Runs** subview is only visible if the **Outbound Logistics** business package is selected within the **Manufacturing, Warehousing, and Logistics** business area in the **Implementation Projects** view of the **Business Configuration** work center.

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

### Business Background

#### Confirmation Update Run

You can access the confirmation update run function in the **Outbound Logistics Control** work center or in the **Supply Planning** work center. The confirmation update run is a variant of the product availability check that you can use to check the availability of a large number of different demand categories. This enables you to easily carry out the following, for example:

- Adjust your confirmations to changes in the product supply situation resulting from material planning
- Adjust your confirmations to changes in the material master, such as a different replenishment lead time for a product
- Give priority to a more recent sales order from a valuable customer

The confirmation update run reorganizes the confirmations to reallocate the available quantity to the customer demand selected for the update run. In the first step, the confirmations for each customer demand selected are reset, and in the second step, each customer demand selected is confirmed again based on the product availability check settings made for the products.

For more information, see **Confirmation Update Run** [page 148].

#### Mass Data Runs (MDR)

A Mass Data Run (MDR) is the automatic mass processing of a task or a business transaction. MDRs enable mass processing of business data and are used in business processes, for example, invoice runs, payment authorization runs, or balance confirmation runs. When a user schedules an MDR the system represents it as a background job. During scoping, it is possible to provide default variants of the MDRs.

MDRs are created and maintained in the work centers. Using the **Job Scheduler**, users schedule the run to execute once or regularly at specified times.

In the **Background Jobs** view of the **Application and User Management** work center, you can monitor and reschedule MDR jobs that are created by users in other work centers.

For more information, see the documentation about mass data runs.

#### Application Log

Application logs are created as a result of business processes that require logging of business steps, for example, the execution of mass data runs. The **Application Log** displays detailed information about business process steps and their results allowing you to review these at a later point in time.

For more information, see the documentation about the application log.
Tasks

Create a Confirmation Update Run

1. To open the **New Confirmation Update Run** screen, click [New]. Alternatively, you can click [Copy] to copy an existing confirmation update run. The **Confirmation Update Run** screen then opens with the run description, sorting parameters, and selection criteria filled automatically by the system. You can then edit and add to this information, where appropriate.

2. In the **General Data** section, enter an ID and, if required, a description for the run.

3. Optional: In the **Control Parameters** section, select the **Update Source of Supply** checkbox if you want the system to redetermine the source of supply for each item during the run. As a result, the system may assign different sources of supply provided that master data was changed. Use this function carefully as it may also change the source of supply that you selected manually on the **Order Logistics Details** screen. In addition, you may experience performance issues.

4. In the **Sorting Parameters** section, click [Add Row] to specify the first sorting parameter to be considered for the run. Sorting parameters affect the sequence in which the customer demand is checked and confirmed.

5. In the **Sequence ID** column, enter a number, choose **Ascending** or **Descending** in the **Direction** column, and select the criterion according to which you want the system to sort customer demand from the dropdown list in the **Criteria** column. If you select the **Items for Complete Delivery First** criterion, the sorting direction is automatically set to **Descending** and cannot be changed. This criterion specifies that if complete delivery orders are among the customer demand that is checked and confirmed, the complete delivery order items are given priority over other items. For more information, see **Complete Delivery Orders** [page 128].

   Note that you can combine the sorting parameters and define, for example, that all order items are first sorted in descending order according to delivery priority (that is, from priority **Immediate**, to **Urgent**, **Normal**, and **Low**) and that the demand with the same delivery priority is then sorted in ascending order according to the document creation date.

6. Repeat steps 4 and 5 for each sorting parameter you want the system to consider.

7. On the relevant tab of the **Selection Criteria** section, click [Add Row] and use the **Inclusion/Exclusion** list and the **Search Pattern** list to specify for which customer demand the availability is checked by the confirmation update run. Depending on what you selected from the **Search Pattern** list, you must enter a single value in the **From** field, a single value in the **To** field, or a value range in the **From** and **To** fields.

   Note that you can combine the selection criteria and define, for example, that you want to check any customer demand for products A and B, or only sales orders for product C that were ordered by a specific customer.

8. Repeat step 7 for each selection criterion you want the system to consider.

9. On the **Net Change Run** tab, select the **Products with Availability-Relevant Changes Only** checkbox if you want to specify that the run checks the availability for a specific
product only if material planning resulted in a changed planning situation or if the product master data was changed.

10. To activate the run, click **Set to Active**.
    Note that you can also later activate the run by clicking **Actions** and choosing **Set to Active** on the overview screen.

11. To save the run and return to the **Confirmation Update Runs** screen, click **Save and Close**.

**Schedule a Confirmation Update Run**

1. To open the **Schedule Job** screen, select the row for the run you want to schedule, and click **Schedule**. Note that you can only schedule active runs.
    Note that a job is a scheduled instance of a mass data run.

2. Choose one of the following options as required:
   - Choose **Start Immediately** to run the job immediately.
   - Choose **Run After Job** and select a job. The job will then run immediately after the job you specify here. It makes sense, for example, to schedule a confirmation update run after a planning run has taken place and then schedule a delivery request run after the confirmation update run.
   - Choose **Single Run** to define a date and time for the run. If you want to run the job at regular time intervals, choose **Recurrence** and choose a recurrence for the run, for example, daily, weekly, or monthly. We recommend that you do not schedule jobs in shorter intervals than one hour. In most cases, once a day should be enough. Since you may experience performance and locking issues if you schedule your runs for times when the system load is high, we also recommend that you schedule your jobs to run at night.

   Avoid scheduling parallel jobs. If you have to schedule the same run more than once, make sure that the jobs do not overlap as this may cause locking issues, and in exceptional cases the job may terminate. After scheduling your runs, double-check in the **Job Monitor** for parallel jobs. For more information, see the documentation about background jobs.

3. Click **Save and Close** to save the run and return to the **Confirmation Update Runs** screen.
    The run has been scheduled and will be executed as specified.

**Export Confirmation Update Runs to Microsoft Excel®**

For more information about this task, see here [page 50].
4.6.3 Tasks

4.6.3.1 Maintain Demand Forecast

Overview

You can access the Maintain Demand Forecast screen under Common Tasks in the following views of the Supply Planning work center:

- Products
- Resource Load
- Exceptions
- Automated Actions

A demand forecast represents an estimation of the future demand for a particular product or service. On the Maintain Demand Forecast screen, you can create and also delete demand forecasts.

For more background and concept information about demand forecasting in general, see Forecasting [page 10].

Procedure

1. Create a Demand Forecast
   a. In the Show menu, select All Demand Forecasts by Month if you want to maintain demand forecasts by month or All Demand Forecasts by Week if you want to maintain them by week. Depending on what you select here, Monthly or Weekly is automatically entered in the Period Type field under Demand Forecast Data.
   b. If you want to create demand forecasts for a product and planning area combination, enter the Product ID, Product Description, and Planning Area ID under Product Data.
   c. If you want to create demand forecasts for a product group and planning area combination, enter the Planning Group ID and the Forecasting Group ID under Product Groups.
   d. Under Demand Forecast Data, select the time period (month or week) in which you want to create demand forecasts in the Period Type field. Note that this is only necessary if the time period you want to work with should now differ from the Show selection you already made. Also enter a start date for the product (or product group) and planning area combination in the Start Date field.
   e. Click Go to see the results in the Forecast Planning Table. Each row in the table shows the demand forecasts for the particular product and planning area combination you entered. Note that the Period Type is displayed as Initial if you have not yet entered a demand forecast for this particular product (or product group) and planning area combination. As soon as you enter a demand forecast, the period type changes to Weekly or Monthly depending on the period type setting you made.
   f. In the relevant row of the Forecast Planning Table, enter the desired number of demand forecasts for the relevant time periods (or buckets) and click Save.
f. The details (consumption key figures) for the selected row in the Forecast Planning Table appear in the Details table at the bottom of the screen.

g. Click Close to exit the screen.

Even if a demand management procedure is not defined for the selected product, you can enter a demand forecast, but the demand forecast will be not valid for supply planning and will therefore not be visible in the Products view.

2. Delete a Demand Forecast

a. Select the product (or product group) and planning area combination for which you want to delete a demand forecast by selecting the relevant row in the Forecast Planning Table.

b. Click Delete and then confirm this deletion by clicking Delete again in the dialog box that appears.

c. The period type for this particular product and planning area combination in the table changes to Initial.

When you delete demand forecasts, the forecasts for the complete time series is deleted.

Alternatives

You can also work with demand forecasts in the Demand Plans view of the Demand Planning work center. For more information, see Create a New Demand Plan [page 37].

4.6.3.2 Export Business Data Using Microsoft Excel®

Overview

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

Prerequisites

- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - Self Services Overview in the Home work center
  - Download Center in the Application and User Management work center
  - Download link that is available directly on the user interface
The settings for your browser must be set correctly. You can review the information about computer settings by clicking Check My Computer Settings on the logon screen.

You must be authorized to perform an export to Microsoft Excel®.

Procedure

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click Switch to Chart or Switch to Table.
   - For a worklist, select the worklist and click Go.
3. Click Export, then choose To Microsoft Excel.
4. Optional: Personalizing your excel export
   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click Personalize This screen
      b. In the side panel, select Display Settings.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting All in the Export Columns field
         The default value for this field is Visible, which exports only the currently displayed columns.
   2. To select the language for your excel export, do the following
      a. In the Display Settings dialog box, set the Language Selection field to Show and click OK
      b. Click Save.
      c. Click Export, then choose To Microsoft Excel®
      d. Select a language in the dialog box that opens.
         The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.
5. Select the template in the dialog box that is displayed.
   - If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
   - If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
   - If there is more than one template in the system for this export scenario, the Template List dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.
6. Click Download.
7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click Open or Save depending on what you want to do with the exported data.

Depending on whether you click Open or Save, there are two possible results:
- If you click **Open**, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.

- If you click **Save** as **Save As** dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully. You can later navigate to the location where you have saved the template and open it.

### 4.7 Reports View

#### 4.7.1 Overview of Reports in Supply Chain Management

**Overview**

This document lists the reports that are available in Supply Chain Management by business function along with the relevant variables in this area. The embedded reports available in this area are also listed.

**Reports**

<table>
<thead>
<tr>
<th>Business Function</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics Execution</td>
<td></td>
</tr>
<tr>
<td>Production Control</td>
<td></td>
</tr>
<tr>
<td><strong>Reports</strong></td>
<td><strong>Reports</strong></td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>Defect Analysis</td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>Inspection Analysis</td>
</tr>
<tr>
<td>Supply Chain Control</td>
<td></td>
</tr>
<tr>
<td>Outbound Logistics</td>
<td></td>
</tr>
<tr>
<td><strong>Order Fulfillment</strong></td>
<td><strong>Order Fulfillment</strong></td>
</tr>
<tr>
<td>Outbound Lead Time Detailed</td>
<td>[page 175]</td>
</tr>
<tr>
<td>Supply Chain Control</td>
<td></td>
</tr>
<tr>
<td>Outbound Logistics</td>
<td></td>
</tr>
<tr>
<td><strong>Order Fulfillment</strong></td>
<td><strong>Order Fulfillment</strong></td>
</tr>
<tr>
<td>Outbound Lead Time Averages</td>
<td>[page 186]</td>
</tr>
<tr>
<td>Supply Chain Control</td>
<td></td>
</tr>
<tr>
<td>Outbound Logistics</td>
<td></td>
</tr>
<tr>
<td><strong>Outbound Delivery</strong></td>
<td><strong>Outbound Delivery</strong></td>
</tr>
<tr>
<td>Performance - Quick Analysis</td>
<td>[page 179]</td>
</tr>
<tr>
<td>Supply Chain Control</td>
<td></td>
</tr>
<tr>
<td>Outbound Logistics</td>
<td></td>
</tr>
<tr>
<td><strong>Outbound Delivery</strong></td>
<td><strong>Outbound Delivery</strong></td>
</tr>
<tr>
<td>Performance by Quantity</td>
<td>[page 181]</td>
</tr>
<tr>
<td>Supply Chain Control</td>
<td></td>
</tr>
<tr>
<td>Outbound Logistics</td>
<td></td>
</tr>
<tr>
<td><strong>Outbound Delivery</strong></td>
<td><strong>Outbound Delivery</strong></td>
</tr>
<tr>
<td>Performance by Time</td>
<td>[page 183]</td>
</tr>
<tr>
<td>Production Control</td>
<td></td>
</tr>
<tr>
<td><strong>Reports</strong></td>
<td><strong>Production Request</strong></td>
</tr>
<tr>
<td>Production Control</td>
<td><strong>Production Request</strong></td>
</tr>
<tr>
<td><strong>Reports</strong></td>
<td><strong>Production Request</strong></td>
</tr>
<tr>
<td>Supply Chain Control</td>
<td></td>
</tr>
<tr>
<td>Production Control</td>
<td></td>
</tr>
<tr>
<td><strong>Production Request</strong></td>
<td><strong>Production Request</strong></td>
</tr>
<tr>
<td>Production Control</td>
<td></td>
</tr>
<tr>
<td><strong>Reports</strong></td>
<td><strong>Yield and Scrap</strong></td>
</tr>
<tr>
<td>Product Designs</td>
<td></td>
</tr>
<tr>
<td><strong>Product Designs</strong></td>
<td><strong>Product Designs - Where Used</strong></td>
</tr>
</tbody>
</table>
Common Variables

The following list provides selected variables that are associated with reports in this area.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account</td>
<td>The customer who ordered products from your organization.</td>
</tr>
<tr>
<td>Confirmation Date</td>
<td>The date on which the logistics or production task is verified as complete.</td>
</tr>
<tr>
<td>Customer</td>
<td>The identifier of the customer.</td>
</tr>
<tr>
<td>Delivery Priority</td>
<td>The delivery priority of the sales order. The priority can be Immediate, Urgent, Normal, or Low.</td>
</tr>
<tr>
<td>Identified Stock ID</td>
<td>The identifier of the identified stock to which the product belongs.</td>
</tr>
<tr>
<td>Inspection Creation Date</td>
<td>The timelines during which the inspections were created.</td>
</tr>
<tr>
<td>Inspection Type</td>
<td>The identifier of the inspection type.</td>
</tr>
<tr>
<td>Logistics Area ID</td>
<td>The identifier of the physical space or storage area where products are stored, for example, a bin. It can also be the identifier of the grouping of logistics areas, for example, a rack.</td>
</tr>
<tr>
<td>Order Type</td>
<td>The classification of the order.</td>
</tr>
<tr>
<td>Order ID</td>
<td>The unique identifier of the sales order.</td>
</tr>
<tr>
<td>Planned Production End Date</td>
<td>The end date of the production request as requested by the customer.</td>
</tr>
<tr>
<td>Planning Area</td>
<td>The grouping of demand and supply for a selected product from a planning perspective within a site.</td>
</tr>
<tr>
<td>Planning Group</td>
<td>The supply planning products group.</td>
</tr>
<tr>
<td>Processor of Confirmation</td>
<td>The name of the person who performs the logistics or production task.</td>
</tr>
<tr>
<td>Product</td>
<td>The identifier of the product.</td>
</tr>
<tr>
<td>Product ID</td>
<td>The identifier of the product.</td>
</tr>
<tr>
<td>Product Category</td>
<td>The group to which the product is assigned.</td>
</tr>
<tr>
<td>Production End Date</td>
<td>The end date of the production order.</td>
</tr>
<tr>
<td>Production Start Date</td>
<td>The start date of the production order.</td>
</tr>
<tr>
<td>Production Request ID</td>
<td>The ID of the production request.</td>
</tr>
<tr>
<td>Resource</td>
<td>The identifier of the resource.</td>
</tr>
<tr>
<td>Sales Organization</td>
<td>The departmental unit that is responsible for the sale and distribution of products.</td>
</tr>
<tr>
<td>Sales Unit</td>
<td>The department or section that is responsible for sales.</td>
</tr>
<tr>
<td>Seller Responsible</td>
<td>The ID of the sales employee responsible.</td>
</tr>
<tr>
<td>Site</td>
<td>The physical location where an enterprise or part of an enterprise resides.</td>
</tr>
<tr>
<td>Supplier</td>
<td>The identifier of the supplier.</td>
</tr>
</tbody>
</table>

Embedded Reports

Embedded reports are often displayed in the Overview views of work centers and provide a graphical display of a specific aspect of report data. The following reports are available as embedded reports:
### Available Data Sources

| Data Source Name       | Data Source ID | Description                                                                 | Access Context |
|------------------------|----------------|-----------------------------------------------------------------------------|----------------|}
<p>| Defect Analysis        | PLMQDFU 01     | Provides data for the analysis of defects, including the inspection ID,     | Site           |
|                        |                | customer, product category, and the number of internally caused defects.     |                |
| Demand Plan Report     | SCMDPAV 01     | Provides details of the demand plan, including the key figures: actuals,    |                |
|                        |                | final actuals, forecast, final forecast, and distribution factors. This     |                |
|                        |                | information is based on the demand plan characteristics including ID,      |                |
|                        |                | supply planning area, product and dates.                                   |                |
| Inspection Analysis    | PLMQINU 01     | Provides data for the analysis of inspections, including the inspection     | Site           |
|                        |                | decision, product category, and the inspector.                            |                |
| Identified Stock       | SCM_ISTOCK     | Provides identified stock master data, including ID and description, as    |                |
|                        |                | well as the reference Product ID and Material ID.                         |                |
| Location               | SCM_LOCATION   | Provides location master data, including ID and roles, for example: Service |                |
|                        |                | Point, Ship-From, and Ship-To data.                                       |                |
| Logistics Area         | SCM_LOG_AREA   | Provides logistics area master data, including ID and description.        | Site           |
| Logistics Unit         | SCM_LU         | Provides logistics unit master data, including ID and description.        |                |
| Production Lot         | SCM_PROD_LOT   | Provides header master data of production lots including the ID and the    | Site           |
|                        |                | organizational unit ID.                                                   |                |</p>
<table>
<thead>
<tr>
<th>Data Source Name</th>
<th>Data Source ID</th>
<th>Description</th>
<th>Access Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Order</td>
<td>SCM_PROD_ORDER</td>
<td>Provides header master data of production orders, including the ID and the output product.</td>
<td>Site</td>
</tr>
<tr>
<td>Released Execution Production Model Operation</td>
<td>SCM_REP MOPER</td>
<td>Provides released execution production model master data of operations, including the ID and the description.</td>
<td>Site</td>
</tr>
<tr>
<td>Supply Planning Area</td>
<td>SCM_S_P L_AREA</td>
<td>Provides supply planning area master data, including planning area ID and location.</td>
<td>Site</td>
</tr>
<tr>
<td>Confirmation Journal</td>
<td>SCM_CFJU 01</td>
<td>Provides transaction data related to inventory changes and inventory movements, including goods issues/receipts/movements. It also shows changes to inventory as a result of confirmed warehouse and production tasks.</td>
<td>Site</td>
</tr>
<tr>
<td>Inbound Delivery Details</td>
<td>SCM_CIDB 01</td>
<td>Provides transaction data of inbound delivery documents, including product items, quantities, business partner, item references, and status information.</td>
<td>Site</td>
</tr>
<tr>
<td>Outbound Delivery Performance Details</td>
<td>SCM_ODPB 01</td>
<td>Provides transaction data of outbound delivery documents, including order ID, product, account, sales unit, and ship-from site ID.</td>
<td>Site</td>
</tr>
<tr>
<td>Resource Requirement</td>
<td>SCMPPTB 01</td>
<td>Provides transaction data of production orders including planned processing time of resources used in the orders.</td>
<td>Site</td>
</tr>
<tr>
<td>Resource Utilisation</td>
<td>SCMPPTB 02</td>
<td>Provides transaction data of production lots including actual processing time of resources used in the production process.</td>
<td>Site</td>
</tr>
<tr>
<td>Production Processing Times</td>
<td>SCMPPTU 01</td>
<td>Provides transaction data of planned and actual processing times of production orders.</td>
<td>Site</td>
</tr>
<tr>
<td>Production Request Fulfillment - Expected Data</td>
<td>SCMPRFB 01</td>
<td>Provides transaction data of production requests including requested quantity and fulfilled quantity.</td>
<td>Site</td>
</tr>
<tr>
<td>Production Request Fulfillment - Actual Data</td>
<td>SCMPRFB 02</td>
<td>Provides transaction data of production requests including the start dates and end dates for the production processes involved with the request.</td>
<td>Site</td>
</tr>
<tr>
<td>Production Request Fulfillment</td>
<td>SCMPRFU 01</td>
<td>Provides transaction data of production request fulfillment, including planned and actual quantities, and dates.</td>
<td>Site</td>
</tr>
<tr>
<td>Expected Yield and Expected Scrap</td>
<td>SCMYASB 01</td>
<td>Provides transaction data of production orders including the expected scraps and expected output quantity from the orders.</td>
<td>Site</td>
</tr>
<tr>
<td>Yield &amp; Scrap</td>
<td>SCMYASU 01</td>
<td>Provides transaction data of planned and actual scrap of production orders.</td>
<td>Site</td>
</tr>
<tr>
<td>Product Design</td>
<td>PLM_PDU 01</td>
<td>Provides product design details including relevant product and BOM details. It also provides data for parent product design.</td>
<td>Site</td>
</tr>
<tr>
<td>Product Design Version</td>
<td>PLMPDB02</td>
<td>Provides product design version master data information including product design version ID, name and description.</td>
<td>Site</td>
</tr>
<tr>
<td>Production Orders By Header General Details</td>
<td>SCM_POHDR</td>
<td>Provides general details of production orders.</td>
<td>Site</td>
</tr>
<tr>
<td>Data Source Name</td>
<td>Data Source ID</td>
<td>Description</td>
<td>Access Context</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Production Orders By Header Order Structure Reporting Points</td>
<td>SCMPOHD R_ORDST R_RP</td>
<td>Provides reporting points of order structure of production orders</td>
<td>Site</td>
</tr>
<tr>
<td>Production Orders By Header Order Structure Activities</td>
<td>SCMPOHD R_ORDST R_ACT</td>
<td>Provides order structure of production orders</td>
<td>Site</td>
</tr>
<tr>
<td>Production Orders By Header Input Products</td>
<td>SCMPOHD RIP</td>
<td>Provides input products of production orders</td>
<td>Site</td>
</tr>
<tr>
<td>Production Order By Header Output Products</td>
<td>SCMPOHD ROP</td>
<td>Provides output products of production orders</td>
<td>Site</td>
</tr>
<tr>
<td>Production Orders By Header Resources</td>
<td>SCMPOHD RRES</td>
<td>Provides resources details of production orders</td>
<td>Site</td>
</tr>
<tr>
<td>Production Orders By Header Execution Details</td>
<td>SCMPOHD REXEC</td>
<td>Provides execution details of production orders</td>
<td>Site</td>
</tr>
<tr>
<td>Production Tasks</td>
<td>SCMPTV01</td>
<td>Provides transactional data of production tasks</td>
<td>Site</td>
</tr>
<tr>
<td>Production Tasks - Resource Utilization</td>
<td>SCMPPTB 02</td>
<td>Provides data of resource utilization of production tasks</td>
<td>Site</td>
</tr>
<tr>
<td>Material Supply and Demand List Aggregated View</td>
<td>SCMMSDV V01</td>
<td>Provides aggregated supply and demand data for the products</td>
<td>Site</td>
</tr>
<tr>
<td>Material Supply and Demand List</td>
<td>SCMMSDV V02</td>
<td>Provides detailed data of material supply and demand list</td>
<td>Site</td>
</tr>
<tr>
<td>Material Supply And Demand Key Figures</td>
<td>SCMPDV01</td>
<td>Provides key figures data of material supply and demand</td>
<td>Site</td>
</tr>
<tr>
<td>Inbound Delivery Request - Item Details</td>
<td>SCMIDRB 01</td>
<td>Provides transactional data of item details of inbound delivery requests</td>
<td>Site</td>
</tr>
<tr>
<td>Warehouse Requests</td>
<td>SCMWRGE NU01</td>
<td>Provides data of the warehouse requests</td>
<td>Site</td>
</tr>
<tr>
<td>Warehouse Requests Execution Details Items</td>
<td>SCMWREX EU01</td>
<td>Provides data of the warehouse requests execution details items</td>
<td>Site</td>
</tr>
<tr>
<td>Warehouse Requests Planned Items</td>
<td>SCMWRPL NU01</td>
<td>Provides data of the warehouse requests planned items</td>
<td>Site</td>
</tr>
<tr>
<td>Outbound Deliveries Detail Line Items</td>
<td>SCM0BDU 02</td>
<td>Provides data of line item details of outbound deliveries</td>
<td>Site</td>
</tr>
<tr>
<td>Data Source Name</td>
<td>Data Source ID</td>
<td>Description</td>
<td>Access Context</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Stock Overview</td>
<td>SCMINVV02</td>
<td>Provides data of the stock overview based on stock separators</td>
<td>Site</td>
</tr>
<tr>
<td>Inventory Allocation</td>
<td>SCMINVALLOC</td>
<td>Provides details of the allocated inventory at a location and logistics area for a particular document which could be warehouse order (inbound/outbound) or production order</td>
<td></td>
</tr>
<tr>
<td>Production Models with Element Details</td>
<td>SCMPMELEMENTU01</td>
<td>Provides data of production models, segments along with bill of operation structure</td>
<td>Site</td>
</tr>
<tr>
<td>Production Models with Activity Details</td>
<td>SCMPMACIVITYU01</td>
<td>Provides data of activities of bills of operation along with production segment and production model details</td>
<td>Site</td>
</tr>
<tr>
<td>Production Models with Activity Item Group Assignment Details</td>
<td>SCMPMITHPRUPU01</td>
<td>Provides data of item group assignments to activities of production models</td>
<td>Site</td>
</tr>
<tr>
<td>Production Models with Item Group Item Details</td>
<td>SCMPMITEMSU01</td>
<td>Provides item group item details of bills of material assigned to the production model</td>
<td>Site</td>
</tr>
<tr>
<td>Production Models with By-Product Assignment Details</td>
<td>SCMPMBYPRODUCTU01</td>
<td>Provides by-products assigned to the production models</td>
<td>Site</td>
</tr>
<tr>
<td>Production Bills of Material Line Items with Engineering Change Orders</td>
<td>SCMITEMCHST</td>
<td>Provides line items with engineering change order details of production bills of materials</td>
<td></td>
</tr>
<tr>
<td>Production Bills of Material Variants</td>
<td>SCMVARIENT</td>
<td>Provides variant details of production bills of materials</td>
<td></td>
</tr>
<tr>
<td>Production Bills of Material Variant and Line Item Details</td>
<td>SCMPBOMU</td>
<td>Provides variant details and line item details of production bills of materials</td>
<td></td>
</tr>
<tr>
<td>Production Bills of Material Variant Item Change State Assignment</td>
<td>SCMVARITEMCHSTASN</td>
<td>Provides list of item change states assigned to the variant</td>
<td></td>
</tr>
<tr>
<td>Batch Transaction</td>
<td>SCMBATU01</td>
<td>Provides details of the documents, for example, production orders and outbound deliveries, where the identified stock is used</td>
<td></td>
</tr>
<tr>
<td>Production Bill of Material Mass Maintenance Run Selection Details</td>
<td>SCMPBOMMNTU01</td>
<td>Provides the details of production bill of material mass maintenance run selection data</td>
<td></td>
</tr>
</tbody>
</table>
### Data Source Name

<table>
<thead>
<tr>
<th>Data Source Name</th>
<th>Data Source ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Bill of Material Mass Maintenance Run</td>
<td>SCMPBOMMNTU02</td>
<td>Provides the details of production bill of material mass maintenance run</td>
</tr>
<tr>
<td>Parameter Details</td>
<td></td>
<td>parameter data</td>
</tr>
</tbody>
</table>

### Available Key Figure Groups

<table>
<thead>
<tr>
<th>Key Figure Group Name</th>
<th>Key Figure Group ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Defects</td>
<td>PLMQDFU01_S TR_01</td>
<td>Shows the number of defects in general and the number of internally caused</td>
</tr>
<tr>
<td></td>
<td></td>
<td>defects</td>
</tr>
<tr>
<td>Number of Inspections</td>
<td>PLMQINU01_S TR_01</td>
<td>Shows how many inspections were performed, accepted, rejected, or skipped.</td>
</tr>
<tr>
<td>&amp; Quotas</td>
<td></td>
<td>It also shows the average quality score, the average lead time, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>inspection quotas, such as the skip quota.</td>
</tr>
<tr>
<td>Number of Inspections</td>
<td>PLMQINU01_S TR_02</td>
<td>Shows the number of inspections.</td>
</tr>
<tr>
<td>Confirmation Journal</td>
<td>SCMCFJU01_S TR_01</td>
<td>Provides an overview of inventory changes and inventory movements, including</td>
</tr>
<tr>
<td></td>
<td></td>
<td>goods issues/receipts/movements, inventory counts and products produced.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It also shows changes to inventory as a result of confirmed logistics tasks.</td>
</tr>
<tr>
<td>Order Fulfillment</td>
<td>SCMODPB01_S TR_06</td>
<td>Provides an analysis of the lead time for delivered customer orders, from</td>
</tr>
<tr>
<td>Outbound Lead Time</td>
<td></td>
<td>order creation date through to delivery date.</td>
</tr>
<tr>
<td>Averages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Order Fulfillment</td>
<td>SCMODPB01_S TR_07</td>
<td>Provides a detailed analysis of the lead time for delivered customer orders,</td>
</tr>
<tr>
<td>Outbound Lead Time</td>
<td></td>
<td>from order creation date through to delivery date.</td>
</tr>
<tr>
<td>Detailed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outbound Delivery</td>
<td>SCMODPB01_S TR_08</td>
<td>Provides a multilevel investigation of the level of performance your company</td>
</tr>
<tr>
<td>Performance by Time</td>
<td></td>
<td>provides through correct and on-time deliveries.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outbound Delivery</td>
<td>SCMODPB01_S TR_09</td>
<td>Provides a multilevel investigation of the level of performance your company</td>
</tr>
<tr>
<td>Performance by</td>
<td></td>
<td>provides through correct and on-time deliveries.</td>
</tr>
<tr>
<td>Quantity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outbound Delivery</td>
<td>SCMODPB01_S TR_11</td>
<td>Provides a multilevel investigation of the level of performance your company</td>
</tr>
<tr>
<td>Performance - Quick</td>
<td></td>
<td>provides through correct and on-time deliveries.</td>
</tr>
<tr>
<td>Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production Processing</td>
<td>SCMPPTU01_S TR_01</td>
<td>Represents the status of the times recorded for the completion of production</td>
</tr>
<tr>
<td>Times</td>
<td></td>
<td>lots or operations.</td>
</tr>
<tr>
<td>Production Request</td>
<td>SCMPRFU01_S TR_01</td>
<td>Shows the planned quantities and dates for a production request, and the</td>
</tr>
<tr>
<td>Fulfillment Header</td>
<td></td>
<td>actual confirmed quantities and dates recorded.</td>
</tr>
<tr>
<td>Yield and Scrap</td>
<td>SCMYASU01_S TR_01</td>
<td>Shows the quantities of acceptable and unacceptable product recorded for a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reporting point, production lot, or time period.</td>
</tr>
<tr>
<td>Inventory Report</td>
<td>SCMINVV02_S TR_01</td>
<td>Gives a list of logistics unit quantity, on hand stock inspection stock,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>restricted and unrestricted stock and the stocks which would expire in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>given time frame.</td>
</tr>
</tbody>
</table>

SAP Business ByDesign February 2017
Supply Planning

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### Common Characteristics and Key Figures

The following list provides selected characteristics and key figures that are associated with data sources in this business area.

**Common Characteristics**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Associated With</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defect Type</td>
<td>Provides an overview of the available defect types, including the defect code and defect description.</td>
<td>Quality Assurance PLMQDFU01</td>
</tr>
<tr>
<td>Identified Stock</td>
<td>A quantity produced at the same time, with the same characteristics and production parameters. ISTOCK_UUID: This characteristic is enabled for navigation.</td>
<td>Supply Chain SCM_ISTOCK</td>
</tr>
<tr>
<td>Inspection Type</td>
<td>Provides the code and description of the inspection type.</td>
<td>Quality Assurance PLMQINU01 and PLMQDFU01</td>
</tr>
<tr>
<td>Location</td>
<td>A logistics-relevant, geographic point within a site. A location can be either internal or external to an enterprise. Location is used to communicate place information in business processes, for example, branches of an enterprise, stock holding plants, and places where services are provided. LOC_UUID: This characteristic is enabled for navigation.</td>
<td>Supply Chain SCM_LOCATIO N</td>
</tr>
<tr>
<td>Logistics Area</td>
<td>A freely definable area within a location providing detailed physical and operational information required for storage and production. Logistics areas can be arranged in a hierarchy according to physical aspects or logistical functions.</td>
<td>Supply Chain SCM_LOG_ARE A</td>
</tr>
<tr>
<td>Logistics Unit</td>
<td>An item consisting of packaging material, for example a pallet or box, established for storage or transport through the supply chain.</td>
<td>Supply Chain SCM_LU</td>
</tr>
<tr>
<td>Resource</td>
<td>An asset that contributes to the sourcing, production, or delivery of a product. RES_UUID: This characteristic is enabled for navigation.</td>
<td>Supply Chain SCM_RESCOURSE E</td>
</tr>
<tr>
<td>Supply Planning Area</td>
<td>An area for which a separate planning ensures the availability of products on time.</td>
<td>Supply Chain SCM_S_PL_ARE A</td>
</tr>
<tr>
<td>Released Execution Production Model Operation</td>
<td>Provides released execution production model master data of operations, including the ID and the description.</td>
<td>Supply Chain SCM_REPM OPER</td>
</tr>
<tr>
<td>Production Lot</td>
<td>Provides header master data of production lots including the ID and the organizational unit ID. PEL_UUID: This characteristic is enabled for navigation.</td>
<td>Supply Chain SCM_PROD_LO T</td>
</tr>
<tr>
<td>Production Order</td>
<td>Provides header master data of production orders, including the ID and the output product. PEO_UUID: This characteristic is enabled for navigation.</td>
<td>Supply Chain SCM_PROD_ORDER</td>
</tr>
</tbody>
</table>
Common Key Figures

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Associated With</th>
</tr>
</thead>
<tbody>
<tr>
<td>0COUNT</td>
<td>Counter</td>
<td>SCM_INSTOCK SCM_LOCATION SCM_LOG_AREA SCM_LOG_AREA SCM_LU SCM_PROD_LOT SCM_PROD_ORDER SCM_REPM_ORDER SCM_REPM_OPER SCM_RESOURSE SCM_S_PL_AREA PLMQINU01 PLMQDFU01</td>
</tr>
</tbody>
</table>

See Also

Overview of Reports in Supply Chain Management  [page 167]

4.7.3 Confirmation Journal

Overview

The Confirmation Journal report shows detailed information on task confirmations which is only available in this report. The report provides managers, supervisors, and workers in a warehouse or a production area with an overview of production and product-movement activities. For example, products issued, products received, products moved, inventory counted, and products produced. The Confirmation Journal report also shows the changes to inventory as a result of confirmed warehouse and production tasks.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

The variables in the confirmation journal include:

- **Actual Execution On**
  The date on which the warehouse or production task was physically carried out.

- **Product**
  Here, the system displays the identifier of the product along with the description.
- **Identified Stock**  
  Here, the system displays the product ID along with the identified stock ID which together uniquely identifies the identified stock.

- **Logistics Area**  
  Here, the system displays the site ID along with the logistics area ID which together uniquely identifies the logistics area.

- **Processor of Confirmation**  
  The name of the person who performed the warehouse or production task.

**Report Content**

The data in this report is initially displayed in table format. You can display a selection of characteristics and key figures as necessary. The columns with the characteristics are shaded in grey and the columns displaying key figures are white. You select the characteristics you want to display in the table from the Not Currently Shown box to the left of the table and you can choose the key figures from the Key Figures Settings dialog box which you access by clicking the Settings button. You can also display the report as a chart. The two tables below shows the available key figures and some of the most important characteristics that you can choose to display in the table. You can select further columns or hide columns to display other details as required:

> Be careful when defining the variables and characteristics to be shown in the table as the system groups all confirmations with the same characteristics into one line. This means that if you choose all confirmations created today in the variables dialog box and you have also selected the characteristic `Conf.ID`, the system lists each and every confirmation completed in that day in a separate row. If you remove the `Conf.ID` characteristic from the Rows box, the system then displays fewer rows in the report as it can aggregate more information into one row, however, each row contains less specific information. Generally speaking, therefore, the more characteristics you show, the less the system can aggregate the rows in the table and the more specific the information becomes.

**Available Key Figures**

<table>
<thead>
<tr>
<th>Column Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmed Qty (Confirmed Quantity)</td>
<td>Represents the quantity as confirmed by the employee. This quantity is usually positive but may also be negative in the case of a negative adjustment confirmation.</td>
</tr>
<tr>
<td>Inventory Valuation Qty (Confirmed Inventory Valuation Quantity)</td>
<td>Represents the confirmed quantity according to the inventory valuation unit of measure defined for this product in the product master.</td>
</tr>
<tr>
<td>Decreasing Qty (Decreasing Inventory Valuation Quantity)</td>
<td>Represents the confirmed quantity according to the inventory valuation unit of measure defined in the product master, that results in a decrease of inventory levels. For example, a goods issue or a reversal with reference to a goods receipt.</td>
</tr>
<tr>
<td>Increasing Qty (Increasing Inventory Valuation Quantity)</td>
<td>Represents the confirmed quantity according to the inventory valuation unit of measure defined in the product master, that results in an increase of inventory levels. For example, a goods receipt or a reversal with reference to a goods issue.</td>
</tr>
</tbody>
</table>
**Deviation Qty**
(Deviation Quantity)

Represents the difference between a proposed confirmation quantity and the quantity that is actually confirmed.

**Effective Qty**
(Effective Inventory Valuation Quantity)

Represents the confirmed quantity according to the inventory valuation quantity unit of measure defined for this product in the product master. The system adds the appropriate sign (positive or negative) to this quantity to show whether the result of the confirmation actually increases or decreases inventory levels.

For example:
- Goods receipt: 10 pc —> Effective Qty: +10 pc
- Goods issue: 10 pc —> Effective Qty: −10 pc
- Reversal of goods receipt: 10 pc —> Effective Qty: −10 pc
- Reversal of goods issue: 10 pc —> Effective Qty: +10 pc

### Characteristics

<table>
<thead>
<tr>
<th>Column Header</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Execution On</td>
<td>The date on which the warehouse or production task was physically carried out. Note that this characteristic represents the Processed On field in the production tasks and the Actual Execution On field for warehouse tasks.</td>
</tr>
<tr>
<td>Business Transaction Date</td>
<td>The date for allocating periods in financial accounting. Note that this characteristic represents the Physical Inventory Key Date in warehouse processes and the Business Transaction Date for production processes.</td>
</tr>
<tr>
<td>Created On</td>
<td>The date on which the confirmation document was created in the system.</td>
</tr>
<tr>
<td>Product</td>
<td>Depending on your settings, the system may only display the identifier of the product in this column or the product identifier along with the description.</td>
</tr>
<tr>
<td>Identified Stock</td>
<td>Depending on your settings, the system either displays the product ID along with the identified stock ID which uniquely identifies the identified stock. Or, you can change the settings so that only the identified stock is displayed. In this case, the column title changes to Identified Stock ID.</td>
</tr>
<tr>
<td>Logistics Area</td>
<td>Depending on your settings, the system either displays the site ID along with the logistics area ID which together uniquely identifies the logistics area. You also have the option of showing the description, if necessary. Or, you can change the settings so that only the logistics area ID is displayed. In this case, the column title changes to Logistics Area ID.</td>
</tr>
<tr>
<td>Business Residence</td>
<td>Represents the valuation level in financial accounting for stocks:</td>
</tr>
<tr>
<td></td>
<td>• For warehouse stocks, this is the business residence assigned to the site.</td>
</tr>
<tr>
<td></td>
<td>• For in-transit stock, this is the business residence assigned to the sending site.</td>
</tr>
<tr>
<td></td>
<td>• For custodian stock, this is the business residence of the site that first sent this product to this customer.</td>
</tr>
<tr>
<td>Conf.ID (Confirmation ID)</td>
<td>The identifier of the confirmation document. Note that if you want to navigate to the confirmation document, this column has to be preceded by the Conf.Document Type.</td>
</tr>
<tr>
<td>Conf.Document Type (Confirmation Document Type)</td>
<td>The document type can be one of the following:</td>
</tr>
<tr>
<td></td>
<td>• A warehouse confirmation — related to a warehouse order</td>
</tr>
<tr>
<td></td>
<td>• A production confirmation — related to a production order</td>
</tr>
<tr>
<td></td>
<td>• A goods and activity confirmation — related to a goods movement such as a consumption for a cost center or a project</td>
</tr>
</tbody>
</table>
Conf.Item Group

The purpose of the Confirmation Item Group is to couple the two sides involved in a confirmation process. That is the source and the target information of stock transfer postings such as unrestricted stock to blocked stock, or logistics area A to logistics area B. The item group expresses which source item belongs to which target item.

Conf.Type (Confirmation Type)

Denotes the type of the confirmation which may be Standard, Reversal, or Adjustment.

Original Document ID

Represents the ID of the document that first triggered the process. That is, the document that starts the document flow. Note that if you want to navigate to the original document details, this column has to be preceded by the Original Document Type.

Original Document Type

Represents the type of the document that triggered the process such as a sales/service order, warehouse request, outbound delivery, or a stock transfer order, for example. Note that this column should precede the original document ID column to be able to navigate to the original document details.

Original Document Item ID

Represents the item ID of the document that triggered a process.

Reversal Confirmation ID

If the reversal status of a standard confirmation document is Canceled, the system displays the ID of the reversal document here — that is the ID of the document that reversed the original confirmation document. For example, document 2 is the reversal document for document 1. In this case, document 2 is displayed as the Reversal Confirmation ID in document 1.

Reversed Confirmation ID

If the Confirmation Type is Reversal, the original confirmation document which has been reversed is displayed here. For example, document 2 is the reversal document for document 1. In this case, document 1 is displayed as the Reversed Confirmation ID in document 2.

Warehouse Order ID (2nd Warehouse Task)

Represents a stock separator that is used in the two-step warehouse processes to commit stock that lies between step one and step two to the process. This stock is not available for other processes.

Movement Direction

States whether the business process which triggered this confirmation originally began with an inventory issue or an inventory receipt. Note that this information does not change if the confirmation document is reversed. For example, the movement direction of a reversed confirmation for a goods receipt is still Inventory Receipt. The fact that it has been reversed is shown by the confirmation type.

Inventory Change Reason

This column is only relevant for the goods and activity confirmation process. Possible values include Returns of Non-Consumed Goods, Scrapping, Consumption, or Transfer for example.

Analyzing the Report

You can analyze the information in this report by all columns. To analyze the data in this report:

- Use the filters to manipulate the display of data in the content pane.
- Drag and drop characteristics to add or remove data from the content pane.

If you want to navigate from the report to the actual confirmation documents, you have to make sure that the system has all the information required to find the appropriate documents. For example, if you display the Conf.ID column, you cannot navigate to the confirmation document unless you have also displayed the Conf.Document Type column directly before the Conf.ID column. The reason for this is that the confirmation ID in question may refer to more than one document (a warehouse confirmation and a production confirmation). Therefore, in order for the ID to be unique, you have to provide the system with the information on whether it refers to a warehouse confirmation, a production confirmation, or a goods and activity confirmation.
The same applies if you want to navigate to the original document details. Here, you must add the *Original Document ID* characteristic to the *Rows* box and this must be preceded by the *Original Document Type* characteristic. That is, only in combination with the original document type is the original document ID unique.

4.7.4 Outbound Delivery Performance - Quick Analysis

**Overview**

This report provides a multilevel investigation of the level of performance your company provides through correct and on-time deliveries.

By a quick graphical or table overview, you can see in which business areas the delivery performance is not meeting goals. It is only relevant if your organization has a transport relationship with your customers, if you just provide services or cash sales then this report is not relevant.

**Features**

**Running the Report**

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:

- **Sales Unit**
  The department or section that is responsible for sales.

- **Distribution Channel**
  The method used to get a product to the customer.

- **Account**
  The customer who ordered products from your organization.

- **Planning Area**
  The grouping of demand and supply for a selected product from a planning perspective within a site.

- **Product**
  The identifier of the product along with the description.

- **Order Item Creation Date**
  The date on which the order item was created.

- **Requested Delivery Date**
  The date on which the customer requires ordered goods to be delivered.

- **Delivery Date**
  The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

**Report Content**

This report shows an aggregated view and comparison of the date and quantity percentages on aggregation level, for example month, customer, and product group.

Additional information is available for the following key figures and characteristics:

**Key Figures**
• **Requested Quantity**  
The quantity that is actually requested by the customer.

• **Promised Quantity**  
The quantity that was promised to be delivered to the customer.

• **Confirmed Quantity**  
The quantity that is confirmed by an availability check against the requested quantity.

• **Delivered Quantity**  
The quantity that is delivered to the customer.

• **% Delivered Qty by Requested Date**  
Quantity delivered by the requested date divided by the overall delivered quantity; given as a percentage.

• **% Delivered Qty by Promised Date**  
Quantity delivered by the promised date divided by the overall delivered quantity; given as a percentage.

• **% Delivered Qty by Confirmed Date**  
Quantity delivered by the confirmed date divided by the overall delivered quantity; given as a percentage.

• **On Time Delivery% - Requested Date**  
Number of deliveries delivered on the requested date given as a percentage.

• **On Time Delivery% - Promised Date**  
Number of deliveries delivered on the promised date given as a percentage.

• **On Time Delivery% - Confirmed Date**  
Number of deliveries delivered on the confirmed date given as a percentage.

**Characteristics**

• **Order Type**  
The classification of the order. It can either be a sales order, service order, or stock transfer order.

• **Delivery Priority**  
The delivery priority of the sales order. The priority can be **Immediate**, **Urgent**, **Normal**, or **Low**.

• **Requested Delivery Month**  
The month in which the customer requires ordered goods to be delivered.

• **Requested Delivery Week**  
The week in which the customer requires ordered goods to be delivered.

• **Promised Delivery Month**  
The month in which the delivery is promised to arrive at its destination.

• **Promised Delivery Week**  
The week in which the delivery is promised to arrive at its destination.

• **Confirmed Delivery Month**  
The month in which the delivery is confirmed to arrive at its destination.

• **Confirmed Delivery Week**  
The week in which the delivery is confirmed to arrive at its destination.

**Analyzing the Report**

When analyzing the reports you have to decide whether you want to do a rough analysis on aggregated level, for example on customer or product level. You can also easily group the results in time blocks like calendar weeks or calendar months. Use the date and quantity reports for detailed analysis and in-depth research on order and delivery level. If you aggregate the reports, mind that the results depend on the displayed key figures and characteristics. The combination of these key figures has to be handled carefully to ensure that the results are usable and interpretable.

To further analyze data in this report, you can drag characteristics to rows and columns.
Add or remove key figures by clicking the Select Key Figures icon under Columns next to the Key Figures dropdown list.

From this report, you can navigate to:
- Product details
- Account details
- Sales unit details
- Sales responsible details
- Ship-from site details

See Also
Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]

4.7.5 Outbound Delivery Performance by Quantity

Overview
This report provides a multilevel investigation of the level of performance your company provides through correct and on-time deliveries.

By a quick graphical or table overview, you can see in which business areas the delivery performance is not meeting goals. It is only relevant if your organization has a transport relationship with your customers, if you just provide services or cash sales then this report is not relevant.

Features
Running the Report
Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:
- Sales Unit
  The department or section that is responsible for sales.
- Distribution Channel
  The method used to get a product to the customer.
- Account
  The customer who ordered products from your organization.
- Planning Area
  The grouping of demand and supply for a selected product from a planning perspective within a site.
- Product
  The identifier of the product along with the description.
- Order Item Creation Date
  The date on which the order item was created.
• Requested Delivery Date
  The date on which the customer requires ordered goods to be delivered.

• Delivery Date
  The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

Report Content

This report shows an in-depth analysis and measures which part of the delivered quantity was actually delivered on time. The report compares the delivery date with the other dates of the fulfillment process: requested date, promised date, and confirmed date to measure the performance of the delivery.

Outbound Delivery Performance by Quantity - Example

Requested Schedule Line: 10 pieces on February 17
Promised Schedule Line: 8 pieces on February 18, 2 pieces on February 20
Confirmed Schedule Line: 7 pieces on February 18, 3 pieces on February 21
Delivered Schedule Line: 9 pieces on February 20, 1 piece on February 21

<table>
<thead>
<tr>
<th>Requested Date</th>
<th>Promised Date</th>
<th>Confirmed Date</th>
<th>Delivery Date</th>
<th>Requested Quantity</th>
<th>Promised Quantity</th>
<th>Confirmed Quantity</th>
<th>Delivered Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 17</td>
<td>February 18</td>
<td>February 18</td>
<td>February 20</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>February 17</td>
<td>February 18</td>
<td>February 21</td>
<td>February 20</td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>February 17</td>
<td>February 18</td>
<td>February 21</td>
<td>February 21</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

The performance of the delivery is as follows:

• With regard to the requested date: Quantity on Requested Delivery Date = 0
• With regard to the promised date: Quantity on Promised Delivery Date = 0
• With regard to the confirmed date: Quantity on Confirmed Delivery Date = 3

Additional information is available for the following key figures and characteristics:

Key Figures

• Requested Quantity
  The quantity that is actually requested by the customer.

• Promised Quantity
  The quantity that was promised to be delivered to the customer.

• Confirmed Quantity
  The quantity that is confirmed by an availability check against the requested quantity

• Delivered Quantity
  The quantity that is delivered to the customer.

• Quantity on Requested Delivery Date
  The quantity that is delivered on the requested delivery date.

• Quantity on Promised Delivery Date
  The quantity that is delivered on the promised delivery date.

• Quantity on Confirmed Delivery Date
  The quantity that is delivered on the confirmed delivery date.

Characteristics

• Order Type
The classification of the order. It can be either a sales order, service order, or stock transfer order.

- **Delivery Priority**
  The delivery priority of the sales order. The priority can be *Immediate, Urgent, Normal*, or *Low*.

- **Requested Delivery Month**
  The month in which the customer requires ordered goods to be delivered.

- **Requested Delivery Week**
  The week in which the customer requires ordered goods to be delivered.

- **Promised Delivery Month**
  The month in which the delivery is promised to arrive at its destination.

- **Promised Delivery Week**
  The week in which the delivery is promised to arrive at its destination.

- **Confirmed Delivery Month**
  The month in which the delivery is confirmed to arrive at its destination.

- **Confirmed Delivery Week**
  The week in which the delivery is confirmed to arrive at its destination.

**Analyzing the Report**

When analyzing the reports you have to decide whether you want to do a rough analysis on aggregated level, for example on customer or product level. You can also easily group the results in time blocks like calendar weeks or calendar months. Use the date and quantity reports for detailed analysis and in-depth research on order and delivery level. If you aggregate the reports, mind that the results depend on the displayed key figures and characteristics. The combination of these key figures has to be handled carefully to ensure that the results are usable and interpretable.

To further analyze data in this report, you can drag characteristics to rows and columns.

Add or remove key figures by clicking the *Select Key Figures* icon under *Columns* next to the *Key Figures* dropdown list.

From this report, you can navigate to:

- Product details
- Account details
- Sales unit details
- Sales responsible details
- Ship-from site details

**See Also**

Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]

**4.7.6 Outbound Delivery Performance by Time**

**Overview**

This report provides a multilevel investigation of the level of performance your company provides through correct and on-time deliveries.
By a quick graphical or table overview, you can see in which business areas the delivery performance is not meeting goals. It is only relevant if your organization has a transport relationship with your customers, if you just provide services or cash sales then this report is not relevant.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:
- Sales Unit
  The department or section that is responsible for sales.
- Distribution Channel
  The method used to get a product to the customer.
- Account
  The customer who ordered products from your organization.
- Planning Area
  The grouping of demand and supply for a selected product from a planning perspective within a site.
- Product
  The identifier of the product along with the description.
- Order Item Creation Date
  The date on which the order item was created.
- Requested Delivery Date
  The date on which the customer requires ordered goods to be delivered.
- Delivery Date
  The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

Report Content

This report shows an in-depth analysis and measures the performance regarding the compliance on schedule line level. A schedule line (requested, confirmed, promised) can either be delivered as okay or not okay. If a schedule line is delivered as okay, the real delivery date meets exactly the compared value (that is, the requested date). Always the latest delivery is taken into account. The aggregated performance counts the schedule lines delivered as okay and compares the result to the number that was delivered as not okay.

### Outbound Delivery Performance by Time - Example

- Requested schedule line: 10 pieces on February 17
  Delivery: 8 pieces on February 17, 2 pieces on February 23
  -> Date performance for requested date: 50%
- Requested schedule line: 5 pieces on February 15
  Delivery: 5 pieces on February 15
  -> Date performance for requested date: 100%

The date performance for the requested date for this customer is 75% overall.

Additional information is available for the following key figures and characteristics:

**Key Figures**
Requested Quantity
The quantity that is actually requested by the customer.

Promised Quantity
The quantity that was promised to be delivered to the customer.

Confirmed Quantity
The quantity that is confirmed by an availability check against the requested quantity.

Delivered Quantity
The quantity that is delivered to the customer.

Deviation to Requested Date
The deviation between the requested delivery date and the delivery date in days.

Deviation to Promised Date
The deviation between the promised delivery date and the delivery date in days.

Deviation to Confirmed Date
The deviation between the confirmed delivery date and the delivery date in days.

On Time Delivery % - Requested Date
Number of deliveries delivered on the requested date given as a percentage.

On Time Delivery % - Promised Date
Number of deliveries delivered on the promised date given as a percentage.

On Time Delivery % - Confirmed Date
Number of deliveries delivered on the confirmed date given as a percentage.

Characteristics

Order Type
The classification of the order. It can be either a sales order, service order, or stock transfer order.

Delivery Priority
The delivery priority of the sales order. The priority can be Immediate, Urgent, Normal, or Low.

Requested Delivery Month
The month in which the customer requires ordered goods to be delivered.

Requested Delivery Week
The week in which the customer requires ordered goods to be delivered.

Confirmed Delivery Month
The month in which the delivery is confirmed to arrive at its destination.

Confirmed Delivery Week
The week in which the delivery is confirmed to arrive at its destination.

Promised Delivery Month
The month in which the delivery is promised to arrive at its destination.

Promised Delivery Week
The week in which the delivery is promised to arrive at its destination.

Analyzing the Report

When analyzing the reports you have to decide whether you want to do a rough analysis on aggregated level, for example on customer or product level. You can also easily group the results in time blocks like calendar weeks or calendar months. Use the date and quantity reports for detailed analysis and in-depth research on order and delivery level. If you aggregate the reports, mind that the results depend on the displayed key figures and characteristics. The combination of these key figures has to be handled carefully to ensure that the results are usable and interpretable.

To further analyze data in this report, you can drag characteristics to rows and columns.
Add or remove key figures by clicking the Select Key Figures icon under Columns next to the Key Figures dropdown list.

From this report, you can navigate to:

- Product details
- Account details
- Sales unit details
- Ship-from site details

See Also

Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]

4.7.7 Order Fulfillment Outbound Lead Time Averages

Overview

This report provides an analysis of the cycle time for delivered customer orders, from order creation date through to delivery date.

It measures the average of the requested cycle time (that is the cycle time between the order creation date and the requested date) and the order fulfillment cycle time (that is the time difference between the order creation date and the delivery date of the last delivery).

Only completely delivered order items are listed in the report. The report data can be broken down to each order schedule line. It displays order creation date, requested date, and delivery date. This report also highlights exceptions such as delays, early deliveries, and late deliveries.

However, the main goal of the Order Fulfillment Outbound Lead Time Averages report is to calculate average values on customer or product level. If you want to list the difference for single line item, you can use the Order Fulfillment Outbound Lead Time Detailed report.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:

- Sales Unit
  The department or section that is responsible for sales.
- Distribution Channel
  The method used to get a product to the customer.
- Account
  The customer that ordered products from your organization.
- Planning Area
The grouping of demand and supply for a selected product from a planning perspective within a site.

- **Product**
The identifier of the product along with the description.

- **Order Item Creation Date**
The date on which the order item was created.

- **Requested Delivery Date**
The date on which the customer requires ordered goods to be delivered.

- **Delivery Date**
The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

**Report Content**

This report shows an analysis of the average requested cycle time in days and the average order fulfillment cycle time in days.

Additional information is available for the following key figures and characteristics:

**Key Figures**

- **Requested Cycle Time (Days)**
The time difference between the order creation date and the requested date.

- **Order Fulfillment Cycle Time (Days)**
The time difference between the order creation date and the delivery date (goods receipt date) of the last delivery.

- **Average Requested Cycle Time (Days)**
Sum of the requested cycle time divided by the number of delivered order items. Order items have to be completely delivered.

- **Average Order Fulfillment Cycle Time (Days)**
Sum of the order fulfillment cycle time divided by the number of delivered order items. Order items have to be completely delivered.

**Characteristics**

- **Delivery Priority**
The delivery priority of the sales order. The priority can be *Immediate, Urgent, Normal, or Low.*

- **Requested Delivery Month**
The month in which the customer requires ordered goods to be delivered.

- **Requested Delivery Week**
The week in which the customer requires ordered goods to be delivered.

- **Confirmed Delivery Month**
The month in which the delivery is confirmed to arrive at its destination.

- **Confirmed Delivery Week**
The week in which the delivery is confirmed to arrive at its destination.

- **Delivery Month**
The month in which the delivery will reach its destination.

- **Delivery Week**
The week in which the delivery will reach its destination.

**Analyzing the Report**

To further analyze data in this report, you can drag characteristics to rows and columns. Add or remove key figures by clicking the **Select Key Figures** icon under **Columns** next to the **Key Figures** dropdown list.
From this report, you can navigate to:

- Order Fulfillment Outbound Lead Time Detailed [page 188]
- Product details
- Account details
- Sales unit details
- Ship-from site details

See Also

Reports View
Overview of Reports in Supply Chain Management [page 167]
Overview of Data Sources in Supply Chain Management [page 169]

4.7.8 Order Fulfillment Outbound Lead Time Detailed

Overview

This report provides an analysis of the cycle time for delivered customer orders, from order creation date through to delivery date.

It enables you to compare the requested cycle time (that is, the time difference between the order creation date and the requested date) with the order fulfillment cycle time (that is, the time difference between the order creation date and the delivery date of the last delivery).

The report data can be broken down to each order schedule line. It displays order creation date, requested date, and delivery date. This report also highlights exceptions such as delays, early deliveries, and late deliveries.

In the Order Fulfillment Outbound Lead Time Detailed report you can list the difference for every single line item. Aggregation is possible but the days are summed up, which does not make sense for all key figures. If you want to take a look at average values on customer or product level, you should use the Order Fulfillment Outbound Lead Time Averages report.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*).

You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:

- Sales Unit
  The department or section that is responsible for sales.
- Distribution Channel
  The method used to get a product to the customer.
- Account
  The customer that ordered products from your organization.
- Planning Area
  The grouping of demand and supply for a selected product from a planning perspective within a site.
- **Product**
  The identifier of the product along with the description.

- **Order Item Creation Date**
  The date on which the order item was created.

- **Requested Delivery Date**
  The date on which the customer requires ordered goods to be delivered.

- **Delivery Date**
  The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

### Report Content

This report shows an analysis of the order fulfillment cycle time in days and the requested cycle time in days. It provides the time difference between the order entry date and the requested date (requested cycle time). Additionally, the report computes the time difference between the order creation date and the delivery date. The delivery date is the calculated arrival date at the customer’s site based on the shipping duration maintained in the transport lane plus the shipment date. You can also display and calculate the deviation between these values.

Additional information is available for the following key figures and characteristics:

#### Key Figures

- **Order Fulfillment Cycle Time (Days)**
  The time difference between the order creation date and the delivery date (goods receipt date) of the last delivery.

- **Requested Cycle Time (Days)**
  The time difference between the order creation date and the requested date. Note that calculating this key figure only makes sense if the characteristic Order ID is part of the selection.

- **Deviation to Requested Date**
  The deviation between the requested delivery date and the delivery date.

#### Characteristics

- **Delivery Priority**
  The delivery priority of the sales order. The priority can be *Immediate, Urgent, Normal, or Low.*

- **Requested Delivery Month**
  The month in which the customer requires ordered goods to be delivered.

- **Requested Delivery Week**
  The week in which the customer requires ordered goods to be delivered.

- **Confirmed Delivery Month**
  The month in which the delivery is confirmed to arrive at its destination.

- **Confirmed Delivery Week**
  The week in which the delivery is confirmed to arrive at its destination.

- **Delivery Month**
  The month in which the delivery will reach its destination.

- **Delivery Week**
  The week in which the delivery will reach its destination.

- **Order Type**
  The classification of the order. It can either be a sales order, service order, or stock transfer order.

### Analyzing the Report

To further analyze data in this report, you can drag characteristics to rows and columns.
Add or remove key figures by clicking the Select Key Figures icon under Columns next to the Key Figures dropdown list.

From this report, you can navigate to:

- Product details
- Account details
- Sales unit details
- Sales responsible details
- Ship-from site details

See Also

Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]
5 Supply Control

5.1 Business Background

5.1.1 Handover to Production

Overview

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals. Planning proposals for finished products and assemblies with procurement type In-House Production are called production proposals since they are used to trigger the production of a certain quantity of a product for a certain date. You create production proposals either manually or let the system create them during the planning run.

You can analyze and release production proposals in the Process Production Proposals view of the Supply Control work center.

When you release a production proposal, the system creates a production request for it and forwards this request to production. Once production execution is started, the system updates planning with information about the processing status from production.

Structure of Production Proposals

A production proposal contains information about how much of the output products must be produced, when production needs to start and finish, and when the product needs to be available. In detail, the following quantity and date information is provided:

- **Planning quantity**
  The planning quantity is the output product quantity that is to be manufactured.

- **Start date**
  The start date represents the start date of the first planning operation.

- **End date**
  The end date represents the end date of the last planning operation. In most cases, the end date is the same as the availability date.

- **Availability date**
  The availability date represents the date on which the requested product is planned to be available in the planning area to cover the demand. It is the date that the planning run determined or that you entered when you created the planning proposal manually.

- **Opening date**
  The opening date is the date on which the production proposal should be released to production to guarantee on-time fulfillment. It is calculated by the system based on the opening horizon that was defined in the supply control profile in the Fine-Tune step in Business Configuration (Supply Chain Planning and Control Opening Horizon and Validity Checks in Purchasing and Production). The opening horizon represents a time buffer that is required to prepare production execution.

Since the system only creates a production proposal if it finds a valid source of supply, a production proposal is always based on a released planning model version (RPM version). Note that the system uses the product, supply...
planning area, quantity, and start date of the proposal to find a valid RPM version. For more information, see Source Determination in Planning [page 58].

The RPM version in turn consists of a bill of material variant (BoM variant) and a bill of operations (BoO). For this reason, a production proposal contains information about the input products necessary to produce the output product, the resources required for production, and the production process at planning level (that is, the process in terms of planning operations and activities). For more information about RPMs, see Production Models.

Analyzing Production Proposals

In the Process Production Proposals view of the Supply Control work center, you see all production proposals in the system and can easily identify if a Start Date in Past or Proposal Outside of Validity Period exception exists for a receipt. From here, you can go to the following screens to analyze a production proposal:

- **Navigate to material flow**
  This screen shows an overview of all multilevel pegging relationships of the demand and supply related to the selected item. It contains the pegging relationships from top-level demand down to all BoM levels. You can use this information to see how other levels of demand would be affected if you changed the start date, end date, or availability date of the production proposal.

- **Navigate to top-level pegged demand**
  This shows the top-level demand that causes the proposal and indicates if there is an unpegged supply quantity or a quantity requested by demand forecasting. If this is the case, you may consider reducing the planning quantity of the production proposal to avoid a resource overload.

- **Navigate to pegged supply**
  This shows the pegged supply that is caused by the proposal and indicates if there is a problem with supply for an input product required to produce your output product. If this is the case, you may consider reducing the planning quantity of the production proposal, which in turn leads to a reduced input product quantity.

Modifying Production Proposals

Before releasing a production proposal, you can modify it in the Process Production Proposals view or on the Production Proposal screen.

In the Process Production Proposals view, you can do the following:

- **Firm and undo firming**
  By firming a production proposal, you protect it against changes during material planning and load leveling. By default, all production proposals that you created manually are firm ed. Production proposals created in the planning run, on the other hand, are not firm ed unless you manually change the quantity or date, for example. When you undo the firming of a production proposal, it may be changed in the next planning run or by load leveling. Note that if you defined a planning time fence in the product master, this means that within this time period, the planning run is not allowed to create receipts to ensure that the short-term plan remains stable. Instead, receipts are automatically scheduled beyond the planning time fence.

- **Change date and quantity**
  On this screen, you can change the availability date and the quantity before you release a production proposal. Note that on the Production Proposal screen, you can change all other dates except for the opening date, which is calculated by the system. You may consider changing the dates of the production proposal, for example, to prevent a resource from being overloaded. If you change, for example, the availability date, the system reschedules the proposal and adjusts all other dates accordingly.

- **Change the source of supply**
You may want to change the source of supply that the system selected if you decide to use different input products for production or if there is an unplanned machine breakdown. Note that you may even switch to external procurement at this stage (make-or-buy decision).

The Production Proposal screen provides more detailed information about a production proposal. It shows exceptions, the proposal structure, and all the input products and output products for a proposal. You can navigate to the material flow to see the pegged demand and pegged supply, change the quantities and dates (start date, end date, and availability date) of the proposal, change the source of supply, and firm the proposal or undo the firming of a proposal in the same way as in the Process Production Proposals view. In addition, you can do the following on this screen:

- You can acknowledge exceptions or change, for example, the start date of the proposal or change source of supply to resolve the exception.

  If the start date of the production proposal is in the past but the production proposal has not yet been released, the system raises the Start Date in Past exception as this jeopardizes on-time fulfillment. If the start or end date of a production proposal is outside of the validity period of the assigned source of supply, the system raises the Proposal Outside of Validity Period exception.

  For more information about exceptions, see Exception-Based Planning on page 66.

- You can explode the released planning model (RPM), which means that the proposal is exploded based on the valid RPM version considering the actual bill of material (BoM) version. Note that all manual changes are lost when you perform this action.

- You can change the quantities and dates of the input products, add input products, and delete input products. The system then sets the Manual Input Product Change indicator for the production proposal and firms the production proposal if it was created by the planning run. To reset these input product changes, you must explode the released planning model (RPM) again.

- If alternative resources exist, you can activate an alternative resource to be used. The system then reschedules the proposal using the alternative resource you selected.

### Releasing Production Proposals

After you have finished analyzing and modifying the production proposal, you need to release the proposal to production. This can be done manually or in an automated run. Note that if you use automated release runs, you can specify whether you want the system to determine in a validity check whether a valid RPM exists before releasing a proposal. You define this in the supply control profile in the Fine-Tune step in Business Configuration (Supply Chain Planning and Control > Opening Horizon and Validity Checks in Purchasing and Production). Note that you must have the required authorization to make configuration settings.

In most cases, you release production proposals based on the opening horizon. However, you can also release production proposals based on other criteria, such as start date, end date, availability date, opening date, product, planning group, or planning area.

When you release a production proposal, it becomes a production request that you can see in the Monitor Production Requests view. It has the same ID as the production proposal from which it was created.

### Monitoring Production Requests

In the Monitor Production Requests view, you can monitor the processing of the production request that was created for your production proposal. You can search for all production requests with open quantity or overdue production requests with an availability date in the past. In this way, you can easily see by how many days a production request is overdue and spot deviations between the requested date from planning and the actual availability date provided.
by manufacturing. If the availability date of the production request is in the past, but production has not yet been completely confirmed, the system raises the Availability Date in Past exception as on-time fulfillment is jeopardized.

To start production, the production planner must create one or more production orders for the production request. The production request status tells you, for example, when the production order is created or when production has started. When all production orders for a production request are finished, you receive confirmation that the request is finished.

Apart from the information about the processing status, you can monitor how much of the planning quantity of the production proposal (which is the requested quantity in the production request) manufacturing plans to produce (committed quantity), how much has already been produced (fulfilled quantity) and what still needs to be produced (open quantity).

On the Outputs tab, you get information about how production orders are created for your production request. If several lines are displayed, manufacturing created more than one production order.

You can also navigate to the material flow, top-level pegged demand and pegged supply as well as take a look at the product planning details.

To get more detailed information about the production request created for your proposal, you can go to the Production Request screen. This screen is the supply planner’s view of execution as it provides information about the production progress. It contains information about the fulfilled quantity and open quantity, about the actual availability date from production, and about how many input products have been consumed. In addition, it shows exceptions that have occurred for the receipt as well as the structure of the production request.

See Also

Supply Planning [page 14]
Handover to Purchasing [page 194]

5.1.2 Handover to Purchasing

Overview

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals.

Purchase proposals are planning proposals for products with procurement type External Procurement. They are used to cover existing independent and dependent demand for input products and raw materials by triggering the procurement of a certain quantity for a certain date. You can analyze and release purchase proposals in the Process Purchase Proposals view of the Supply Control work center.

When you release a purchase proposal, the system creates a purchase request for it and forwards this request to the purchasing department. Purchasing creates a purchase order for the purchase request and sends the completed purchase order to the supplier. The system updates planning with information from the purchase order.

Structure of Purchase Proposals

A purchase proposal contains the following information:

- **Planning quantity**
  The planning quantity is the product quantity intended to cover the demand.

- **Planned order date**
  The order date represents the date on which the product should be ordered from the supplier.
- **Planned delivery date**  
The planned delivery date represents the date on which the product should be delivered by the supplier.

- **Availability date**  
The availability date represents the date on which the requested product must be available to cover the demand. It is the date that the planning run determined or the date you entered when you created the planning proposal. Note that the goods receipt processing time lies between the availability date and the planned delivery date.

- **Opening date**  
The opening date is the date on which the purchase proposal should be released to purchasing to guarantee on-time fulfillment. It is calculated by the system based on the opening horizon that was defined in the supply control profile in the Fine-Tune step in Business Configuration (Supply Chain Planning and Control > Opening Horizon and Validity Checks in Purchasing and Production). The opening horizon represents a time buffer that is required by the purchasing department to prepare purchasing, such as update the supplier information, check prices, and so on.

- **Earliest requirement date**  
The earliest requirement date is the earliest date on which the pegged demand requires the receipt.

If the system finds a purchasing contract or list price as the source of supply for the product to be purchased, the purchase proposal also contains information on the supplier. Note that the system uses the planned order date of the purchase proposal to find a valid source of supply.

If the system does not find a purchasing contract or list price, the system creates a purchase proposal without a source of supply. For more information, see Source Determination in Planning [page 58].

### Analyzing and Modifying Purchase Proposals

In the **Supply Control** work center, **Process Purchase Proposals** view, you see all purchase proposals in the system. From here, you can navigate to the following screens to analyze a purchase proposal:

- **Navigate to material flow**  
  This screen shows an overview of all multilevel pegging relationships of the demand and supply related to the selected item. It contains the pegging relationships from top-level demand down to all levels of the bill of material (BoM). You can use this information to see how other levels of demand would be affected if you changed the availability date of the purchase proposal.

- **Navigate to top-level pegged demand**  
  This shows the top-level demand that causes the purchase proposal. It indicates, for example, how problems with a purchase proposal affect a sales order for a finished product that requires the product requested in the purchase proposal. As a result, you may want to change the planning quantity or change the source of supply to ensure on-time fulfillment.
  
  Note that there is no pegged demand visible when you create a purchase proposal manually. A material planning run has to take place first and match demand and supply. For more information, see Material Planning [page 52].

If an exception occurs for a purchase proposal, you can go to the **Purchase Proposal** screen to display more detailed information, acknowledge the exception, or change the date or source of supply to resolve the exception.

<table>
<thead>
<tr>
<th>Exception Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The planned order date of the purchase proposal is in the past but the purchase proposal has not yet been released, the system raises the <strong>Start Date in Past</strong> exception as this jeopardizes on-time fulfillment.</td>
</tr>
<tr>
<td>If the planned order date or the planned delivery date of a purchase proposal is outside of the validity period of the assigned source of supply, the system raises the <strong>Proposal Outside of Validity Period</strong> exception.</td>
</tr>
</tbody>
</table>

In addition, you can navigate to the material flow, firm the proposal, undo the firming of a proposal, and release the proposal in the same way as in the **Process Purchase Proposals** view.
Before releasing the purchase proposal, you can modify it as follows:

- **Firm and undo firming**
  By firming a purchase proposal, you protect it against automatic changes during the planning run. By default, all purchase proposals that you created manually are firmed. Purchase proposals created in the planning run, on the other hand, are not firmed unless you manually change the quantity or date, for example. When you undo the firming of a purchase proposal, it may be changed in the next planning run.
  Note that if you defined a planning time fence in the product master, this means that within this time period, the planning run is not allowed to create receipts to ensure that the short-term plan remains stable. Instead, receipts are automatically scheduled beyond the planning time fence.

- **Change date and quantity**
  You can only change the planning quantity and the availability date. The system reschedules the proposal and adjusts all other dates accordingly.

- **Merge proposals**
  You can merge two or more purchase proposals for the same product, product specification, and planning area into one purchase proposal. The earliest delivery date and the sum of all planning quantities are taken as the planned delivery date and planning quantity for the merged proposal. If the purchase proposals you want to merge have different sources of supply, the merged purchase proposal contains no source of supply.

- **Change the source of supply**
  You may want to change the source of supply that the system selected to ensure on-time fulfillment. Note that you may even switch to in-house production at this stage, provided that a released planning model (RPM) exists for the product.

### Releasing Purchase Proposals

After you have finished analyzing and modifying the purchase proposal, you need to release the proposal to purchasing. This can be done manually or in an automated run. Note that if you use automated release runs, you can specify whether you want the system to determine in a validity check whether a valid source of supply exists before releasing a proposal. You define this in the supply control profile in the **Fine-Tune** step in Business Configuration. Note that you must have the required authorization to make configuration settings.

In most cases, you release purchase proposals based on the opening horizon. However, you can also release purchase proposals based on other criteria, such as availability date, delivery date, opening date, order date, product, planning group, planning area, or supplier.

When you release a purchase proposal, it becomes a purchase request that is sent to purchasing. You can see the purchase request with process type **To-Stock** in the **Monitor Purchase Requests** view. The purchase request is assigned its own ID from purchasing but you can still use the purchase proposal ID to search for the purchase request.

### Monitoring Purchase Requests

In the **Monitor Purchase Requests** view, you can monitor the processing of the following:

- Purchase requests of process type **To-Stock** that were created for your purchase proposals and sent to purchasing.
- Purchase requests of process type **Third-Party** that were created in a third-party order processing scenario. For more information, see **Third-Party Order Processing** [page 150].

You can search for the following:

- All open purchase requests
The system displays all purchase requests with an open quantity, which means that purchasing has not yet ordered the complete requested quantity.

- Open purchase requests with a planned order date in the past
  The system displays all purchase requests for which purchasing has not yet ordered the complete requested quantity although the planned order date is today or in the past.

- Open purchase requests with a planned delivery date in the past
  The system displays all purchase requests for which purchasing has not yet ordered the complete requested quantity although the planned delivery date is today or in the past.

- Purchase requests with a canceled quantity
  The system displays all purchase requests of process type To-Stock that were canceled by purchasing and all purchase requests of process type Third-Party that were either canceled by purchasing or for which the sales order was canceled, provided that no purchase order was created for the purchase request. In all of these cases, the open quantity was set to zero.

The details section provides information about the following:

- Requested quantity
  This is the planning quantity from your purchase proposal.

- Ordered quantity
  This is the requested quantity for which purchasing has already created one or more purchase orders.

- Open quantity
  The system calculates the open quantity by subtracting the ordered quantity from the requested quantity. If the remaining open quantity can be canceled, the open quantity is set to zero. Depending on the process type of the purchase request, the remaining open quantity can be canceled as follows:
  - Process type To-Stock
    The remaining open quantity can be canceled by canceling the open quantity in the purchase request.
  - Process type Third-Party
    The remaining open quantity can be canceled by canceling the open quantity in the purchase request provided that no purchase order has been created, or by canceling the third-party sales order item.

- Canceled quantity
  As long as no purchase order has been created for the entire or part of the open quantity of a purchase request, the entire or part of the open quantity is transferred to the canceled quantity when you cancel the open quantity in the purchase request. The purchase request is assigned the status Canceled. Note that this information is only available for purchase requests of process type To-Stock.

- Canceled indicator
  Depending on the process type of the purchase request, theCanceled indicator is set as follows:
  - Process type To-Stock
    The purchase request is assigned the status Canceled irrespective of whether a purchase order has been created or not. If a purchase order exists, however, the canceled quantity is zero.
  - Process type Third-Party
    The purchase request is assigned the status Canceled only if no purchase order exists when the request’s open quantity or the third-party sales order item is canceled.

Note that if a purchase request is canceled after it has been converted into a purchase order in purchasing or if a sales order requiring external fulfillment is canceled after the purchase request has been converted, a BTM task informs the buyer about this cancellation, and he or she must check what must be done. For more information, see Notification - Purchase Request Item Canceled. If the buyer decides to cancel the purchase order, this is reflected in the Canceled Quantity field.

- Requested delivery date
  The requested delivery date is only available for purchase requests of process type Third-Party. It represents the date on which the customer wants the product that he or she ordered to be delivered. The information is
taken from the sales order item and is forwarded to purchasing. In this way, the supplier can be informed about the date that the customer requested even if the planned delivery date determined by the system is later than the requested date.

- **Planned delivery date**
  The planned delivery date represents the date on which the product should be delivered by the supplier. It is determined through scheduling.

- **Planned order date**
  The planned order date represents the date on which the product should be ordered from the supplier so that the planned delivery date is kept.

**Example**

You are monitoring open purchase requests of process type **To-Stock**. The following information is displayed in the overview section:

<table>
<thead>
<tr>
<th>Request ID</th>
<th>Product ID</th>
<th>Requested Quantity</th>
<th>Ordered Quantity</th>
<th>Open Quantity</th>
<th>Canceled Quantity</th>
<th>Canceled</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001–1</td>
<td>ABC01</td>
<td>100</td>
<td>80</td>
<td>20</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

This means that you have requested 100 pieces and purchasing has already created one or more purchase orders for 80 pieces. 20 pieces have not been ordered yet.

When you take a look at the same purchase request a few days later, the following information is shown:

<table>
<thead>
<tr>
<th>Request ID</th>
<th>Product ID</th>
<th>Requested Quantity</th>
<th>Ordered Quantity</th>
<th>Open Quantity</th>
<th>Canceled Quantity</th>
<th>Canceled</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001–1</td>
<td>ABC01</td>
<td>100</td>
<td>80</td>
<td>0</td>
<td>20</td>
<td>X</td>
</tr>
</tbody>
</table>

This means that purchasing could not find a supplier to order the remaining 20 pieces from and therefore canceled the purchase request. For this reason, the open quantity is set to zero and the remaining 20 pieces that were not ordered are shown as the canceled quantity. The status of the purchase request is set to **Canceled**.

Furthermore, the preview section of the **Monitor Purchase Requests** view tells you which purchase orders were created for a purchase request as you can see the purchase order line items and information about the ordered item quantity. In addition, the **Canceled** column shows you if a purchase order line item was canceled by purchasing. Note that if a purchase order item was canceled by purchasing, the ordered quantity in the overview section is reduced and the open quantity is increased accordingly. However, in the preview section the quantity originally ordered is still shown in the **Ordered Quantity** column of the **Assigned Purchase Order Items** tab for information purposes.

From the **Purchase Request Planning Details Overview** screen, you can navigate to the **Purchase Request Overview** screen from purchasing to display more detailed information and change purchase request details if required.

For purchase requests of process type **Third-Party**, you can also navigate to the sales order from which the purchase request was created.

**Monitoring Purchase Orders**

To actually order a product from a supplier, a purchase order must be created in purchasing for the purchase request from planning. This can be done either automatically or a buyer can do it. He or she can bundle purchase requests for the same supplier into a single purchase order.

In the **Monitor Purchase Orders** view, you can monitor the delivery progress in terms of quantity and date for the purchase orders of process types **To-Stock** or **Third-Party** that purchasing created for your purchase requests. You can search for the following:
- **Open purchase order items**
  The system displays all purchase order items for which the delivery is not completed, irrespective of the open quantity. This means that if, for example, the open quantity of a purchase order item of process type *To-Stock* was consumed by an advised inbound delivery, the purchase order item would still be selected as long as the delivery is not completed.

- **Overdue purchase order items**
  The system displays all purchase order items for which the delivery is not completed and that have a planned delivery date of today or before today.

The overview section provides information about the purchase order quantity, the delivery quantity, and the open quantity of a purchase order. You can also see if there are any inbound delivery notifications advised for a purchase order line item of process type *To-Stock* and if the delivery is completed, which means that the goods receipt of the complete quantity ordered or more than the quantity ordered was posted or that purchasing has manually set the delivery to complete. If a purchase order item was canceled, the original purchase order quantity is still displayed for information purposes and the open purchase order quantity is set to zero.

The [Delivery Progress](#) tab in the preview section provides an overview of the actual delivery dates and delivery quantities for a selected purchase order line item. You see detailed information for the following delivery types:

- **Supplier deliveries**
  You can see if there are any inbound delivery notifications advised for purchase order line items of process type *To-Stock* (status *Advised*), if the delivery has arrived at your site and has not yet been processed by the warehouse operator (status *Received*), if delivered quantities are being unloaded by a warehouse operator (status *In Process*), or if all delivered quantities have been moved to a storage location and posted to stock (status *Fulfilled*).
  For more information, see Supplier Delivery Processing.

- **Returns to supplier**
  You can see if quantities to be returned to the supplier are being picked by a warehouse operator (status *In Process*) or if an outbound delivery has been created and released (status *Fulfilled*). Once a return to supplier delivery has been fulfilled, the delivery quantity of the corresponding delivery item reduces the delivery quantity shown in the overview section. The open PO quantity, however, remains zero since it is up to the purchasing department to decide if a replacement is requested. Once a replacement is requested, the open quantity is adjusted accordingly.

**Example**
You ordered and received ten pieces from your supplier. You created a supplier return request for six pieces but the outbound delivery has not been created yet. No replacement has been requested. The quantities are calculated as follows:

<table>
<thead>
<tr>
<th>PO Line Item ID</th>
<th>Product ID</th>
<th>PO Quantity</th>
<th>Delivered Quantity</th>
<th>Open PO Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001–1</td>
<td>ABC01</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

This means that the delivered quantity remains zero since the warehouse operator has not yet shipped the goods, and the open quantity remains zero since no replacement was requested.

Now, the outbound delivery has been created and released and you requested a replacement of six pieces. The quantities are calculated as follows:

<table>
<thead>
<tr>
<th>PO Line Item ID</th>
<th>Product ID</th>
<th>PO Quantity</th>
<th>Delivered Quantity</th>
<th>Open PO Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001–1</td>
<td>ABC01</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

This means that the delivered quantity is reduced to four since you returned six pieces. Since you also requested the replacement of these six pieces, the open quantity is adjusted to six pieces.
If the delivery is completed for a purchase order line item and a return to supplier takes place afterwards, the purchase order is not automatically opened again in the Monitor Purchase Orders view, which means that the Delivery Completed indicator is not removed and the open quantity remains zero. In Purchasing, however, the returned quantity is taken into account to calculate the open quantity and to set the purchase order item to not completely delivered if necessary. A Goods Returned to Supplier task is created in the worklist of the Purchase Orders view in purchasing to inform them about the return to supplier. The buyer can now do the following:

- He or she can explicitly set the delivery to complete in purchasing if no substitute delivery for the returned quantity is requested. Note that if the invoice has already been paid, the buyer can enter a credit memo with reference to the original purchase order.
- He or she can change the delivery date of the original purchase order to use it for purchasing the remaining open quantity. This information is transferred to the Monitor Purchase Orders view, where the Delivery Completed indicator is removed and the open quantity is set accordingly.

For more information, see Return to Supplier Processing - Goods Return Processing.

- Third-party deliveries
You can see the delivery notification ID and the shipment date that the external supplier sent you and that was entered in the Third-Party Delivery Notification view of the Third-Party Order Processing work center. The inbound delivery ID is the internal document that triggers supplier invoicing and the outbound delivery ID triggers customer invoicing.

For more information, see Third-Party Order Processing [page 150].

The Delivery Schedule tab in the preview section is only displayed in the following cases:

- For purchase orders with multiple schedule lines, the tab displays the delivery schedules as confirmed by the supplier.
  For more information, see Purchase Order Acknowledgements.
- For returns to supplier for which replacement was requested, the tab displays the quantity that was requested. Note that the open quantity in the overview section is adjusted accordingly.
  For more information, see Return to Supplier Processing - Goods Return Shipping.

If you need more information about the purchase order (for example, view the document flow for the selected purchase order or display the warehouse provider and the externally-managed location if the purchase order is to be shipped to an externally-managed warehouse), you can go to the Purchase Order Logistics Details screen. From this screen, you can navigate to the Purchase Order Overview screen from purchasing and further on to the Purchase Order screen and change purchase order details, provided that you are authorized to do so.

See Also
Supply Planning [page 14]
Exception-Based Planning [page 66]

5.1.3 Planning Stock Transfers

Overview
As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals.
Stock transfer proposals are planning proposals for products with procurement type *Internal Procurement*. They are used to indicate the movement of stock between two sites of the same company. You can analyze and release stock transfer proposals in the *Process Stock Transfer Proposals* view of the *Supply Control* work center. When you release a stock transfer proposal, the system creates a stock transfer order.

**Structure of Stock Transfer Proposals**

A stock transfer proposal contains information about how much of the product can be shipped from one site to another, and when the product needs to be available in the receiving site. In detail, the following quantity and date information is provided:

- **Planning quantity**
  The planning quantity is the quantity that is to be transferred from the sending site to the receiving site.

- **Availability date**
  The availability date represents the date on which the requested product is planned to be available in the planning area (receiving site) to cover the demand. It is the date that the planning run determined or that you entered when you created the planning proposal manually.

Since the system only creates a stock transfer proposal if it finds a valid source of supply, a stock transfer proposal is always based on a transport lane. Note that the system uses the product, supply planning area, and quantity of the proposal to find a valid transport lane. For more information, see *Source Determination in Planning* [page 58].

**Modifying Stock Transfer Proposals**

Before releasing a stock transfer proposal, you can modify it in the *Process Stock Transfer Proposals* view, on the *Stock Transfer Proposal* screen.

In the *Process Stock Transfer Proposal* view, you can do the following:

- **Firm and undo firming**
  By firming a stock transfer proposal, you protect it against changes during material planning. By default, all stock transfer proposals that you created manually are firmed. Stock transfer proposals created in the planning run, on the other hand, are not firmed unless you manually change the quantity or date, for example. When you undo the firming of a stock transfer proposal, it may be changed in the next planning run.

  If you defined a planning time fence in the product master, this means that within this time period, the planning run is not allowed to create receipts to ensure that the short-term plan remains stable. Instead, receipts are automatically scheduled beyond the planning time fence.

- **Change date and quantity**
  On this screen, you can change the availability date and the quantity before you release a stock transfer proposal.

- **Change the source of supply**
  You may want to change the source of supply that the system selected if you decide to shift different products or if there is an unplanned machine breakdown.

The *Stock Transfer Proposal* screen provides more detailed information about a stock transfer proposal. It shows exceptions, the proposal structure, and the product for a proposal. You can change the planning quantity and availability date of the proposal, change the source of supply, and firm the proposal or undo the firming of a proposal in the same way as in the *Process Stock Transfer Proposals* view. In addition, you can acknowledge exceptions or change, for example, the planning quantity of the proposal or change source of supply to resolve the exception.

For more information about exceptions, see *Exception-Based Planning* [page 66].
Releasing Stock Transfer Proposals

After you have finished analyzing and modifying the stock transfer proposal, you need to release the proposal. This can be done manually in the Process Stock Transfer Proposals view or in an automated run in the Automated Actions view.

You can release stock transfer proposals based on product, planning group, ship-from site or planning area. When you release a stock transfer proposal, it becomes a stock transfer order that you can see in the Customer Demand view of the Outbound Logistics Control work center. It has a new ID, that is different from the stock transfer proposal from which it was created.

In the stock transfer order that is created by releasing a stock transfer proposal, the Ship-to Location is the same as the Ship-to Site. This can later be manually updated in the stock transfer order.

See Also
Supply Planning  [page 14]

5.1.4 Third-Party Order Processing

Overview
You, as supply planner, sales representative, or buyer working as the third-party order processing coordinator of your company, can use third-party order processing to coordinate and monitor the direct shipment of a product to your customer by a supplier rather than your own company.

The following is an example of a typical process flow based on the business scenarios Order-to-Cash and Procure-to-Pay (Stock). Your company sells a product to a customer. However, you do not supply the product to the customer yourself. Instead you order it from a supplier and instruct this supplier to send it to the customer’s address. The supplier then invoices your company accordingly. Based on the shipment information from your supplier, your company, in turn, invoices the customer. Variants of this process flow are possible.

For more information, see business scenarios:
- Order-to-Cash (Third-Party Order Processing — Material)
- Order-to-Cash (Sell-from-Stock)
- Procure-to-Pay (Stock)

This process supports materials bundled together into kits.

If you use kits in your sales processes, please note that the sales kits are now called kits in SAP Business ByDesign system.
Prerequisites

Configuration Settings

- Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

Third-Party Order Processing is enabled in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click [Edit Project Scope].

For this example business process, the settings for the business scenarios Order-to-Cash and Procure-to-Pay (Stock) have been made.

Additionally, for Third-Party Order Processing, the following has been defined:

In Scoping, these business topics must be activated in the following sequence:

- The Sell Standard Products business topic in the Product and Service Portfolio for Sales business package
- The Sales Orders business topic in the Selling Products and Services business package
- The Third-Party Procurement business topic in the Purchase Request and Order Management business package
- In the Purchase Requests business topic of the Purchase Request and Order Management business package, the scoping question Do you want purchase orders to be created automatically from purchase requests? has been answered with Yes.

If your company does not keep products in stock but always deliver them directly from your suppliers, you have to deselect the Shipping business topic in the Outbound Logistics business package. This business topic is automatically selected when the Sell Standard Products and Sales Orders business topics are selected.

The following master data settings are fulfilled:

- In the product master, the product is defined as a product to be purchased and sold, which means that both the status of the Purchasing tab and the status of the sales organizations in the Sales tab are set to Active. This is done in the Materials view of the Product Data work center.
- A purchasing contract or list price for one or more suppliers from which the product can be delivered has been created in the Sourcing and Contracting work center.
- The product is assigned to a product category for which automatic purchase order creation is activated. In this case, the purchase order is created automatically when the sales order is submitted. This is done in the Purchase Requests and Orders work center (Define Automatic Creation of Purchase Orders common task).

You can also configure the solution to post third-party direct shipment documents to inventory in Financials. To find the business option to configure this, select your implementation project and click [Edit Project Scope]. In the Scoping step of the project, ensure that Inventory Valuation is selected within Financial and Management Accounting. In the Questions step, expand the Inventory Valuation scoping element and select Valuation of Purchases and Material Movements. Under Group: Valuation of Purchases and Material Movements, select and answer the question for the Activation of Inventory Postings for Third-Party Direct Shipment business option.
Third-Party Order Processing

1. **Creating the Sales Order**
   In the *Sales Orders* view of the *Sales Orders* work center, the sales representative creates a sales order for an account and enters an item for a product.

   **The system:**
   - Carries out sourcing to determine a source. For the purposes of this scenario, this product can be supplied only by a supplier. Therefore, the system sets the *Fulfillment* indicator to *External* and automatically proposes a supplier. The sales representative can change the supplier by assigning a new source of supply. For more information, see Sales Orders Quick Guide.
   - Triggers an availability check which is based on the supplier lead time. If you have a purchasing contract with the supplier, the supplier lead time is taken from this contract. Otherwise, the supplier lead time is taken from the product master where it could be defined supplier specific. For example, if the confirmed delivery date is later than the requested delivery date because of the supplier lead time, a yellow ATP traffic light is displayed. The requested quantity is either confirmed at the requested delivery date or at a later date depending on the supplier lead time. For more information, see Availability Checking in Third-Party Order Processing Scenarios.
   - Requests a product valuation to determine the purchasing price specific to the supplier and to calculate the profit margin of the sales order. For more information, see Profit Margin.
2. **Creating the Purchase Order**
   The sales representative saves and releases the sales order and sends an order confirmation to the customer. Depending on the output settings, he or she uses e-mail, fax or print to do so or a B2B message is sent to the customer automatically.

   **The system:**
   - Sets both the status of the sales order and the delivery status in the sales order to *In Process*.
   - Creates a customer demand with the delivery type *Third-Party* in the *Customer Demand* view of the *Outbound Logistics Control* work center. The release status of the customer demand is set to *Released* and the delivery status to *Not Started*.
   
   After you have released the sales order, you can no longer change the supplier in the sales order.
   
   For more information, see *Customer Demand Quick Guide* [page 107].
   - Creates a purchase request and a purchase order in the *Purchase Requests and Orders* work center as for the purpose of this scenario the automated purchase order creation has been defined.
   
   The purchase order has the process type *Third-Party*. The status of this purchase order is set to *Sent*, meaning that the supplier has been informed.
   
   For more information, see *Purchase Orders Quick Guide*.
   - Displays the purchase order of the process type *Third-Party* in the *Monitor Purchase Orders* view of the *Supply Control* work center. Here, the supply planner can monitor the progress of the purchase order from a planning and logistics perspective.
   
   For more information, see *Quick Guide for Monitor Purchase Orders* [page 231].

3. **Receiving the Supplier Confirmation**
   Once the supplier has replied to the purchase order, the buyer creates a purchase order acknowledgement to record the delivery quantity and the delivery date confirmed by the supplier. This is done in the *Purchase Orders* view of the *Purchase Requests and Orders* work center.

   For more information, see *Create a Purchase Order Acknowledgement*.

   **The system:**
   - Changes the status of the purchase order from *Sent* to *Acknowledgment Received*.
   - Updates the customer demand with schedule lines containing the quantities and delivery dates based on the confirmation of the supplier.
   - Creates a third-party purchase order in the *Third-Party Purchase Orders* view of the *Third-Party Order Fulfillment* work center. This third-party purchase order has the status *Ordered*.

4. **Receiving the Delivery Acknowledgement**
   Once the supplier has shipped the product to the customer and sent you a copy of the delivery note, the buyer or the sales representative records it by going to the *Third-Party Purchase Orders* view of the *Third-Party Order Fulfillment* work center and creating the third-party delivery notification.

   For more information, see *Quick Guide for Third-Party Purchase Orders*.

   The buyer or the sales representative saves and releases the third-party delivery notification.

   **The system:**
   - Creates a third-party inbound delivery with the status *Released*.
   - Creates a third-party outbound delivery with the status *Released*.
   - Creates a goods and activity confirmation based on the information in the third-party outbound delivery. This confirmation is sent to financial accounting. Based on this outbound delivery, the system creates the outbound delivery invoice request. This is visible in the *Invoice Requests* view of the *Customer Invoicing* work center with the status *To Be Invoiced*.

   For more information, see *Quick Guide for Invoice Requests*. 
If you have selected the option of posting third-party direct shipment documents to inventory in the solution, the goods and activity confirmation is posted to Financials with two additional items for inventory that represents the third-party outbound and inbound deliveries.

- Updates the total goods receipt quantity in the purchase order. The items appear in the Purchasing Document Items view of the Inventory Valuation work center. For more information, see Purchasing Document Items Quick Guide.
- Changes the purchase order status to Follow-up Document Created and the delivery status to Completely Delivered and updates it with the total delivery quantity.
- Updates the final delivery date in the sales order. The items appear in the Sales Document Items view of the Cost and Revenue work center. For more information, see Sales Document Items Quick Guide.
- Changes the delivery status in the sales order to Finished and updates the quantity delivered. The overall status of the sales order remains In Process.
- Changes the delivery status of the customer demand to Finished.
- Updates the schedule lines of the customer demand with the fulfilled quantities and the shipment date.
- Informs supplier invoicing that an invoice for the purchase order can be verified.

5. Receiving the Supplier Invoice

Once the supplier has sent you the invoice, the accountant creates and posts a new supplier invoice with reference to the third-party purchase order in the Invoice Entry view of the Supplier Invoicing work center. For more information, see Create an Invoice or Credit Memo with Reference to Preceding Documents.

The system:
- Saves the document in the Invoices and Credit Memos view of the Supplier Invoicing work center. For more information, see Quick Guide for Invoices and Credit Memos (in Supplier Invoicing).
- Forwards the details of the transaction to the general ledger. The system creates a journal entry for the supplier invoice, posts the supplier invoice as payables in the general ledger, and releases the invoice for payment. For more information, see Journal Entries Quick Guide.
- Updates the purchase order status to Finished and sets the invoice completed status to Invoiced.

6. Creating the Customer Invoice

Based on the outbound delivery invoice request, the accountant creates and releases the customer invoice in the Invoice Requests view of the Customer Invoicing work center. Or, the accountant waits until the next scheduled invoice run when the system automatically processes the invoice requests and creates and releases the invoice. For more information, see Quick Guide for Invoice Requests.

The system:
- The system creates a journal entry for the customer invoice and posts the customer invoice as revenues and receivables as journal entry in the general ledger. In addition, it creates an open item in the customer account. When the payment is received, this open item is cleared. The payment is posted as a cash receipt in the general ledger.
- Updates the sales order item invoice status to Finished. If no other items exist, the system sets the sales order status to Completed.
5.2 Process Production Proposals View

5.2.1 Quick Guide for Process Production Proposals

The Process Production Proposals view of the Supply Control work center gives you an overview of production proposals that have to be released to the production department. The main function of this view is that you can manually control the release of production proposals to production for further processing. You can check for existing planning issues and resolve them before releasing proposals to production.

Business Background

Handover to Production

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals. Planning proposals for finished products and assemblies with procurement type In-House Production are called production proposals since they are used to trigger the production of a certain quantity of a product for a certain date. You create production proposals either manually or let the system create them during the planning run.

You can analyze and release production proposals in the Process Production Proposals view of the Supply Control work center.

When you release a production proposal, the system creates a production request for it and forwards this request to production. Once production execution is started, the system updates planning with information about the processing status from production.

For more information, see Handover to Production [page 191].

Source Determination in Planning

As supply planner, you have to make sure that all types of demand for a product and planning area combination, such as customer demand, forecast demand, and dependent demand, are fulfilled on time and in the quantity required. The system helps you to achieve this by finding the most adequate sources of supply irrespective of whether you plan your products in an interactive or automated planning run, or create planning proposals manually. Based on the availability date and planning quantity of a planning proposal to be created, sourcing first searches among the sources of supply that match the procurement type specified on the Planning tab of the Materials view in the Product Development work center. The following procurement types are available:

- In-house production
- Internal procurement
- External procurement
- Source of supply priority rule

For more information, see Source Determination in Planning [page 58].

Business Scenario: Make-to-Stock

The Make-to-Stock business scenario enables your company to produce goods and place them in stock. Your customer demands such as sales orders or service orders can then be covered using this existing stock. You define demand management procedures to define the appropriate make-to-stock strategies that best suit your company’s
business requirements. Using forecast demand, you can plan for periodic demand. Customer demands are then covered by this produced or procured stock and consume the forecast demand according to the predefined demand management procedures.

Multi-level supply planning ensures that the goods receipts for all required products are planned on time which, in turn, means that you can trigger the creation of purchase orders and production orders on time. If all required components are in stock, you only need to create production orders. Releasing the production order triggers the creation of a production lot and all the necessary production tasks (supply, make, and check) required to commence execution. You use check tasks to ensure the quality of your produced products. When the final confirmation is complete, the system automatically posts the produced stock to the predefined production output area and triggers inventory and financial accounting updates. From here you use remove tasks to transport the stock to the warehouse. For more information, see Make-to-Stock.

**Business Scenario: Order-to-Cash (Make-to-Order)**

The Order-to-Cash (Specified Products) business scenario enables your company to produce and sell products for a specific customer demand.

You can create a sales quote or sales order with a product specification that includes customer-specific requirements, plan the multilevel demand for a sales order item, and create supply for the required products. You can order and receive materials based on requirements from the customer, release the production order, and create production tasks. During task confirmation, it is ensured that only those materials that were replenished for a specific customer demand are consumed. Output products are always confirmed as specified stock. A final inspection identifies if any of the units do not conform to the customer requirements.

You can post a goods issue. The system creates an outbound delivery and the products are shipped to the customer. An invoice is created based on the outbound delivery and the system updates financial accounting.

For more information, see Order-to-Cash (Make-to-Order).

**Tasks**

**Change a Production Proposal**

1. Select the row for the production proposal that you want to edit and click **Edit** to open the **Production Proposal** screen.

2. To display the main data of the production proposal, such as status, product, date, and quantity details, choose the **General** tab. In addition, you can view information about the released planning model being used and the explosion date. If the input products have been changed manually, the **Manual Product Input Change** checkbox is selected. You can also see proposal-related exceptions, that is if a **Start Date in Past** or **Proposal Outside Validity Period** exception for a production proposal has occurred, and acknowledge or resolve the exception. For more information, see the **Acknowledge Exceptions** task description below.

3. Optional: Change the planning quantity for the proposal. The production proposal is rescheduled backward.

4. Optional: Change the availability date, end date or start date of the production proposal. If you change the availability date or end date, the production proposal is rescheduled backward. If you change the start date, the production proposal is rescheduled forward.

5. To protect the production proposal against automatic changes during the planning run and load leveling, click **Firm**. Note that you can also undo this action by clicking **Undo Firm**.
6. To update the production proposal with the latest changes made in the production model, click **Explode RPM**.

7. To select a different production model, click **Change Source of Supply**. Note that you can even turn the production proposal into a purchase proposal by selecting a purchasing contract or list price as the source of supply.

8. To open the material flow, click **Open Material Flow**.

9. To display the planning operations, assigned resources, and input products for each planning operation related to the production proposal, choose the **Proposal Structure** tab.

10. Optional: Move planning operations to alternative resources.

11. To display information about input products and output products related to the production proposal, choose the **Products** tab.

12. Optional: To add, replace, or delete input products for a planning operation, choose the **Input Products** tab.

13. To add a co-product to be manufactured, choose the **Output Products** tab.

14. To release the production proposal to production, click **Release**. The proposal becomes a production request.

**Export Production Proposals to Microsoft Excel**

For more information about this task, see [here](#) [page 50].

**Delete a Production Proposal**

Select the row for the production proposal you want to delete and click **Delete**. The system deletes the production proposal.

**Manually Release a Production Proposal to Production**

1. Select the row for the proposal that you want to release to production.

2. Optional: Analyze the production proposal before releasing it by opening the **Product Planning Details** screen or by navigating to the material flow, top-level pegged demand, or pegged supply.

3. Optional: Modify the production proposal before releasing it by firming the proposal or by changing the availability date, planning quantity, or source of supply.

4. After you have finished analyzing and modifying the production proposal, click **Release**. The production proposal is released to production and becomes a production request that you can see in the **Monitor Production Requests** view. It has the same ID as the production proposal from which it was created.

Note that you can also release the production proposal on the **Production Proposal** screen.

**Open Product Planning Details**

1. Select the row for the production proposal for whose product you want to view the product planning details and click **Open Product Planning Details**. You obtain detailed information about the supply and demand situation for the selected product.

2. Optional: Change the supply and demand situation for the finished product by creating a new planning proposal or editing an existing planning proposal.
For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

Open Material Flow

1. Select the row for the supply element (that is, the production proposal, purchase proposal, production request, purchase request, or purchase order) for which you want to open the material flow, click Navigate to, and then choose Material Flow. The Material Flow screen that appears provides you with information about the entire pegging network from the receipts perspective. It presents the pegging relationships from the top-level demand down to all bill of material (BoM) levels:
   - The upper table shows the top-level demand or supply where the pegging network originates, for example, a sales order, a forecast, or the topmost, pegged supply element if the top-level supply element is not pegged to an independent demand.
   - The hierarchy table in the lower section of the screen shows all the supply elements that are pegged to this top-level element. It also shows the unpegged demand quantity and pegged quantity. The unpegged demand quantity shows how much of the demand quantity is not covered by the available supply due to capacity bottlenecks or stock shortages. The pegged quantity shows you how much of the supply quantity is already pegged to the corresponding demand. In addition, the table contains planning-relevant data such as the status of your reference document, the product ID, and the date of the document (for example, requested date of the demand, availability date of the supply).

Note that the pegging information is only calculated during the planning run. This means that when you access the Material Flow screen, it shows the situation as was determined in the last planning run and may not represent the current situation.

2. Optional: Reschedule the pegging network upwards to the top-level element to optimize your planning processes. You have the following options:
   - Click Reschedule Bottom-Up and then choose From Reference Document. The system reschedules the pegged orders. From the unpegged demand quantity, the planner can determine any capacity or a stock shortages.
   - Click Reschedule Bottom-Up, Close Gaps. The system reschedules the pegged orders without leaving any time interval between them (compact scheduling).

3. Optional: To get a graphical overview of the pegging relationships and easily identify problems within your order network, click Open Material Flow Graph.

4. Optional: Select a supply element and click Reschedule Top-Down. Here the system starts from the selected supply element and reschedules down the pegging network.

5. Optional: To obtain detailed information about the supply and demand situation for the product, product specification, and planning area of the supply element selected, click Open Product Planning Details. Note that you can also open the product planning details for the top-level pegged demand that is the original source of the supply element selected. For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

6. Optional: To release a production proposal or purchase proposal from planning to manufacturing or purchasing respectively, select a proposal from the supply elements table and click Release.
7. Optional: To protect a production or purchase proposal against automatic changes during the planning run and load leveling, select a proposal from the supply elements list, click **Actions**, and then choose **Firm**.

   Note that you can also undo the firming of a proposal using **Undo Firm**.

   Note that you can also open the material flow on the **Production Proposal** screen.

### Display Top-Level Pegged Demand

1. Select the row for the production proposal for which you want to display the top-level pegged demand, click **Navigate to**, and then choose **Top-Level Pegged Demand**.

   The **Top-Level Pegged Demand** screen that appears shows you which supply covers which top-level demand and which top-level demand is affected by changes you make to the supply quantity or date:

   - In the **Supply** section of the screen, you can view detailed information for the supply category selected, such as a production proposal, including the planning quantity, start date, and availability date. In addition, you can see if a production proposal has been firm.
   - In the **Top-Level Pegged Demand** section, you can see which demand category, such as a sales order or forecast, originally caused the production proposal selected, how much is requested, and when the quantity is required.

2. Optional: To open the product planning details for the supply or for the top-level pegged demand, open the material flow, firm, or release the production proposal, click the relevant button as required.

3. Save your entries and return to the production proposal list.

### Display Pegged Supply

1. Select the row for the production proposal for which you want to display the pegged supply, click **Navigate to**, and then choose **Pegged Supply**.

   The **Pegged Supply** screen that appears shows you if there is enough supply pegged for the dependent demand (that is, the input products required to produce your output product) resulting from your production proposal:

   - In the **Production Proposals and Requests** section, you can view detailed information for the selected production proposal, including the planning quantity, start date, and availability date. In addition, you can see if a production proposal has been firm.
   - In the **Pegged Supply** section, you can see the requested input products with the requested quantity and requirement date.

2. Optional: To open the product planning details or material flow, or firm or release the production proposal, click the relevant button as required.

3. Save your entries and return to the production proposal list.

### Firm a Production Proposal

Select the row for the production proposal that you want to firm, click **Actions**, and then choose **Firm**.

The production proposal is now protected against automatic changes during the planning run and load leveling.

Note that you can also undo the firming of a proposal using **Undo Firm**. By default, all production proposals that you created and changed manually are firm.

Note that you can also firm the production proposal on the **Production Proposal** screen.
Change the Date and Quantity of a Production Proposal

1. Select the row for the production proposal whose date or quantity you want to change, click Actions, and then choose Change Date and Quantity.
2. On the Change Date and Quantity screen that appears, change the availability date and planning quantity of the production proposal as required.
3. Save your entries and return to the overview screen.

Change the Source of Supply

1. Select the row for the production proposal whose source of supply you want to change, click Actions, and then choose Change Source of Supply.
   The Change Source of Supply screen that appears displays the current source of supply information in the upper table and available alternative sources of supply that you can assign in the lower table.
2. Select any of the alternative sources of supply in the lower table and click Assign.
   Note that you can even switch from in-house production to external procurement.
3. Save your entries and return to the overview screen.

Note that you can also change the source of supply on the Production Proposal screen.

Acknowledge Exceptions

1. Select the row for the purchase proposal for which the system has raised an exception and click Edit to open the Production Proposal screen.
2. In the Exceptions section, click Acknowledge once you have analyzed and resolved the issue.
   Note that you can always reset the status.

For more information about exceptions, see the Exceptions Quick Guide [page 62].

The following common tasks are available in the Process Production Proposals view:

New Planning Proposal

1. Start the New Planning Proposal common task.
2. In the New Planning Proposal screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date.
   To create more than one planning proposal, click Add Row and enter the details as required. To remove a planning proposal, click Remove.
3. Optional: Select one or more planning proposals and click Release to release the proposals to production or purchasing. The proposals then become requests.
4. Click Save and Close to save the new planning proposal(s) and close the screen.
5. To view the new planning proposal, open the associated product in the Product Planning Details screen in the Products view of the Supply Planning work center, or in the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals views of the Supply Control work center.

Stock Overview

For more information about this task, see here [page 26].
5.3 Monitor Production Requests View

5.3.1 Quick Guide for Monitor Production Requests

The Monitor Production Requests view of the Supply Control work center provides an overview of the production requests that the system created when your production proposals were released. You can clearly see production requests with open quantity or overdue production requests with an availability date in the past. The production request status tells you when one or more production orders have been created for a production request, when production has started, and when all production orders for a production request are finished.

Business Background

Handover to Production

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals. Planning proposals for finished products and assemblies with procurement type In-House Production are called production proposals since they are used to trigger the production of a certain quantity of a product for a certain date. You create production proposals either manually or let the system create them during the planning run. You can analyze and release production proposals in the Process Production Proposals view of the Supply Control work center.

When you release a production proposal, the system creates a production request for it and forwards this request to production. Once production execution is started, the system updates planning with information about the processing status from production.

For more information, see Handover to Production [page 191].

Tasks

Export Production Requests to Microsoft Excel®

For more information about this task, see here [page 50].

Open Product Planning Details

1. Select the row for the production request for whose product you want to view the product planning details and click Open Product Planning Details.
   You obtain detailed information about the supply and demand situation for the selected product.

2. Optional: Change the supply and demand situation for the finished product by creating a new planning proposal or editing an existing planning proposal.
   For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].
Open Material Flow

1. Select the row for the supply element (that is, the production proposal, purchase proposal, production request, purchase request, or purchase order) for which you want to open the material flow, click Navigate to, and then choose Material Flow.

The Material Flow screen that appears provides you with information about the entire pegging network from the receipts perspective. It presents the pegging relationships from the top-level demand down to all bill of material (BoM) levels:

- The upper table shows the top-level demand or supply where the pegging network originates, for example, a sales order, a forecast, or the topmost, pegged supply element if the top-level supply element is not pegged to an independent demand.

- The hierarchy table in the lower section of the screen shows all the supply elements that are pegged to this top-level element. It also shows the unpegged demand quantity and pegged quantity. The unpegged demand quantity shows how much of the demand quantity is not covered by the available supply due to capacity bottlenecks or stock shortages. The pegged quantity shows you how much of the supply quantity is already pegged to the corresponding demand. In addition, the table contains planning-relevant data such as the status of your reference document, the product ID, and the date of the document (for example, requested date of the demand, availability date of the supply).

Note that the pegging information is only calculated during the planning run. This means that when you access the Material Flow screen, it shows the situation as was determined in the last planning run and may not represent the current situation.

2. Optional: Reschedule the pegging network upwards to the top-level element to optimize your planning processes. You have the following options:

   - Click Reschedule Bottom-Up and then choose From Reference Document.
     The system reschedules the pegged orders. From the unpegged demand quantity, the planner can determine any capacity or a stock shortages.

   - Click Reschedule Bottom-Up and then choose From Reference Document and Close Gaps.
     The system reschedules the pegged orders without leaving any time interval between them (compact scheduling).

3. Optional: To get a graphical overview of the pegging relationships and easily identify problems within your order network, click Open Material Flow Graph.

4. Optional: Select a supply element and click Reschedule Top-Down. Here the system starts from the selected supply element and reschedules down the pegging network.

5. Optional: To obtain detailed information about the supply and demand situation for the product, product specification, and planning area of the supply element selected, click Open Product Planning Details.

   Note that you can also open the product planning details for the top-level pegged demand that is the original source of the supply element selected.

   For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

6. Optional: To release a production proposal or purchase proposal from planning to manufacturing or purchasing respectively, select a proposal from the supply elements table and click Release.

7. Optional: To protect a production or purchase proposal against automatic changes during the planning run and load leveling, select a proposal from the supply elements list, click Actions, and then choose Firm.
Note that you can also undo the firming of a proposal using *Undo Firm*.

Note that you can also open the material flow on the *Production Request* screen.

### Display Top-Level Pegged Demand

1. Select the row for the production request for which you want to display the top-level pegged demand, click *Navigate to*, and then choose *Top-Level Pegged Demand*. The *Top-Level Pegged Demand* screen that appears shows you which supply covers which top-level demand and which top-level demand is affected by changes you make to the supply quantity or date:
   - In the *Supply* section of the screen, you can view detailed information for the supply category selected, such as a production proposal or purchase proposal, including the planning quantity, start date and availability date. In addition, you can see if a production proposal or purchase proposal has been firmed.
   - In the *Top-Level Pegged Demand* section, you can see which demand category, such as a sales order or forecast, originally caused the planning proposal or request selected, how much is requested, and when the quantity is required.

2. Optional: To open the product planning details for the supply or for the top-level pegged demand, click the relevant button.

3. Optional: To open the material flow, click *Open Material Flow*.

4. Save your entries and return to the production request list.

### Display Pegged Supply

1. Select the row for the production request for which you want to display the pegged supply, click *Navigate to*, and then choose *Pegged Supply*. The *Pegged Supply* screen that appears shows you if there is enough supply pegged for the dependent demand (that is, the input products required to produce your output product) resulting from your production request:
   - In the *Production Proposals and Requests* section, you can view detailed information for the selected production request, including the planning quantity, start date, and availability date. In addition, you can see if a production proposal has been firmed.
   - In the *Pegged Supply* section, you can see the requested input products with the requested quantity and requirement date.

2. To open the product planning details or material flow, click the relevant button as required.

3. Save your entries and return to the production request list.

### Display the Production Request Structure

1. Select the row for the production request that you want to display and click *View* to open the *Production Request* screen.

2. To display the planning operations, assigned resources, and input products and output product per planning operation related to the production request, choose the *Request Structure* tab.

3. To see how much of each input quantity has been consumed by the production request and how much is still open, choose the *Input Products* tab in the details section. The tab also tells you if there is a due-date violation, which means that the requirement date
of the production request is before the availability date of the pegged supply (for example, a purchase request).

4. Optional: To navigate to the Product Planning Details screen for the input product, select an input product and click Open Product Planning Details.
   For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

5. To see how much of the product quantity has been fulfilled by production and how much is still open, choose the Output Products tab in the details section. You can also see if there is a due-date violation, which means that the availability date of the production request is after the requirement date of the pegged demand (for example, a sales order).

6. Optional: To navigate to the Product Planning Details screen for the output product, select an output product and click Open Product Planning Details.

Display Input and Output Products of a Production Request

1. Select the row for the production request for which you want to display input and output products and click View to open the Production Request screen.

2. To display information about the input products and output products related to the selected production request, choose the Products tab.

3. To view information about the consumed and open product quantity, due-date violations, and the pegged supply for the input product selected, choose the Input Products tab.

4. Optional: To navigate to the Product Planning Details screen for the input product, select an input product and click Open Product Planning Details.
   For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

5. To view information about the fulfilled and open product quantity and to see when the requested product will actually be available from production, choose the Output Products tab.
   You can also see due-date violations and the pegged demand for the output product selected.

6. Optional: To navigate to the Product Planning Details screen for the output product, select an output product and click Open Product Planning Details.

Display the Document Flow

1. Select the row for the production request for which you want to display the document flow and click View to open the Production Request screen.

2. To display the document flow for the selected production request through the supply chain, choose the Document Flow tab.
   For more information, see Document Flow.

The following common tasks are available in the Monitor Production Requests view:

New Planning Proposal

1. Start the New Planning Proposal common task.

2. In the New Planning Proposal screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date.
To create more than one planning proposal, click Add Row and enter the details as required. To remove a planning proposal, click Remove.

3. Optional: Select one or more planning proposals and click Release to release the proposals to production or purchasing. The proposals then become requests.

4. Click Save and Close to save the new planning proposal(s) and close the screen.

5. To view the new planning proposal, open the associated product in the Product Planning Details screen in the Supply Planning work center, or in the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals views of the Supply Control work center.

Stock Overview
For more information about this task, see here [page 26].

5.3.2 Tasks

5.3.2.1 Export Business Data Using Microsoft Excel®

Overview
You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

Prerequisites
- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - Self Services Overview in the Home work center
  - Download Center in the Application and User Management work center
  - Download link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking Check My Computer Settings on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

Procedure
1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click Switch to Chart or Switch to Table.
   - For a worklist, select the worklist and click Go.
3. Click Export, then choose To Microsoft Excel.
4. Optional: Personalizing your excel export
1. To select the columns in your exported excel, do the following:
   a. In the title bar, click Personalize This screen.
   b. In the side panel, select Display Settings.
   c. In the Display Settings dialog box, you can export all the columns in the view by selecting All in the Export Columns field.
   
   The default value for this field is Visible, which exports only the currently displayed columns.

2. To select the language for your excel export, do the following
   a. In the Display Settings dialog box, set the Language Selection field to Show and click OK.
   b. Click Save.
   c. Click Export, then choose To Microsoft Excel.
   d. Select a language in the dialog box that opens.
   
   The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.

5. Select the template in the dialog box that is displayed.

   - If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
   - If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
   - If there is more than one template in the system for this export scenario, the Template List dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.

6. Click Download.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click Open or Save depending on what you want to do with the exported data.

   Depending on whether you click Open or Save, there are two possible results:

   - If you click Open, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
   - If you click Save, a Save As dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully.

   You can later navigate to the location where you have saved the template and open it.
5.4 Process Purchase Proposals View

5.4.1 Quick Guide for Process Purchase Proposals

The Process Purchase Proposals view of the Supply Control work center gives you an overview of purchase proposals that have to be released to the purchasing department. You can clearly see proposals with planning issues, and you can access other information to help resolve these exceptions. The main function of this view is that you can manually control the release of purchase proposals to the purchasing department for further processing.

Business Background

Handover to Purchasing

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals. Purchase proposals are planning proposals for products with procurement type External Procurement. They are used to cover existing independent and dependent demand for input products and raw materials by triggering the procurement of a certain quantity for a certain date. You can analyze and release purchase proposals in the Process Purchase Proposals view of the Supply Control work center.

When you release a purchase proposal, the system creates a purchase request for it and forwards this request to the purchasing department. Purchasing creates a purchase order for the purchase request and sends the completed purchase order to the supplier. The system updates planning with information from the purchase order.

For more information, see Handover to Purchasing [page 194].

Source Determination in Planning

As supply planner, you have to make sure that all types of demand for a product and planning area combination, such as customer demand, forecast demand, and dependent demand, are fulfilled on time and in the quantity required. The system helps you to achieve this by finding the most adequate sources of supply irrespective of whether you plan your products in an interactive or automated planning run, or create planning proposals manually. Based on the availability date and planning quantity of a planning proposal to be created, sourcing first searches among the sources of supply that match the procurement type specified on the Planning tab of the Materials view in the Product Development work center. The following procurement types are available:

- In-house production
- Internal procurement
- External procurement
- Source of supply priority rule

For more information, see Source Determination in Planning [page 58].

Business Scenario: Procure-to-Pay (Stock)

The Procure-to-Pay (Stock) scenario enables you to purchase stock products based on a requirement that can be generated from a planning system, such as a Materials Requirements Planning (MRP) system.
It covers all stages of the procurement process, from demand planning and creation of a purchase order, through automatic or manual assignment of sources of supply, sending the purchase order to a supplier, to goods and services receipt, invoice verification, and payment. For more information, see Procure-to-Pay (Stock).

**Tasks**

**Change a Purchase Proposal**

1. Select the row for the purchase proposal that you want to edit and click **Edit** to open the *Purchase Proposal* screen.
   The screen displays the main data of the purchase proposal, such as status, product, date, and quantity details. You can also see if a *Start Date in Past* or *Proposal Outside Validity Period* exception for a purchase proposal has occurred, and acknowledge or resolve the exception. For more information, see the *Acknowledge Exceptions* task description below.

2. Optional: Change the planning quantity or availability date for the proposal and click the relevant button to release the purchase proposal, firm a purchase proposal, change or remove the source of supply, and open the material flow as required. Note that you can also perform these tasks on the purchase proposal list.

3. Save your entries and return to the purchase proposal list.

**Export Purchase Proposals to Microsoft Excel®**

For more information about this task, see [here](#) [page 50].

**Delete a Purchase Proposal**

Select the row for the purchase proposal that you want to delete and click **Delete**.

The system deletes the purchase proposal.

**Manually Release a Purchase Proposal to Purchasing**

1. Select the row for the proposal that you want to release to purchasing.

2. Optional: Analyze the purchase proposal before releasing it by opening the *Product Planning Details* screen or by navigating to the material flow or top-level pegged demand.

3. Optional: Modify the purchase proposal before releasing it by firming the proposal, changing the availability date or planning quantity, merging proposals, or changing the source of supply.

4. After you have finished analyzing and modifying the purchase proposal, click **Release**.
   The purchase proposal is released to purchasing and becomes a purchase request that you can see in the *Monitor Purchase Requests* view. It is assigned a new ID from purchasing but you can still use the ID of the purchase proposal from which it was created to search for the purchase request.

   Note that you can also release a purchase proposal on the *Purchase Proposal* screen.
Open Product Planning Details

1. Select the row for the purchase proposal for whose product you want to view the product planning details and click Open Product Planning Details. You obtain detailed information about the supply and demand situation for the selected product.

2. Optional: Change the supply and demand situation for the finished product by creating a new planning proposal or editing an existing planning proposal. For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

Open Material Flow

1. Select the row for the supply element (that is, the production proposal, purchase proposal, production request, purchase request, or purchase order) for which you want to open the material flow, click Navigate to Material Flow, and then choose Material Flow. The Material Flow screen that appears provides you with information about the entire pegging network from the receipts perspective. It presents the pegging relationships from the top-level demand down to all bill of material (BoM) levels:
   - The upper table shows the top-level demand or supply where the pegging network originates, for example, a sales order, a forecast, or the topmost, pegged supply element if the top-level supply element is not pegged to an independent demand.
   - The hierarchy table in the lower section of the screen shows all the supply elements that are pegged to this top-level element. It also shows the unpegged demand quantity and pegged quantity. The unpegged demand quantity shows how much of the demand quantity is not covered by the available supply due to capacity bottlenecks or stock shortages. The pegged quantity shows you how much of the supply quantity is already pegged to the corresponding demand. In addition, the table contains planning-relevant data such as the status of your reference document, the product ID, and the date of the document (for example, requested date of the demand, availability date of the supply).

   Note that the pegging information is only calculated during the planning run. This means that when you access the Material Flow screen, it shows the situation as was determined in the last planning run and may not represent the current situation.

2. Optional: Reschedule the pegging network upwards to the top-level element to optimize your planning processes. You have the following options:
   - Click Reschedule Bottom-Up and then choose From Reference Document. The system reschedules the pegged orders. From the unpegged demand quantity, the planner can determine any capacity or a stock shortages.
   - Click Reschedule Bottom-Up and then choose From Reference Document and Close Gaps. The system reschedules the pegged orders without leaving any time interval between them (compact scheduling).

3. Optional: To get a graphical overview of the pegging relationships and easily identify problems within your order network, click Open Material Flow Graph.

4. Optional: Select a supply element and click Reschedule Top-Down. Here the system starts from the selected supply element and reschedules down the pegging network.

5. Optional: To obtain detailed information about the supply and demand situation for the product, product specification, and planning area of the supply element selected, click Open Product Planning Details.
Note that you can also open the product planning details for the top-level pegged demand that is the original source of the supply element selected. For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

6. Optional: To release a production proposal or purchase proposal from planning to manufacturing or purchasing respectively, select a proposal from the supply elements table and click Release.

7. Optional: To protect a production or purchase proposal against automatic changes during the planning run and load leveling, select a proposal from the supply elements list, click Actions, and then choose Firm.

Note that you can also undo the firming of a proposal using Undo Firm.

Note that you can also open the material flow on the Purchase Proposal screen.

**Display Top-Level Pegged Demand**

1. Select the row for the purchase proposal for which you want to display the top-level pegged demand, click Navigate to, and then choose Top-Level Pegged Demand. The Top-Level Pegged Demand screen that appears shows you which supply covers which top-level demand and which top-level demand is affected by changes you make to the supply quantity or date:
   - In the Supply section of the screen, you can view detailed information for the supply category selected, such as a purchase proposal, including the planning quantity, start date, and availability date. In addition, you can see if a purchase proposal has been firmed.
   - In the Top-Level Pegged Demand section, you can see which demand category, such as a sales order or forecast, originally caused the purchase proposal selected, how much is requested, and when the quantity is required.

2. Optional: To open the product planning details for the supply or for the top-level pegged demand, open the material flow, firm, or release the production proposal, click the relevant button as required.

3. Save your entries and return to the purchase proposal list.

**Firm a Purchase Proposal**

Select the row for the purchase proposal that you want to firm, click Actions, and then choose Firm.

The purchase proposal is now protected against automatic changes during the planning run. By default, all purchase proposals that you created and changed manually are firmed.

Note that you can also undo the firming of a proposal using Undo Firm.

Note that you can also firm a purchase proposal on the Purchase Proposal screen.

**Change the Date and Quantity of a Purchase Proposal**

1. Select the row for the purchase proposal whose date or quantity you want to change, click Actions, and then choose Change Date and Quantity.

2. On the Change Date and Quantity screen that appears, change the availability date and planning quantity of the purchase proposal as required.

3. Save your entries and return to the overview screen.
Merge Purchase Proposals

You can combine two or more purchase proposals for the same product, product specification, and planning area into one purchase proposal.

1. Select the rows for the purchase proposals that you want to merge, click Actions, and then choose Merge Proposals.
   The Merge Purchase Proposal screen that appears provides an overview of the purchase proposals that you want to merge and the new purchase proposal. If the purchase proposals that you want to merge have different sources of supply, the new purchase proposal contains no source of supply.
   Note that the system takes the earliest delivery date and the sum of all planning quantities as the planned delivery date and planning quantity for the new purchase proposal.

2. Optional: Change the planned delivery date or planning quantity according to your needs.

3. Release the new purchase proposal to the purchasing department for processing.

Change the Source of Supply for a Purchase Proposal

1. Select the row for the purchase proposal whose source of supply you want to change, click Actions, and then choose Change Source of Supply.
   The Change Source of Supply screen that appears displays the current source of supply information in the upper table and available alternative sources of supply that you can assign in the lower table.

2. Change the source of supply in one of the following ways:
   ● Select any of the alternative sources of supply in the lower table and click Assign.
     Note that you may even switch to in-house production at this stage, provided that a released planning model (RPM) exists for the product.
   ● Click Remove Assignment in the upper table to remove the source of supply currently assigned and to leave it up to the purchasing department to assign a source of supply for the purchase proposal.

3. Save your entries and return to the overview screen.
   Note that you can also change the source of supply on the Purchase Proposal screen.

Acknowledge Exceptions

1. Select the row for the purchase proposal for which the system has raised an exception and click Edit to open the Purchase Proposal screen.

2. In the Exceptions section, click Acknowledge once you have analyzed and resolved the issue.
   Note that you can always reset the status.

For more information about exceptions, see the Exceptions Quick Guide [page 62].

The following common tasks are available in the Process Purchase Proposals view:

New Planning Proposal

1. Start the New Planning Proposal common task.
2. In the New Planning Proposal screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date. To create more than one planning proposal, click Add Row and enter the details as required. To remove a planning proposal, click Remove.

3. Optional: Select one or more planning proposals and click Release to release the proposals to production or purchasing. The proposals then become requests.

4. Click Save and Close to save the new planning proposal(s) and close the screen.

5. To view the new planning proposal, open the associated product in the Product Planning Details screen in the Products view of the Supply Planning work center, or in the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals views of the Supply Control work center.

Stock Overview
For more information about this task, see here [page 26].

5.4.2 Tasks

5.4.2.1 Export Business Data Using Microsoft Excel®

Overview
You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

Prerequisites
- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - Self Services Overview in the Home work center
  - Download Center in the Application and User Management work center
  - Download link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking Check My Computer Settings on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

Procedure
1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click Switch to Chart or Switch to Table.
   - For a worklist, select the worklist and click Go.
3. Click Export, then choose To Microsoft Excel.

4. Optional: Personalizing your excel export

   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click Personalize This screen.
      b. In the side panel, select Display Settings.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting All in the Export Columns field.

         The default value for this field is Visible, which exports only the currently displayed columns.

   2. To select the language for your excel export, do the following
      a. In the Display Settings dialog box, set the Language Selection field to Show and click OK.
      b. Click Save.
      c. Click Export, then choose To Microsoft Excel.
      d. Select a language in the dialog box that opens.

         The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.

5. Select the template in the dialog box that is displayed.

   - If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
   - If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
   - If there is more than one template in the system for this export scenario, the Template List dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.

6. Click Download.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click Open or Save depending on what you want to do with the exported data.

   Depending on whether you click Open or Save, there are two possible results:

   - If you click Open, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
   - If you click Save, a Save As dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully. You can later navigate to the location where you have saved the template and open it.
5.5 Monitor Purchase Requests View

5.5.1 Quick Guide for Monitor Purchase Requests

The Monitor Purchase Requests view of the Supply Control work center allows you to monitor purchase requests from a planning perspective. As a supply planner with no access to purchasing in the system, you need to be able to monitor the progress of the following:

- Purchase requests of process type To-Stock, that is requests that the system creates when your purchase proposals are released to purchasing
- Purchase requests of process type Third-Party, that is requests that are created in a third-party order processing scenario

The view also tells you which purchase orders were created for a purchase request and whether a purchase order item was canceled by purchasing.

Business Background

Handover to Purchasing

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals. Purchase proposals are planning proposals for products with procurement type External Procurement. They are used to cover existing independent and dependent demand for input products and raw materials by triggering the procurement of a certain quantity for a certain date. You can analyze and release purchase proposals in the Process Purchase Proposals view of the Supply Control work center.

When you release a purchase proposal, the system creates a purchase request for it and forwards this request to the purchasing department. Purchasing creates a purchase order for the purchase request and sends the completed purchase order to the supplier. The system updates planning with information from the purchase order.

For more information, see Handover to Purchasing [page 194].

Third-Party Order Processing

You, as supply planner, sales representative, or buyer working as the third-party order processing coordinator of your company, can use third-party order processing to coordinate and monitor the direct shipment of a product to your customer by a supplier rather than your own company. This can be an external supplier or a partner company in an intercompany scenario.

For more information, see Third-Party Order Processing [page 150].

Tasks

Export Purchase Requests to Microsoft Excel®

For more information about this task, see here [page 50].
View Purchase Request Details

1. Select the row for the purchase request for which you want to display detailed information and click View to open the Purchase Request Planning Details Overview screen.

The screen provides an overview of the planned data for a purchase request item and of the actual data for one or more purchase order items that the purchasing department created for your purchase request item.

Note that for purchase requests of process type Third-Party the screen also provides business partner details and information about the sales order from which the purchase request was created.

2. Optional: To navigate to the Purchase Request Overview screen from purchasing, click the request ID. On this screen, you can display more detailed information and change purchase request details if required.

3. Optional: To open the Sales Order Logistics Details screen and display general order information for purchase requests of process type Third-Party, click the sales order ID.

Open Product Planning Details

This action is not available for purchase requests of process type Third-Party.

1. Select the row for the purchase request for whose product you want to view the product planning details and click Open Product Planning Details.

You obtain detailed information about the supply and demand situation for the selected product.

2. Optional: Change the supply and demand situation for the finished product by creating a new planning proposal or editing an existing planning proposal.

For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

Open Material Flow

This action is not available for purchase requests of process type Third-Party.

1. Select the row for the supply element (that is, the production proposal, purchase proposal, production request, purchase request, or purchase order) for which you want to open the material flow, click Navigate to, and then choose Material Flow.

The Material Flow screen that appears provides you with information about the entire pegging network from the receipts perspective. It presents the pegging relationships from the top-level demand down to all bill of material (BoM) levels:

- The upper table shows the top-level demand or supply where the pegging network originates, for example, a sales order, a forecast, or the topmost, pegged supply element if the top-level supply element is not pegged to an independent demand.

- The hierarchy table in the lower section of the screen shows all the supply elements that are pegged to this top-level element. It also shows the unpegged demand quantity and pegged quantity. The unpegged demand quantity shows how much of the demand quantity is not covered by the available supply due to capacity...
bottlenecks or stock shortages. The pegged quantity shows you how much of the supply quantity is already pegged to the corresponding demand. In addition, the table contains planning-relevant data such as the status of your reference document, the product ID, and the date of the document (for example, requested date of the demand, availability date of the supply).

Note that the pegging information is only calculated during the planning run. This means that when you access the Material Flow screen, it shows the situation as was determined in the last planning run and may not represent the current situation.

2. Optional: Reschedule the pegging network upwards to the top-level element to optimize your planning processes. You have the following options:
   - Click Reschedule Bottom-Up and then choose From Reference Document. The system reschedules the pegged orders. From the unpegged demand quantity, the planner can determine any capacity or a stock shortages.
   - Click Reschedule Bottom-Up and then choose From Reference Document and Close Gaps. The system reschedules the pegged orders without leaving any time interval between them (compact scheduling).

3. Optional: To get a graphical overview of the pegging relationships and easily identify problems within your order network, click Open Material Flow Graph.

4. Optional: Select a supply element and click Reschedule Top-Down. Here the system starts from the selected supply element and reschedules down the pegging network.

5. Optional: To obtain detailed information about the supply and demand situation for the product, product specification, and planning area of the supply element selected, click Open Product Planning Details. For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

6. Optional: To release a production proposal or purchase proposal from planning to manufacturing or purchasing respectively, select a proposal from the supply elements table and click Release.

7. Optional: To protect a production or purchase proposal against automatic changes during the planning run and load leveling, select a proposal from the supply elements list, click Actions, and then choose Firm. Note that you can also undo the firming of a proposal using Undo Firm.

Display Top-Level Pegged Demand

This action is not available for purchase requests of process type Third-Party.

1. Select the row for the purchase request for which you want to display the top-level pegged demand, click Navigate to, and then choose Top-Level Pegged Demand. The Top-Level Pegged Demand screen that appears shows you which supply covers which top-level demand and which top-level demand is affected by changes you make to the supply quantity or date:
   - In the Supply section of the screen, you can view detailed information for the supply category selected, such as a purchase request, including the planning quantity,
start date, and availability date. In addition, you can see if a purchase proposal has been firmed.

- In the Top-Level Pegged Demand section, you can see which demand category, such as a sales order or forecast, originally caused the purchase request selected, how much is requested, and when the quantity is required.

2. To open the product planning details or material flow, click the relevant button as required.
3. Save your entries and return to the purchase request list.

**Display the Document Flow**

Select the row for the purchase request for which you want to display the document flow through the supply chain and choose the Document Flow tab.

For more information, see Document Flow.

The following common tasks are available in the Monitor Purchase Requests view:

**New Planning Proposal**

1. Start the New Planning Proposal common task.
2. In the New Planning Proposal screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date.
   To create more than one planning proposal, click Add Row and enter the details as required. To remove a planning proposal, click Remove.
3. Optional: Select one or more planning proposals and click Release to release the proposals to production or purchasing. The proposals then become requests.
4. Click Save and Close to save the new planning proposal(s) and close the screen.
5. To view the new planning proposal, open the associated product in the Product Planning Details screen in the Products view of the Supply Planning work center, or in the Process Production Proposals, Process Purchase Proposals, or Process Stock Transfer Proposals views of the Supply Control work center.

**Stock Overview**

For more information about this task, see here [page 26].

5.5.2 Tasks

5.5.2.1 Export Business Data Using Microsoft Excel®

**Overview**

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.
Prerequisites

- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - Self Services Overview in the Home work center
  - Download Center in the Application and User Management work center
  - Download link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking Check My Computer Settings on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

Procedure

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click Switch to Chart or Switch to Table.
   - For a worklist, select the worklist and click Go.
3. Click Export, then choose To Microsoft Excel.
4. Optional: Personalizing your excel export
   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click Personalize This screen.
      b. In the side panel, select Display Settings.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting All in the Export Columns field.
      The default value for this field is Visible, which exports only the currently displayed columns.
   2. To select the language for your excel export, do the following
      a. In the Display Settings dialog box, set the Language Selection field to Show and click OK.
      b. Click Save.
      c. Click Export, then choose To Microsoft Excel®, then choose To Microsoft Excel®.
      d. Select a language in the dialog box that opens.
      The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.
5. Select the template in the dialog box that is displayed.
6. Click **Download**.
7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click **Open** or **Save** depending on what you want to do with the exported data.

Depending on whether you click **Open** or **Save**, there are two possible results:

- If you click **Open**, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
- If you click **Save**, a **Save As** dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully. You can later navigate to the location where you have saved the template and open it.

### 5.6 Monitor Purchase Orders View

#### 5.6.1 Quick Guide for Monitor Purchase Orders

The **Monitor Purchase Orders** view of the **Supply Control** work center allows you to monitor the progress of purchase orders of process type **To-Stock** or **Third-Party** from a planning and a logistics perspective. The main purpose is to check if the quantities and dates will be met by the suppliers. You can easily see overdue purchase orders which are due to be delivered today or for which the delivery date has already moved to the past.

### Business Background

#### Handover to Purchasing

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals. Purchase proposals are planning proposals for products with procurement type **External Procurement**. They are used to cover existing independent and dependent demand for input products and raw materials by triggering the procurement of a certain quantity for a certain date. You can analyze and release purchase proposals in the **Process Purchase Proposals** view of the **Supply Control** work center.

When you release a purchase proposal, the system creates a purchase request for it and forwards this request to the purchasing department. Purchasing creates a purchase order for the purchase request and sends the completed purchase order to the supplier. The system updates planning with information from the purchase order.

For more information, see **Handover to Purchasing**. [page 194]
Third-Party Order Processing

You, as supply planner, sales representative, or buyer working as the third-party order processing coordinator of your company, can use third-party order processing to coordinate and monitor the direct shipment of a product to your customer by a supplier rather than your own company. This can be an external supplier or a partner company in an intercompany scenario.

For more information, see Third-Party Order Processing [page 150].

Tasks

View Purchase Order Logistics Details

1. To open the Purchase Order Logistics Details screen, select the row for the purchase order line item for which you want to display detailed information and click View. The screen provides detailed information about the purchase order and the delivery progress.

2. To view general information about a purchase order, such as supplier and administrative details, choose the General tab. If the purchase order is to be shipped to an externally-managed warehouse, the warehouse provider and the externally-managed location are displayed in the Warehouse Provider Information section group. Note that you can navigate to the Purchase Order Overview screen from purchasing by clicking the purchase order ID. If you are authorized, you can then navigate to the Purchase Order screen and change purchase order details.

3. To view the purchase order line item details, choose the Line Items tab.
   - The table in the upper section contains date, product, and quantity details. It also indicates if there are any inbound delivery notifications advised for a purchase order item and if the delivery has been completed.
   - The Purchase Order Item section provides further details about the line item selected:
     ○ The General tab shows further product, date, and quantity details for the selected purchase order item.
     ○ The Delivery Progress tab provides an overview of the dates and quantities from the delivery documents. If a return to supplier has taken place, you can use this tab to see how much was sent back to the supplier. Note that once the supplier has delivered the complete quantity, the open quantity is set to zero. Even if you return two pieces, the open quantity remains zero since it is up to the purchasing department to decide if a replacement is requested. If purchasing requests a replacement, the open quantity is adjusted accordingly.
     ○ The Delivery Schedule tab provides the following information:
       ○ For purchase orders with multiple schedule lines, it displays the delivery schedule as confirmed by the supplier.
       For more information, see Purchase Order Acknowledgements.
       ○ If a return to supplier has taken place, it shows what was requested from the supplier. This includes replacement requests.
For more information, see Return to Supplier Processing - Goods Return Shipping.

4. To display the document flow for the selected purchase order through the supply chain, choose the Document Flow tab. For more information, see Document Flow.

Export Purchase Orders to Microsoft Excel

For more information about this task, see here [page 50].

Open Product Planning Details

This action is only available if you are authorized to view the planning details of a specific product. It is not available for purchase order line items of process type Third-Party.

1. Select the row for the purchase order for whose product you want to view the product planning details and click Open Product Planning Details. You obtain detailed information about the supply and demand situation for the selected product.

2. Optional: Change the supply and demand situation for the finished product by creating a new planning proposal or editing an existing planning proposal. For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

Open Material Flow

This action is not available for purchase order line items of process type Third-Party.

1. Select the row for the supply element (that is, the production proposal, purchase proposal, production request, purchase request, or purchase order) for which you want to open the material flow, click Navigate to, and then choose Material Flow.

The Material Flow screen that appears provides you with information about the entire pegging network from the receipts perspective. It presents the pegging relationships from the top-level demand down to all bill of material (BoM) levels:

- The upper table shows the top-level demand or supply where the pegging network originates, for example, a sales order, a forecast, or the topmost pegged supply element if the top-level supply element is not pegged to an independent demand.

- The hierarchy table in the lower section of the screen shows all the supply elements that are pegged to this top-level element. It also shows the unpegged demand quantity and pegged quantity. The unpegged demand quantity shows how much of the demand quantity is not covered by the available supply due to capacity bottlenecks or stock shortages. The pegged quantity shows you how much of the supply quantity is already pegged to the corresponding demand. In addition, the table contains planning-relevant data such as the status of your reference document, the product ID, and the date of the document (for example, requested date of the demand, availability date of the supply).
Note that the pegging information is only calculated during the planning run. This means that when you access the Material Flow screen, it shows the situation as was determined in the last planning run and may not represent the current situation.

2. Optional: Reschedule the pegging network upwards to the top-level element to optimize your planning processes. You have the following options:
   - Click Reschedule Bottom-Up and then choose From Reference Document. The system reschedules the pegged orders. From the unpegged demand quantity, the planner can determine any capacity or a stock shortages.
   - Click Reschedule Bottom-Up and then choose From Reference Document and Close Gaps. The system reschedules the pegged orders without leaving any time interval between them (compact scheduling).

3. Optional: To get a graphical overview of the pegging relationships and easily identify problems within your order network, click Open Material Flow Graph.

4. Optional: Select a supply element and click Reschedule Top-Down. Here the system starts from the selected supply element and reschedules down the pegging network.

5. Optional: To obtain detailed information about the supply and demand situation for the product, product specification, and planning area of the supply element selected, click Open Product Planning Details. Note that you can also open the product planning details for the top-level pegged demand that is the original source of the supply element selected. For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

6. Optional: To release a production proposal or purchase proposal from planning to manufacturing or purchasing respectively, select a proposal from the supply elements table and click Release.

7. Optional: To protect a production or purchase proposal against automatic changes during the planning run and load leveling, select a proposal from the supply elements list, click Actions, and then choose Firm. Note that you can also undo the firming of a proposal using Undo Firm.

**Display Top-Level Pegged Demand**

This action is not available for purchase order line items of process type Third-Party.

1. Select the row for the purchase order for which you want to display the top-level pegged demand, click Navigate to, and then choose Top-Level Pegged Demand. The Top-Level Pegged Demand screen that appears shows you which supply covers which top-level demand and which top-level demand is affected by changes you make to the supply quantity or date:
   - In the Supply section of the screen, you can view detailed information for the supply category selected, such as a purchase order, including the planning quantity, start date, and availability date. In addition, you can see if a purchase proposal has been firm.
   - In the Top-Level Pegged Demand section, you can see which demand category, such as a sales order or forecast, originally caused the purchase order selected, how much is requested, and when the quantity is required.
2. Optional: To open the product planning details for the supply or for the top-level pegged demand, click the relevant button.
3. To open the material flow, click *Open Material Flow*.
4. Save your entries and return to the purchase order list.

The following common tasks are available in the *Monitor Purchase Orders* view:

**New Planning Proposal**
1. Start the *New Planning Proposal* common task.
2. In the *New Planning Proposal* screen, the system creates a new line in the table that represents the new planning proposal. Here, enter the product ID, planning area ID, quantity, and availability date. To create more than one planning proposal, click [Add Row] and enter the details as required. To remove a planning proposal, click [Remove].
3. Optional: Select one or more planning proposals and click [Release] to release the proposals to production or purchasing. The proposals then become requests.
4. Click [Save and Close] to save the new planning proposal(s) and close the screen.
5. To view the new planning proposal, open the associated product in the *Product Planning Details* screen in the *Products* view of the *Supply Planning* work center, or in the *Process Production Proposals*, *Process Purchase Proposals*, or *Process Stock Transfer Proposals* views of the *Supply Control* work center.

**Stock Overview**
For more information about this task, see here [page 26].

### 5.6.2 Tasks

#### 5.6.2.1 Export Business Data Using Microsoft Excel®

**Overview**
You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

**Prerequisites**
- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - *Self Services Overview* in the *Home* work center
  - *Download Center* in the *Application and User Management* work center
  - *Download* link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking *Check My Computer Settings* on the logon screen.
You must be authorized to perform an export to Microsoft Excel*.

**Procedure**

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click *Switch to Chart* or *Switch to Table*.
   - For a worklist, select the worklist and click *Go*.
3. Click [Export], then choose *To Microsoft Excel*.
4. **Optional: Personalizing your excel export**
   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click *Personalize This screen*.
      b. In the side panel, select *Display Settings*.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting **All** in the *Export Columns* field.
         - The default value for this field is **Visible**, which exports only the currently displayed columns.
   2. To select the language for your excel export, do the following
      a. In the Display Settings dialog box, set the *Language Selection* field to *Show* and click [OK].
      b. Click [Save].
      c. Click [Export], then choose *To Microsoft Excel*.
      d. Select a language in the dialog box that opens.
         - The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.
5. Select the template in the dialog box that is displayed.
   - If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
   - If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
   - If there is more than one template in the system for this export scenario, the *Template List* dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.
6. Click [Download].
7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click [Open] or [Save] depending on what you want to do with the exported data.
   Depending on whether you click [Open] or [Save], there are two possible results:
   - If you click [Open], a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
If you click Save, a Save As dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully. You can later navigate to the location where you have saved the template and open it.

5.7 Process Stock Transfer Proposals View

5.7.1 Quick Guide for Process Stock Transfer Proposals

The Process Stock Transfer Proposals view of the Supply Control work center gives you an overview of stock transfer proposals that have to be released. You can clearly see proposals with planning issues, and you can access other information to help resolve these exceptions. The main function of this view is that you can manually control the release of stock transfer proposals to create stock transfer orders.

Business Background

Planning Stock Transfers

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals. Stock transfer proposals are planning proposals for products with procurement type Internal Procurement. They are used to indicate the movement of stock between two sites of the same company. You can analyze and release stock transfer proposals in the Process Stock Transfer Proposals view of the Supply Control work center. When you release a stock transfer proposal, the system creates a stock transfer order. For more information, see Planning Stock Transfers [page 200].

Intracompany Stock Transfer Processing

Intracompany stock transfer processing enables you to plan and process the transfer of products from one site to another of the same company. As supply planner, you can plan your intracompany stock transfers using stock transfer proposals. As warehouse manager, you can process your intracompany stock transfers with or without task support from the system. This document provides an example of a typical process flow describing the stock transfer planning using stock transfer proposals, and the stock transfer process using stock transfer orders either by posting the goods issue and goods receipt directly or by creating the warehouse request and processing warehouse tasks. For the outbound process, the example with tasks uses one-step shipping and for the inbound process, the example with tasks also uses one-step receiving. For more information, see Intracompany Stock Transfer Processing.

Source Determination in Planning

As supply planner, you have to make sure that all types of demand for a product and planning area combination, such as customer demand, forecast demand, and dependent demand, are fulfilled on time and in the quantity required. The system helps you to achieve this by finding the most adequate sources of supply irrespective of whether you plan your products in an interactive or automated planning run, or create planning proposals manually. Based on the availability date and planning quantity of a planning proposal to be created, sourcing first searches among...
the sources of supply that match the procurement type specified on the Planning tab of the Materials view in the Product Development work center. The following procurement types are available:

- In-house production
- Internal procurement
- External procurement
- Source of supply priority rule

For more information, see Source Determination in Planning [page 58].

Business Scenario: Intracompany Stock Transfer

The Intracompany Stock Transfer business scenario enables you to transfer stock from one site to another site within the same company. You create the stock transfer proposal in the receiving site to plan the shipping of stock. You create the stock transfer order in the sending site manually, or by releasing the stock transfer proposal. You complete the outbound processing steps in the sending site in the same way as you would complete outbound processing when based on sales orders. When you create the outbound delivery, an advised inbound delivery notification is created in the receiving site automatically. You then complete the inbound processing steps in the receiving site in the same way as you would complete inbound processing when based on purchase orders.

For more information, see Intracompany Stock Transfer.

Tasks

Change a Stock Transfer Proposal

1. Select the row for the stock transfer proposal that you want to edit and click Edit to open the Stock Transfer Proposal screen.
   The screen displays the main data of the stock transfer proposal, such as status, planning area, date, and quantity details.

2. Optional: Change the planning quantity or availability date for the proposal and click the relevant button to release the stock transfer proposal, or firm or unfirm a stock transfer proposal as required.
   Note that you can also perform these tasks on the stock transfer proposal list.

3. Save your entries and return to the stock transfer proposal list.

Export Stock Transfer Proposals to Microsoft Excel®

For more information about this task, see here [page 50].

Delete a Stock Transfer Proposal

Select the row for the stock transfer proposal that you want to delete and click Delete.

The system deletes the stock transfer proposal.

Manually Release a Stock Transfer Proposal

1. Select the row for the proposal that you want to release.

2. Optional: Analyze the stock transfer proposal before releasing it by opening the Product Planning Details screen or by navigating to the material flow or top-level pegged demand.

3. Optional: Modify the stock transfer proposal before releasing it by firming the proposal, or changing the availability date or planning quantity.
4. After you have finished analyzing and modifying the stock transfer proposal, click **Release**. The stock transfer proposal is released and the system creates a stock transfer order that you can see in the **Customer Demand** view in the **Outbound Logistics Control** work center.

Note that you can also release a stock transfer proposal on the **Stock Transfer Proposal** screen.

**Open Product Planning Details**

1. Select the row for the stock transfer proposal for whose product you want to view the product planning details and click **Open Product Planning Details**. You obtain detailed information about the supply and demand situation for the selected product.

2. Optional: Change the supply and demand situation for the finished product by creating a new planning proposal or editing an existing planning proposal. For details about which tasks you can perform on the **Product Planning Details** screen, see the Tasks section in the Quick Guide for Products in Supply Planning [page 73].

**Firm a Stock Transfer Proposal**

Select the row for the stock transfer proposal that you want to firm, click **Actions**, and then choose **Firm**. The stock transfer proposal is now protected against automatic changes during the planning run. By default, all stock transfer proposals that you created and changed manually are firmed.

Note that you can also undo the firming of a proposal using **Undo Firm**.

Note that you can also firm a stock transfer proposal on the **Stock Transfer Proposal** screen.

**Change the Date and Quantity of a Stock Transfer Proposal**

1. Select the row for the stock transfer proposal whose date or quantity you want to change, click **Actions**, and then choose **Change Date and Quantity**.

2. On the **Change Date and Quantity** screen that appears, change the availability date and planning quantity of the stock transfer proposal as required.

3. Save your entries and return to the overview screen.

**Change the Source of Supply for a Stock Transfer Proposal**

1. Select the row for the stock transfer proposal whose source of supply you want to change, click **Actions**, and then choose **Change Source of Supply**.

   The **Change Source of Supply** screen that appears displays the current source of supply information in the upper table and available alternative sources of supply that you can assign in the lower table.

2. Change the source of supply in one of the following ways:
   - Select any of the alternative sources of supply in the lower table and click **Assign**. Note that you may even switch to in-house production at this stage, provided that a released planning model (RPM) exists for the product.
   - Click **Remove Assignment** in the upper table to remove the source of supply currently assigned and to leave it up to the purchasing department to assign a source of supply for the stock transfer proposal.

3. Save your entries and return to the overview screen.
Note that you can also change the source of supply on the Stock Transfer Proposal screen.

**Acknowledge Exceptions**

1. Select the row for the stock transfer proposal for which the system has raised an exception and click Edit to open the Stock Transfer Proposal screen.

2. In the Exceptions section, click Acknowledge once you have analyzed and resolved the issue.

Note that you can always reset the status.

For more information about exceptions, see the Exceptions Quick Guide [page 62].

Two receipt-related exceptions, that is, Start Date in Past and Availability Date in Past, are raised for stock transfer proposals. For more information, see Exception-Based Planning [page 66].

The following common tasks are available in the Process Stock Transfer Proposals view:

**Stock Overview**

For more information about this task, see here [page 26].

### 5.7.2 Tasks

### 5.7.2.1 Export Business Data Using Microsoft Excel®

**Overview**

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

**Prerequisites**

- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - Self Services Overview in the Home work center
  - Download Center in the Application and User Management work center
  - Download link that is available directly on the user interface

- The settings for your browser must be set correctly. You can review the information about computer settings by clicking Check My Computer Settings on the logon screen.

- You must be authorized to perform an export to Microsoft Excel®.

**Procedure**

1. Go to the screen with the data you want to export.

2. Depending on the type of data, choose one of these options:
• For a report, you can either export a chart or a table. To do so, select the report, and click Switch to Chart or Switch to Table.
• For a worklist, select the worklist and click Go.

3. Click Export, then choose To Microsoft Excel.

4. Optional: Personalizing your excel export

   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click Personalize This screen.
      b. In the side panel, select Display Settings.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting All in the Export Columns field.

         The default value for this field is Visible, which exports only the currently displayed columns.

   2. To select the language for your excel export, do the following:
      a. In the Display Settings dialog box, set the Language Selection field to Show and click OK.
      b. Click Save.
      c. Click Export, then choose To Microsoft Excel.
      d. Select a language in the dialog box that opens.

         The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.

5. Select the template in the dialog box that is displayed.

   • If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
   • If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
   • If there is more than one template in the system for this export scenario, the Template List dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.

6. Click Download.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click Open or Save depending on what you want to do with the exported data.

   Depending on whether you click Open or Save, there are two possible results:
   • If you click Open, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
   • If you click Save, a Save As dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully. You can later navigate to the location where you have saved the template and open it.
5.8 Automated Actions View

5.8.1 Quick Guide for Automated Actions (in Supply Control)

The Automated Actions view of the Supply Control work center enables you to create, maintain, and monitor mass data runs for the automated release of proposals from the planning department to the production and purchasing departments.

The following mass data runs are available:

- Release Production Proposal Run
- Release Purchase Proposal Run
- Release Stock Transfer Proposal Run

Business Background

Mass Data Runs (MDR)

A Mass Data Run (MDR) is the automatic mass processing of a task or a business transaction. MDRs enable mass processing of business data and are used in business processes, for example, invoice runs, payment authorization runs, or balance confirmation runs. When a user schedules an MDR the system represents it as a background job. During scoping, it is possible to provide default variants of the MDRs.

MDRs are created and maintained in the work centers. Using the Job Scheduler, users schedule the run to execute once or regularly at specified times.

In the Background Jobs view of the Application and User Management work center, you can monitor and reschedule MDR jobs that are created by users in other work centers.

For more information, see Mass Data Runs (MDR).

Handover to Production

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals.

Planning proposals for finished products and assemblies with procurement type In-House Production are called production proposals since they are used to trigger the production of a certain quantity of a product for a certain date. You create production proposals either manually or let the system create them during the planning run.

You can analyze and release production proposals in the Process Production Proposals view of the Supply Control work center.

When you release a production proposal, the system creates a production request for it and forwards this request to production. Once production execution is started, the system updates planning with information about the processing status from production.

For more information, see Handover to Production [page 191].

Handover to Purchasing

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals.
Purchase proposals are planning proposals for products with procurement type External Procurement. They are used to cover existing independent and dependent demand for input products and raw materials by triggering the procurement of a certain quantity for a certain date. You can analyze and release purchase proposals in the Process Purchase Proposals view of the Supply Control work center.

When you release a purchase proposal, the system creates a purchase request for it and forwards this request to the purchasing department. Purchasing creates a purchase order for the purchase request and sends the completed purchase order to the supplier. The system updates planning with information from the purchase order.

For more information, see Handover to Purchasing [page 194].

Planning Stock Transfers

As supply planner, your main task is to balance demand (requirements) and supply (receipts) within your supply chain. You plan receipts to cover existing independent and dependent demand by means of planning proposals.

Stock transfer proposals are planning proposals for products with procurement type Internal Procurement. They are used to indicate the movement of stock between two sites of the same company. You can analyze and release stock transfer proposals in the Process Stock Transfer Proposals view of the Supply Control work center.

When you release a stock transfer proposal, the system creates a stock transfer order.

For more information, see Planning Stock Transfers [page 200].

Intracompany Stock Transfer Processing

Intracompany stock transfer processing enables you to plan and process the transfer of products from one site to another of the same company. As supply planner, you can plan your intracompany stock transfers using stock transfer proposals. As warehouse manager, you can process your intracompany stock transfers with or without task support from the system.

This document provides an example of a typical process flow describing the stock transfer planning using stock transfer proposals, and the stock transfer process using stock transfer orders either by posting the goods issue and goods receipt directly or by creating the warehouse request and processing warehouse tasks. For the outbound process, the example with tasks uses one-step shipping and for the inbound process, the example with tasks also uses one-step receiving.

For more information, see Intracompany Stock Transfer Processing.

Business Scenario: Make-to-Stock

The Make-to-Stock business scenario enables your company to produce goods and place them in stock. Your customer demands such as sales orders or service orders can then be covered using this existing stock. You define demand management procedures to define the appropriate make-to-stock strategies that best suit your company’s business requirements. Using forecast demand, you can plan for periodic demand. Customer demands are then covered by this produced or procured stock and consume the forecast demand according to the predefined demand management procedures.

Multi-level supply planning ensures that the goods receipts for all required products are planned on time which, in turn, means that you can trigger the creation of purchase orders and production orders on time. If all required components are in stock, you only need to create production orders. Releasing the production order triggers the creation of a production lot and all the necessary production tasks (supply, make, and check) required to commence execution. You use check tasks to ensure the quality of your produced products. When the final confirmation is complete, the system automatically posts the produced stock to the predefined production output area and triggers inventory and financial accounting updates. From here you use remove tasks to transport the stock to the warehouse.

For more information, see Make-to-Stock.
Business Scenario: Order-to-Cash (Make-to-Order)

The Order-to-Cash (Specified Products) business scenario enables your company to produce and sell products for a specific customer demand.

You can create a sales quote or sales order with a product specification that includes customer-specific requirements, plan the multilevel demand for a sales order item, and create supply for the required products. You can order and receive materials based on requirements from the customer, release the production order, and create production tasks. During task confirmation, it is ensured that only those materials that were replenished for a specific customer demand are consumed. Output products are always confirmed as specified stock. A final inspection identifies if any of the units do not conform to the customer requirements.

You can post a goods issue. The system creates an outbound delivery and the products are shipped to the customer. An invoice is created based on the outbound delivery and the system updates financial accounting.

For more information, see Order-to-Cash (Make-to-Order).

Business Scenario: Procure-to-Pay (Stock)

The Procure-to-Pay (Stock) scenario enables you to purchase stock products based on a requirement that can be generated from a planning system, such as a Materials Requirements Planning (MRP) system.

It covers all stages of the procurement process, from demand planning and creation of a purchase order, through automatic or manual assignment of sources of supply, sending the purchase order to a supplier, to goods and services receipt, invoice verification, and payment.

For more information, see Procure-to-Pay (Stock).

Business Scenario: Intracompany Stock Transfer

The Intracompany Stock Transfer business scenario enables you to transfer stock from one site to another site within the same company. You create the stock transfer proposal in the receiving site to plan the shipping of stock. You create the stock transfer order in the sending site manually, or by releasing the stock transfer proposal. You complete the outbound processing steps in the sending site in the same way as you would complete outbound processing when based on sales orders. When you create the outbound delivery, an advised inbound delivery notification is created in the receiving site automatically. You then complete the inbound processing steps in the receiving site in the same way as you would complete inbound processing when based on purchase orders.

For more information, see Intracompany Stock Transfer.

Tasks

Create a Release Production Proposal Run

1. On the Release Production Proposal Runs subview, click New to open the New Release Production Proposals Run screen. Alternatively, you can click Copy to copy an existing release production proposals run. The New Release Production Proposals Run screen then opens with the run description and selection criteria filled automatically by the system. You can then edit and add to this information, where appropriate.

2. In the General Data section, enter an ID and, if required, a description for the run.

3. In the Selection By Date section, specify date criteria for selecting proposals.
1. By default, **Within Opening Horizon** is selected, which means that all production proposals with opening dates within the opening horizon period defined in Business Configuration are selected. If necessary, select a date type, such as, availability date, and specify either a number of days within which proposals should be included or a date range instead. The system then includes or excludes production proposals based on these criteria.

4. On the relevant tab of the **Selection Criteria** section, click **Add Row**, and use the **Inclusion/Exclusion** list and the **Search Pattern** list to specify if you want to include or exclude products, planning groups, or planning areas and to further define which products, planning groups, or planning areas you want to include or exclude. The system then includes or excludes proposals based on these criteria. Depending on what you selected from the **Search Pattern** list, you must enter a single value in the **From** field, a single value in the **To** field, or a value range in the **From** and **To** fields.

5. Repeat this step for each set of products, planning groups, or planning areas you want to add to or exclude from the run.

6. To activate the run, click **Set to Active**. You an also later activate the run by clicking **Actions** and choosing **Set to Active** on the overview screen.

7. To save the run and return to the **Release Production Proposal Runs** screen, click **Save and Close**.

**Create a Release Purchase Proposals Run**

1. On the **Release Purchase Proposal Runs** subview, click **New** to open the **New Release Purchase Proposals Run** screen. Alternatively, you can click **Copy** to copy an existing release production proposals run. The **New Release Purchase Proposals Run** screen then opens with the run description and selection criteria filled automatically by the system. You can then edit and add to this information, where appropriate.

2. In the **General Data** section, enter an ID and, if required, a description for the run.

3. In the **Selection By Date** section, specify date criteria for selecting proposals.
By default *Within Opening Horizon* is selected, which means that all purchase proposals with opening dates within the opening horizon period defined in Business Configuration are selected. If necessary, select a date type, such as, availability date, and specify either a number of days within which proposals should be included or a date range instead. The system then includes or excludes purchase proposals based on these criteria.

4. On the relevant tab of the **Selection Criteria** section, click **Add Row** and use the **Inclusion/Exclusion** list and the **Search Pattern** list to specify if you want to include or exclude products, planning groups, suppliers, or planning areas and to further define which products, planning groups, suppliers, or planning areas you want to include or exclude. The system then includes or excludes proposals based on these criteria. Depending on what you selected from the **Search Pattern** list, you must enter a single value in the **From** field, a single value in the **To** field, or a value range in the **From** and **To** fields.

5. Repeat this step for each set of products, planning groups, suppliers, or planning areas you want to add to or exclude from the run.

6. To activate the run, click **Set to Active**. You can also later activate the run by clicking **Actions** and choosing **Set to Active** on the overview screen.

7. To save the run and return to the **Release Purchase Proposal Runs** subview, click **Save and Close**.

**Schedule a Release Purchase Proposals Run**

1. On the **Release Purchase Proposal Runs** subview, click **Schedule** to open the **Schedule Job** screen. You can also schedule the run on the **New Release Purchase Proposals Run** screen.

2. Choose one of the following options as required:
   - Choose **Start Immediately** to execute the run immediately.
   - Choose **Run After Job** and select a job. The run will then be executed immediately after the specified job.
   - Choose **Single Run** to define a date and time for the run. If you want to execute the run at regular time intervals, choose **Recurrence** and choose a recurrence for the run, for example, daily, weekly, or monthly.

3. To save the run and return to the **Release Purchase Proposal Runs** subview, click **Save and Close**. The run has been scheduled and will be executed as specified.

**Create a Release Stock Transfer Proposals Run**

1. On the **Release Stock Transfer Proposals** subview, click **New** to open the **New Stock Transfer Proposal Run** screen.

2. In the **General Data** section, enter an ID and, if required, a description for the run.

3. In the **Selection By Date** section, specify date criteria for selecting proposals.

4. On the relevant tab of the **Selection Criteria** section, click **Add Row** and use the **Inclusion/Exclusion** list and the **Search Pattern** list to specify if you want to include or exclude products, planning groups, ship-from locations, or planning areas and to further define which products, planning groups, ship-from locations, or planning areas
you want to include or exclude. The system then includes or excludes proposals based on these criteria. Depending on what you selected from the Search Pattern list, you must enter a single value in the From field, a single value in the To field, or a value range in the From and To fields.

5. Repeat this step for each set of products, planning groups, ship-from locations, or planning areas you want to add to or exclude from the run.

6. To activate the run, click Set to Active. You can also later activate the run by clicking Actions and choosing Set to Active on the overview screen.

7. To save the run and return to the Release Stock Transfer Proposals subview, click Save and Close.

Schedule a Release Stock Transfer Proposals Run


2. Choose one of the following options as required:
   - Choose Start Immediately to execute the run immediately.
   - Choose Run After Job and select a job. The run will then be executed immediately after the specified job.
   - Choose Single Run to define a date and time for the run. If you want to execute the run at regular time intervals, choose Recurrence and choose a recurrence for the run, for example, daily, weekly, or monthly.

3. To save the run and return to the Release Stock Transfer Proposals subview, click Save and Close. The run has been scheduled and will be executed as specified.

Export Release Proposal Runs to Microsoft Excel®

For more information about this task, see here [page 50].

5.8.2 Tasks

5.8.2.1 Export Business Data Using Microsoft Excel®

Overview

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

Prerequisites

- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
Procedure

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click Switch to Chart or Switch to Table.
   - For a worklist, select the worklist and click Go.
3. Click Export, then choose To Microsoft Excel.
4. Optional: Personalizing your Excel export
   1. To select the columns in your exported Excel, do the following:
      a. In the title bar, click Personalize This screen.
      b. In the side panel, select Display Settings.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting All in the Export Columns field.
         The default value for this field is Visible, which exports only the currently displayed columns.
   2. To select the language for your Excel export, do the following:
      a. In the Display Settings dialog box, set the Language Selection field to Show and click OK.
      b. Click Save.
      c. Click Export, then choose To Microsoft Excel.
      d. Select a language in the dialog box that opens.
         The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.
5. Select the template in the dialog box that is displayed.
   - If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
   - If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
   - If there is more than one template in the system for this export scenario, the Template List dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.
6. Click Download.
7. A message shows that you can open or save the file which contains the data that you have just exported from
the solution. Click **Open** or **Save** depending on what you want to do with the exported data.

Depending on whether you click **Open** or **Save**, there are two possible results:

- If you click **Open**, a worksheet opens with the data in Microsoft Excel. The file has a temporary name,
  but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save
  that worksheet.
- If you click **Save**, a **Save As** dialog box opens. You can specify an appropriate file name and a location
to save the exported Microsoft Excel file to. A message will inform you when the download has
completed successfully.

You can later navigate to the location where you have saved the template and open it.

5.9 Reports View

5.9.1 Production Request Fulfillment

**Overview**

This report shows the planned quantities and dates for a production request, and the actual confirmed quantities
and dates recorded.

**Views**

The following views are available with this report:

- Production Request Fulfillment by Production Request
  Shows the product, planned and end dates, fulfilment rate, on time status, and fulfilled and requested
  quantities for each production request in table format.
- Production Request Fulfillment Detail
  Shows all of the fulfillment details for each production request in table format.

**Features**

**Running the Report**

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify
a value for all mandatory variables. In the system, mandatory variables are indicated by an asterisk (*). You can
define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:

- Production Request ID
- Planned Production End Date
- Final Segment
- Output Product
- Production Group
- Planned Category
Report Content
The following data is filtered for this report:
- Final Segment

The report shows an analysis of the following:
- Requested Quantity
- Fulfilled Quantity
- Fulfillment Rate
- Production End Date
- On Time Status
- Production Start Date

Analyzing the Report
To further analyze data in this report, you can drag characteristics to rows and columns.
From this report, you can navigate to:
- Production Request Fulfillment Detail

See Also
Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]
6 Outbound Logistics Control

6.1 Customer Demand View

6.1.1 Customer Demand Quick Guide

The Customer Demand view provides an overview of your demand that can result from sales orders that are fulfilled internally or externally, from sales orders that contain sales kits, as well as from service orders, stock transfer orders, and project stock orders. Information on the availability status, release status, and delivery status helps you to monitor and optimize the fulfillment of demand from a supply chain perspective.

The view enables you to quickly identify confirmation issues, as schedule lines for the order line items provide detailed information about the dates and quantities that are requested, confirmed, released, not confirmed, or fulfilled. You can also use this view to release confirmed order items to logistics execution to trigger the delivery of the products requested.

You can access the Customer Demand view from the following locations:

- Supply Planning work center
- Outbound Logistics Control work center

For Sales Kits-

- You can display the hidden columns — Sales Kit Product, Parent Line Item ID, Base Quantity and Not Goods Issue Relevant to view sales kit information.
- If you want to view the sales orders that contain sales kits, you can use the advanced search and select Sales Kit in the Item Group field.

For Project Stock Orders-

- You can display the hidden columns — Project ID and Project Task ID to view project stock order information.
- If you want to view the customer demand corresponding to project stock orders, you can use the advanced search and select Project Stock Order in the Order Category field.
- You can display the hidden fields — Project ID and Project Task ID in the advanced search under Customer Demand Data, to filter the customer demand corresponding to project stock orders, based on the search parameters.

For Sales Orders, Service Order, Stock Transfer Orders, and Project Stock Orders-

- You can display the hidden column Confirmation Basis under the Schedule Lines tab of the Details section for a sales order, service order, stock transfer order, or project stock order. This column displays whether the system sets the status of the availability check based on stock, receipt or replenishment lead time.

For more information about availability checks, see Availability Checks [page 16].
Business Background

Ship-From Determination and Shipment Scheduling for Customer Demand

As supply planner, you can use ship-from determination and shipment scheduling for customer demand to determine the following:

- A site or supplier from which the product is delivered to the customer
- The date when the product must be available to ship (execution start date)
- The date on which the product is shipped to the customer (shipment date)
- The date on which the product arrives at the customer site (delivery date)

This information is used by planning, production, and logistics to ensure the customer order is fulfilled on time. Ship-from determination is triggered when a customer demand, such as a sales order, service order, project stock order, or sales quote is entered in the system. It determines the ship-from site or supplier for the products requested and is a prerequisite, for example, for planning runs and availability checks. Ship-from determination uses several sources of information (transport lanes, purchasing contracts, and list prices) to determine the site or supplier from which the product is delivered.

For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

Availability Checks

Availability checks enable you, as a supply planner, to answer the question of whether or not a requested quantity of a product is available at a certain place at a certain point in time. Confirmations as a result of these checks not only give a reliable answer to this question, they are also required for the follow-on processes in logistics execution. Providing a reliable delivery date at the very time when a quote or order is entered in the system, helps you to improve customer satisfaction.

The system allows you to check the availability for sales orders, service orders, stock transfer orders, project stock orders, and sales quotes.

For more information, see Availability Checks [page 16].

Complete Delivery Orders

You can use complete delivery orders to ensure that the complete quantity of all material items of a sales order or stock transfer order, or the complete quantity of all spare part items of a service order is shipped together on the same date and in a single delivery. This avoids partial deliveries, which often result in a product that is useless for your customer. In addition, complete delivery orders help you save logistics costs.

The complete delivery requirements must be adhered to in planning but the system offers enough flexibility for special situations. In execution, the process is not as strict and the request for complete delivery may be overruled.

For more information, see Complete Delivery Orders [page 128].

Third-Party Order Processing

You, as supply planner, sales representative, or buyer working as the third-party order processing coordinator of your company, can use third-party order processing to coordinate and monitor the direct shipment of a product to your customer by a supplier rather than your own company. This can be an external supplier or a partner company in an intercompany scenario.

For more information, see Third-Party Order Processing [page 150].
Intracompany Stock Transfer Processing

Intracompany stock transfer processing enables you to plan and process the transfer of products from one site to another of the same company. As supply planner, you can plan your intracompany stock transfers using stock transfer proposals. As warehouse manager, you can process your intracompany stock transfers with or without task support from the system.

This document provides an example of a typical process flow describing the stock transfer planning using stock transfer proposals, and the stock transfer process using stock transfer orders either by posting the goods issue and goods receipt directly or by creating the warehouse request and processing warehouse tasks. For the outbound process, the example with tasks uses one-step shipping and for the inbound process, the example with tasks also uses one-step receiving.

For more information, see Intracompany Stock Transfer Processing.

Sales Kit Process Flow

A kit is defined as a logical group of items that can be sold or purchased together as one unit. Wholesale and component manufacturing industries like to offer product bundles as single selling units. In the Business ByDesign system a single selling or purchasable unit comprising of various components is called a kit.

For more information, see Sales Kit Process Flow [page 274].

Sourcing Material from Stock for Projects

During the execution of a project, you may need to procure material for use in the project. You can choose to either source the material from stock or purchase the material.

For more information, see Sourcing Material from Stock for Projects.

Business Scenario: Order-to-Cash (Sell-from-Stock)

The Order-to-Cash (Sell-from-Stock) business scenario enables you to sell goods from stock using a wide range of standard features to handle sales quotes, sales orders, deliveries, customer invoices, and payments. This scenario includes features, such as, available-to-promise (ATP) check, pricing, credit card, credit limit check, and automatic order creation.

For more information, see Order-to-Cash (Sell-from-Stock).

Business Scenario: Order-to-Cash (Make-to-Order)

The Order-to-Cash (Specified Products) business scenario enables your company to produce and sell products for a specific customer demand.

You can create a sales quote or sales order with a product specification that includes customer-specific requirements, plan the multilevel demand for a sales order item, and create supply for the required products. You can order and receive materials based on requirements from the customer, release the production order, and create production tasks. During task confirmation, it is ensured that only those materials that were replenished for a specific customer demand are consumed. Output products are always confirmed as specified stock. A final inspection identifies if any of the units do not conform to the customer requirements.

You can post a goods issue. The system creates an outbound delivery and the products are shipped to the customer. An invoice is created based on the outbound delivery and the system updates financial accounting.

For more information, see Order-to-Cash (Make-to-Order).

Business Scenario: Order-to-Cash (Third-Party Order Processing - Material)

The Order-to-Cash (Third-Party Order Processing - Material) business scenario enables your company to create sales orders that are used to ship products with or without a product specification to your customer directly from a supplier rather than from your own company. A third-party purchase request is created automatically when you
release a sales order for a product to which purchasing contracts and/or list prices have been assigned in the system. The third-party purchase order can be created automatically or manually. You can enter the supplier’s confirmation data in the system when they send the delivery notification. Based on this third-party delivery, supplier invoicing and customer invoicing is triggered. You can use the Order-to-Cash (Third-Party Order Processing – Material) scenario if you always ship directly from a supplier or if you only ship directly from a supplier in exceptional cases. For more information, see Order-to-Cash (Third-Party Order Processing - Material).

**Business Scenario: Intracompany Stock Transfer**

The Intracompany Stock Transfer business scenario enables you to transfer stock from one site to another site within the same company. You create the stock transfer proposal in the receiving site to plan the shipping of stock. You create the stock transfer order in the sending site manually, or by releasing the stock transfer proposal. You complete the outbound processing steps in the sending site in the same way as you would complete outbound processing when based on sales orders. When you create the outbound delivery, an advised inbound delivery notification is created in the receiving site automatically. You then complete the inbound processing steps in the receiving site in the same way as you would complete inbound processing when based on purchase orders.

For more information, see Intracompany Stock Transfer.

**Business Scenario: Field Service and Repair**

The Service and Repair business scenario enables your service department to provide repair and maintenance to your customers on-site, at your own service center, or at the service center of a supplier. It provides functions to handle service requests, plan service orders and related activities, and fulfill, confirm, and invoice services. There are also enhanced functions for:

- Customer warranties, to bring transparency to your warranty business, to allow you to meet any legal requirements, and provide information on warranty-related cost and profit.
- Service levels, to define reaction times, specify and measure performance objectives, and designate milestones and operating hours.
- Outsourcing, to offer and sell third-party services, whether you outsource your field service organization partially or completely.

Service and Repair incorporates business functions from related areas that directly support service delivery, such as from Supply Chain Management for spare part logistics, warehousing, and inventory; and from Financial Accounting for processing due items and payments.

For more information, see Field Service and Repair.

**Business Scenario: Materials in Projects**

The Materials in Projects business scenario is relevant for project-based service providers who handle materials in addition to services (for example, infrastructure service providers, IT, or energy infrastructure as gas pipeline or wind power). They need to plan and schedule materials on projects, procure these materials from within the project, and sell these materials along with the project services within one project invoice. This scenario enables you to source materials from your own inventories by creating project stock orders. You can choose to either source the material from stock or purchase the material.

For more information, see Materials in Projects.
Tasks

- Any action that is performed at the sales kit level applies to all the sales kit items. For example, if you release the confirmed schedule lines for a sales kit, the system will release the confirmed schedule lines for all the sales kit items.

Display Order Logistics Details for a Sales Order, Service Order, or Project Stock Order

1. To open the *Order Logistics Details* screen for the relevant order category, select the row for a sales order, service order, or project stock order and click *Edit*.
2. To display general information about the order, including contact details, sales organization details, and delivery information, choose the *General* tab.
3. To display a line-by-line breakdown of all line items from the selected order, choose the *Line Items* tab.
4. Optional: Select a row and click the relevant button to release the confirmed schedule lines for an order item, open the product planning details, open the order item planning details, check the availability, force a confirmation, or cancel a confirmation as required. For sales orders of delivery type *Third-Party*, you can use this screen to release confirmed schedule lines and check the availability.
   - Note that you can also perform these tasks on the customer demand list.
   
   - If the sales order contains a sales kit, you can perform these tasks only for the sales kit and not for individual sales kit items.

5. Optional: To change the source of supply for an order that has not been released, select a row and choose the *Alternative Sources* tab. For more information about this task, see the *Manually Re-Source a Sales Order, Service Order, or Project Stock Order* task below.
   
   - If the sales order contains a sales kit, you can change the source of supply for individual sales kit items and not for the sales kit.

6. To display the document flow for the selected order through the supply chain, choose the *Document Flow* tab.
   
   - For more information, see Document Flow.

   Note that you cannot change most of the information on this screen. To change order data, click *You can Also -> Open Sales Order Overview* to navigate to the *Sales Order Overview* screen from Sales.

Manually Re-Source a Sales Order, Service Order, or Project Stock Order

1. To open the *Order Logistics Details* screen for the relevant order category, select the row for a sales order, service order, or project stock order line item that has not been released and click *Edit*.

   - Note that you cannot re-source stock transfer orders.
To be able to change the source of supply for line items that are part of a complete delivery order, you must first switch off complete delivery temporarily. For more information see, the task **Temporarily Switch Off Complete Delivery** below.

2. Choose the **Line Items** tab and select the line item for which you want to change the source of supply.

3. To view the transport lanes, purchasing contracts, or list prices that are available as sources of supply for an order line item, choose the **Alternative Sources** tab. Note that the system has performed a simulative availability check, that is, without confirming quantities for the alternative sources listed here. The **Currently selected Source of Supply** column indicates which source is used at the moment.

If the sales order contains a sales kit, you can change the source of supply for individual sales kit items and not for the sales kit.

4. Select the transport lane, purchasing contract, or list price from which you want to source the order and click **Deliver from Selected Source of Supply**. The system performs a binding availability check with confirmed quantities for the source you selected. The result is displayed in the **Availability Status** column in the line item table.

For complete delivery orders, you must assign the same source of supply to all order line items. Otherwise, the system will not let you save.

5. Save your entries.

**Export Customer Demand to Microsoft Excel**

For more information about this task, see here [page 50].

**Open Product Planning Details**

This action is only available if you are authorized to view the planning details of a specific product. It is not available for order line items with delivery type **Third-Party**. It is also not available for sales kits.

Select the row for the sales order, service order, stock transfer order, or project stock order for which you want to view the product planning details and click **Open Product Planning Details**.

You obtain detailed information about the supply and demand situation for the selected product. For details about which tasks you can perform on the **Product Planning Details** screen, see the Tasks section of the **Quick Guide for Products in Supply Planning** [page 73].

**Open Order Item Planning Details**

This action is not available for orders line items with delivery type **Third-Party**. It is also not available for sales kits.
1. Select the row for the sales order, service order, stock transfer order, or project stock order for which you want to open the order item planning details and click [Open Order Item Planning Details].

The screen shows the multilevel product structure of the requested product based on the valid bill of material (BoM) and provides planning-relevant supply and demand information for every item of the product structure.

2. Define which levels of the product structure are shown in the list as required:
   - To display all levels of the product structure that are affected by an exception, click [Show Path with Exceptions].
     All other levels are hidden.
   - To display all levels of the product structure, click [Show Entire Path].

3. Open the material flow for the order item, navigate to the product planning details, or start an interactive planning run as required:
   - To get an overview of the multilevel pegging relationships of the demand and supply related to the selected item and identify planning issues due to lateness and insufficiently pegged quantities, click [Open Material Flow].
     For details about which tasks you can perform on the Material Flow screen, see Open Material Flow in the Tasks section of the Quick Guide for Process Production Proposals [page 207].
   - To get detailed information about the supply and demand situation for the selected product and to solve existing exceptions, for example, by changing the source of supply, click [Open Product Planning Details].
     For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section of the Quick Guide for Products in Supply Planning [page 73].
   - To start an interactive planning run to plan the supply for the actual demand or to resolve existing planning issues, click [Run Planning].
     Note that if you choose Single BoM Level, the system performs the planning run for the selected level of the product structure only. If you choose Multi BoM Level, the planning run is carried out for the selected level of the product structure and all levels below this level.
     For details about interactive planning, see the Tasks section of the Quick Guide for Products in Supply Planning [page 73].

Release a Sales Order, Service Order, Stock Transfer Order, or Project Stock Order

Sales order line items with delivery type Third-Party are released automatically when the sales order is released. For this reason, the action is only available if purchasing canceled the open quantity of the purchase request and you can now re-source the customer demand and then release it again.

1. Do the following:
   - You can configure the solution to do a second availability check based on stock alone. To find the business option to configure this, select your implementation project and click [Edit Project Scope]. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control. In the Questions step, expand the Demand Management and Order Confirmation scoping element and select Product Availability Check. Under Group: Stock-Based Availability Check, select and answer the question.
If you have configured the solution to do a second availability check based on stock, do the following:

- If you want the system to do a second availability check based on stock while releasing the customer demand, select the corresponding customer demand item, whose confirmed schedule lines you want to release, so that execution can start. Click [Release] > [With Stock Check]

  In case of multiple delivery, the confirmed schedule line is split based on the stock availability when this check is performed and the confirmed schedule line is released accordingly for available stock. However, in case of any single delivery rule, the confirmed schedule line is not split and only released when the check confirms that the entire confirmed quantity of that schedule line is available for execution.

- If you do not want the system to do a second availability check based on stock while releasing the customer demand, select the corresponding customer demand item, whose confirmed schedule lines you want to release so that execution can start. Click [Release] > [Without Stock Check]

  - Select the row for the sales order, service order, stock transfer order, or project stock order line item whose confirmed schedule lines you want to release so that execution can start and click [Release].

If you select an item that is part of a complete delivery order and therefore belongs to a delivery group, the system releases all other items of the delivery group along with the item that you selected. If not all items of the delivery group can be released, the system releases none of the items.

- If a sales order contains a sales kit, you can release the confirmed schedule lines only for the sales kit and not for individual sales kit items.

To get an overview of your complete delivery orders and check the availability status of the delivery groups, use the Complete Delivery Orders show option or group the list by delivery group. For more information, see Complete Delivery Orders [page 128].

If the item that you selected has more than one confirmed schedule line or if you selected several items to be released, the Release Schedule Lines dialog box appears.

2. In the Release Schedule Lines dialog box, choose one of the following options:

- Enter a date so that the system releases all confirmed schedule lines of the selected order line item with an execution start date up until the date you entered.

- Do not enter a date so that the system releases all confirmed schedule lines of the selected order line item.

The order line item is released and a delivery proposal is created, which you can see in the Delivery Control view of the Outbound Logistics work center. The warehouse manager can then create a warehouse request for the delivery proposal or post a goods issue.

When you release a sales orders of delivery type Third-Party, a purchase request is created in the Purchase Request view of the Purchase Requests and Orders work center.

You can also release the confirmed schedule lines of a sales order, service order, stock transfer order, or project stock order on the Order Logistics Details screen for the relevant order category.
Check Availability

1. Select the row for the sales order, service order, stock transfer order, or project stock order line item for which you want to perform an availability check, and find out when and in what quantity the requested products will be available. Note that this action is only available for order line items that have been partially released or not released.

2. Click [Actions] and then choose Check Availability. The system carries out the availability check for the line item you selected, saves the result of the check, and updates the availability status information accordingly.

Note that if you want to get an earlier confirmation date for a line item that is part of a complete delivery order, you must check the availability for all items of the order since the item with the latest confirmation date determines the confirmation date for the entire delivery group. For more information, see Availability Checks for Complete Delivery Orders [page 130].

Note that for sales orders of delivery type Third-Party, a yellow availability status indicates late delivery. The requested quantity is always fully confirmed.

Force a Confirmation

Note that this action is not available for order line items with delivery type Third-Party.

Select the row for the sales order, service order, stock transfer order, or project stock order line item for which you want to force a confirmation, click [Actions], and then choose Force Confirmation. Note that this action is only available for order line items that have been partially released or not released.

The system confirms the requested quantity on the requested date for the order line item selected. If the requested date is in the past, the system confirms the requested quantity on the present day. Only use this action if you are entirely sure that a demand can be confirmed as requested.

Note that if you force the confirmation for a line item that is part of a complete delivery order, you can only solve quantity issues, for example, overwrite a confirmation with zero quantity. If you want to force the confirmation to improve the confirmed delivery date, you must first switch off complete delivery temporarily. For more information, see the task Temporarily Switch Off Complete Delivery below.

Customer demand that was manually confirmed in a forced confirmation is not included in confirmation update runs.

Note that you can undo a forced confirmation by canceling the confirmation or by checking the availability again.

Cancel a Confirmation

Note that this action is not available for order line items with delivery type Third-Party.

If a sales order contains a sales kit, this action is available only for the sales kit and not for individual sales kit items.
Select the row for the sales order, service order, stock transfer order, or project stock order line item for which you want to cancel the confirmation, click Actions, and then choose Cancel Confirmation. Note that this action is only available for order line items that have been partially released or not released.

The system sets the confirmed quantity on the requested date back to zero for this order line item. The availability status is set to Not Confirmed. The quantity that becomes available in this way can now be allocated to another order for the same product when you check the availability again.

Temporarily Switch Off Complete Delivery

- This action is only available for line items that are part of a complete delivery order.
- If a sales order contains a sales kit, this action is available only for the sales kit and not for individual sales kit items.

1. To open the Order Logistics Details screen for the relevant order category, select the row for a sales order or service order line item that has not been released and click Edit.

2. To see what the confirmed dates and quantities of the individual items of an order would look like if they were not combined in a delivery group, that is, if their dates were not aligned, choose the Line Items tab, select any of the line items, click Actions, and then choose Temporarily Switch Off Complete Delivery. The system switches off complete delivery and checks the availability for all line items of the order again. You can now change the availability situation for individual items without taking the other items of the delivery group into account. Note that you must switch on complete delivery again to be able to save your changes.

3. Optional: Re-source an item that is late to any of the alternative sources of supply listed on the Alternative Sources tab. Note that you must assign the same source of supply to all order line items. Otherwise, the system will not let you save your entries.

4. Optional: Force the confirmation for an item that is late to the requested date. Note that forcing the confirmation for one item, does not necessarily mean that the confirmed delivery date for the entire delivery group moves to the requested date or at least to an earlier date than before. When you switch complete delivery back on, the system realigns the confirmed delivery dates of all items and the item with the latest confirmation date determines the confirmation date for the entire delivery group.

5. To check how your changes affect the availability situation of your delivery group and to be able to save your changes, click Actions, and then choose Switch On Complete Delivery. The system recalculates the availability status on delivery group level.

6. If you are satisfied with the result, save your entries.

Edit Order Logistics Details for a Stock Transfer Order

1. Select the row for a stock transfer order line item and click Edit to open the Edit Stock Transfer Order Logistics Details screen.

2. On the General Data tab, change the ship-from site, ship-to site/ship-to location, or delivery priority, or select the Complete Delivery Order checkbox as required. Note that these changes are only possible if all order line items have the status Not Released.
3. For order line items that have the status *Not Released*, make the following changes on the Line Items tab as required:
   - Change the product, requested quantity, requested delivery date, or freight forwarder for an existing line item.
   - Add new line items and remove line items that have not been saved.
   - Cancel and release line items.

Note that for order line items that have the status *Partially Released* or *Released*, you can only add new line items and remove line items that have not been saved.

4. Save your entries and return to the customer demand list. The system changes the stock transfer order accordingly.

**Maintain the Freight Forwarder for a Stock Transfer Order**

1. Select the row for a stock transfer order that has not been released and click **Maintain Freight Forwarder**.
2. In the **Maintain Freight Forwarder** dialog box that appears, enter a freight forwarder ID for the selected stock transfer order item and click **OK** to save the changes and return to the customer demand list.

Note that you can also maintain the freight forwarder for a stock transfer order item on the Line Items tab of the **Edit Stock Transfer Order Logistics Details** screen.

The following common tasks are available in the Customer Demand view:

**Stock Overview**

For more information about this task, see here [page 26].

**New Stock Transfer Order**

1. Start the **New Stock Transfer Order** common task.
2. Specify a ship-from site ID, a ship-to site ID, and a ship-to location ID. The ship-to site and ship-to location may have been modeled in your system as follows:
   - The ship-to site is also the ship-to location:
     In this case, the ship-to site also has the role of the ship-to location. The ship-to location ID (which is the same as the ship-to site ID) is entered automatically when the user enters the ship-to site ID and presses Enter.
   - The ship-to site and ship-to location are different and there is only one ship-to location:
     In this case, the ship-to location ID is entered automatically when the user enters the ship-to site ID and presses Enter.
   - The ship-to site and ship-to location are different and there are more than one ship-to locations:
     In this case, the ship-to location ID cannot be entered automatically when the user enters the ship-to site ID as the assignment is not unique. If, however, the user enters the ship-to location ID, the ship-to site ID is entered automatically as this assignment is unique.

For more information, see Locations and Location Layouts.

3. Optional: Select a delivery priority.
Note that if you select **Immediate** as the priority, the system automatically releases the stock transfer order to outbound logistics provided that the order can be confirmed today.

4. Optional: To specify that you want to ship all items with the same requested date, ship-to address, and delivery rule together in one outbound delivery, select the **Complete Delivery Order** checkbox.

5. On the **Line Items** tab, click **Add Row** and enter the product ID and the requested quantity of the product that you want to ship.

6. Repeat this step for each product you want to ship.

7. Click **Release** to release the stock transfer order and save your entries.

### 6.1.2 Business Background

#### 6.1.2.1 Ship-From Determination and Shipment Scheduling for Customer Demand

**Overview**

As supply planner, you can use ship-from determination and shipment scheduling for customer demand to determine the following:

- A site or supplier from which the product is delivered to the customer
- The date when the product must be available to ship (execution start date)
- The date on which the product is shipped to the customer (shipment date)
- The date on which the product arrives at the customer site (delivery date)

This information is used by planning, production, and logistics to ensure the customer order is fulfilled on time. Ship-from determination is triggered when a customer demand, such as a sales order, service order, project stock order, or sales quote is entered in the system. It determines the ship-from site or supplier for the products requested and is a prerequisite, for example, for planning runs and availability checks. Ship-from determination uses several sources of information (transport lanes, purchasing contracts, and list prices) to determine the site or supplier from which the product is delivered.

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For stock transfer orders that you use to ship goods from one site of your company to another, the system uses the information about the sending and receiving sites that you enter to find the relevant transport lane, which is required for scheduling. As a prerequisite, you must have created a transport lane pointing from a ship-from site to a ship-to-site of the same company.

### Master Data for Ship-From Determination

Different master data is required depending on whether you want to deliver the product requested by your customer from your own ship-from site or have it delivered to the customer by an external supplier (third-party order processing).
Shipment from Your Own Site

To find a ship-from site to deliver the product to the customer, the system uses the following data created in the Supply Chain Design Master Data work center:

- **Transport zone**
  Transport zones are geographical regions. You can use them to group customers according to their ship-to addresses, or according to their customer IDs. You can define transport zones for the following:
  - A single country
  - Several countries
  - One or more regions within a country
  - Ranges of postal codes within a country
  - Combinations of the above
  - A single customer
  - Several customers

> When you define a country, a region, and a postal code range in a transport zone, this transport zone is valid for all ship-to addresses matching either the country, or the country and region, or the country and postal code range.

For more information on this task, see Transport Zones Quick Guide.

- **Transport lane**
  In transport lanes, you define connections as follows:
  - Between ship-from sites and transport zones
  - Between ship-from sites and ship-to sites of the same company (only relevant for intracompany stock transfer scenarios)

You can define transport lanes for all products, or specify a set of products or product categories for which they may be used. Transport lanes also contain information about the shipping duration, which is required for shipment scheduling. Note that you can define a default shipping duration in business configuration, which is then used as the default value when you create a transport lane. You do this in the Supply Chain Setup Management activity group of the Activity List view in the Business Configuration work center.

In addition, you can prioritize transport lanes. You may want to do this if there are multiple ship-from sites available to deliver products to the same transport zone. Note that you always maintain transport lane priorities for the combination of lane and product. This means that a transport lane can have a different priority depending on the product that is shipped using the lane.

For more information on how to create and edit transport lanes, see Transport Lanes Quick Guide.

Shipment by an External Supplier

To find an external supplier to deliver the product to the customer, a purchasing contract or list price must have been created for the product in the Sourcing and Contracting work center or in the Product Portfolio work center respectively. When ship-from determination finds the purchasing contract or list price, the system creates a purchase order that you can send to the supplier. If the product can also be shipped from your own site but you do not want this site to be the default ship-from site, you can exclude the relevant ship-from site from automatic ship-from determination for this product. To do so, you select the Disable Automatic Ship-From Determination checkbox on the Availability Confirmation tab of the Materials view in the Product Development work center.

For more information on the direct shipment of products by an external supplier, see Third-Party Order Processing [page 150].
Ship-From Determination for Sales Orders and Sales Quotes

When determining sources from which to deliver products for sales orders and sales quotes, the system first finds all the transport zones in your company whose country, country and region, or country and postal code range matches the ship-to address information (country, region, postal code) given in the sales order or sales quote. If the system does not find anything among the transport zones you created, it uses the global transport zone that is delivered with the solution.

Note that the system does not check if a postal code given in the ship-to address matches a region in a transport zone or if a region given in a ship-to address matches a postal code range in a transport zone.

Once matching transport zones have been found, the system looks for sources from which to deliver the product requested by the customer. Since internal sources, that is ship-from sites of the same company, always take priority over external sources, that is suppliers, the system determines the following types of sources in the following sequence:

1. Transport lanes
   Based on the transport zone, the system finds possible transport lanes for the product. If it finds more than one matching transport zone, it uses all of them to find transport lanes and then takes the transport lane with the highest priority. If it finds more than one transport zone but no priorities have been maintained for the transport lanes, it uses the one that is more specific. This means that a lane that is to be used to transport the product requested in the order would be preferred over a lane for all products. If no priorities are maintained and none of the transport lanes is more specific than the others, the system selects any of the transport lanes found.
   The information from the transport zone and the transport lane selected determines the ship-from site. Note that the system always checks whether the ship-from site belongs to the seller company before it uses it as a source to deliver a product for a sales order or sales quote.
   Transport lanes also contain information on the shipping duration, which is necessary for scheduling the order.

2. Purchasing contracts
   If the system does not find any ship-from sites, it searches for external sources to cover the demand. The system checks all purchasing contracts that are valid for the product to be sold. If more than one contract is available, the system takes the contract that is defined as the fixed source of supply in the Source Determination view of the Sourcing and Contracting work center in purchasing and determines a supplier. This results in a third-party order processing scenario where your company sells products directly from a supplier to a customer.

3. List prices
   If the system does not find any suitable purchasing contracts, it searches for list prices. If more than one list price is available, the system takes the list price that is defined as the fixed source of supply in the Source Determination view of the Sourcing and Contracting work center in purchasing and determines a supplier. This also results in a third-party order processing scenario.

Ship-From Determination for Service Orders

In pick-up scenarios where a service performer picks up the spare parts from the seller party directly, the party information about the service performer contains the address information that the system uses to find a transport zone and available transport lanes. Note that if no service performer address is maintained, the system uses the address of the ship-to party entered in the service order. The system then takes the transport lane with the highest priority and determines a ship-from site, that is, the pick-up site. Note that the system always checks if a logistics
area of the type Storage Area with logistics use Movable Storage has been defined for the pick-up site before it uses it for a service order.

In pre-delivery scenarios where the spare parts are delivered to the service requester, the system uses the address information of the ship-to party given in the service order to determine a matching transport zone. Based on the transport zone and transport lane information, it finds a ship-from site in the same way as described for sales orders and sales quotes.

**Ship-From Determination for Stock Transfer Orders**

In intracompany stock transfer scenarios where you transport goods between the stocks of two sites belonging to the same company, you must enter information about the sending site and the receiving site in the stock transfer order. This means that the system does not need to find a ship-from site. It uses the information you entered to find the transport lane. In this way, the shipping duration required for shipment scheduling is determined.

**Ship-From Determination for Project Stock Orders**

In the Consumption at Site scenario where the project consumes the materials from a particular site, the system takes the ship-from site from the project stock order. In the absence of a ship-from site, the system uses the address information of the ship-to party given in the project stock order to determine a matching transport zone, and finds a ship-from site based on the transport zone and transport lane information. The system always checks if a logistics area of logistics use Project Stock has been defined for the ship-from site before it uses it for a project stock order.

In the Pick-up scenario where a service performer carries the material to the site of consumption, the party information about the person responsible contains the recipient address information that the system uses to find a transport zone and available transport lanes. If no recipient address is maintained, the system uses the address of the ship-to party entered in the project stock order. The system then takes the transport lane with the highest priority and determines a ship-from site, that is, the pick-up site. The system always checks if a logistics area of logistics use Movable Storage has been defined for the pick-up site before it uses it for a project stock order.

In the Pre-delivery scenario where the materials are pre-delivered to the site of consumption, the system uses the address information of the ship-to party given in the project stock order to determine a matching transport zone. Based on the transport zone and transport lane information, it finds a ship-from site in the same way as described for sales orders and sales quotes.

For any customer, transport lanes comprising of customer-specific transport zones take priority over other transport lanes. For example, when the system finds a transport lane with a customer-specific transport zone, that transport lane is picked up by sourcing, and not the transport lane with a transport zone based on the customer’s country, region, or postal code.

The following table gives an overview of the possible results of ship-from determination for customer demand:
Ship-From Determination Results

<table>
<thead>
<tr>
<th>Sales Orders</th>
<th>Sales Quotes</th>
<th>Service Orders</th>
<th>Stock Transfer Orders</th>
<th>Project Stock Orders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Transport lanes leading to ship-from sites (or the ship-to location)</td>
<td>1. Transport lanes leading to ship-from sites (or the ship-to location)</td>
<td>* Pick-up scenario:</td>
<td>Transport lanes required for scheduling (using the ship-to site and ship-from site information)</td>
<td>* Consumption at Site scenario:</td>
</tr>
<tr>
<td>2. Purchasing contracts</td>
<td>2. Purchasing contracts</td>
<td>Transport lanes leading to pick-up sites (using the transport zone of the service performer)</td>
<td>Transport lanes leading to ship-from sites (or the ship-to location)</td>
<td>Transport lanes leading to ship-from sites (or the ship-to location)</td>
</tr>
<tr>
<td>3. List prices</td>
<td>3. List prices</td>
<td>Pre-delivery scenario:</td>
<td>* Pre-delivery scenario:</td>
<td>* Pre-delivery scenario:</td>
</tr>
</tbody>
</table>

Ship-From Determination for Complete Delivery Sales Orders or Service Orders

If the Complete Delivery checkbox is selected for a sales order or service order, the source of supply must be the same for all order items in the same delivery group. The system therefore determines all alternative sources of supply for each item of a delivery group to find the one source that is valid for all items. If one of the items cannot be delivered from the same source as the other items, a warning message is displayed on the order screen and the availability check cannot be performed.

If the source is changed manually for one item on order screen, ship-from determination is repeated for all items to verify that they can all be delivered from the selected source. If this is not possible, a warning message is displayed and the confirmations are canceled.

Manual Ship-From Selection

If you want to use a different ship-from site or supplier for a customer demand than the one determined by the system, you can select any of the alternative sources displayed in the Sales Order Logistics Details screen before you release the customer demand. You can access the screen from the Customer Demand view of the Outbound Logistics Control work center or the Supply Planning work center.

Examples for Ship-From Determination

The following examples illustrate how you create transport zones and transport lanes in the system to meet your company’s requirements and how the system finds the site from which to ship your goods to your customers in a sell-from stock scenario.
Example A

Your company has customers all over the United States and a smaller number of customers in Canada. You have two warehouses in the United States (Texas and Massachusetts) from which you ship goods and one ship-from site in Canada (British Columbia). For this reason, you have created the following transport zones for your company:

<table>
<thead>
<tr>
<th>Transport Zone</th>
<th>Regions</th>
<th>Postal Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Country</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Canada</td>
<td></td>
</tr>
</tbody>
</table>

To be able to ship goods from your ship-from sites to your customers in the different transport zones, you have created the following transport lanes between your ship-from sites and transport zones:

<table>
<thead>
<tr>
<th>Transport Lane</th>
<th>Ship-From Site</th>
<th>Transport Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>Texas, US</td>
<td>A (United States, all regions)</td>
</tr>
<tr>
<td>002</td>
<td>Massachusetts, US</td>
<td>A (United States, all regions)</td>
</tr>
<tr>
<td>003</td>
<td>British Columbia, Canada</td>
<td>B (Canada)</td>
</tr>
</tbody>
</table>

If your company receives a sales order with the ship-to party address “New York NY 10001, United States”, the system finds transport zone A as it is valid for all ship-to addresses in the United States. Transport zone A, in turn, leads to transport lanes 001 and 002, that is, to your ship-from sites in Texas and Massachusetts. Since you have not prioritized any of the two lanes and none of them is more specific, the system selects any of the two. Note that if you do not want to leave it entirely up to the system which ship-from site is selected, you would need to prioritize one of the two transport lanes.

Example B

Your company’s customers in New York are becoming more important and you want to make sure that they receive the products they order as quickly as possible. For this reason, you create transport zone C for the New York region and transport lane 004 between your ship-from site in Massachusetts and transport zone C. To ensure that this transport lane is always used to ship goods to your customers in New York, you prioritize this lane over the two lanes for all US regions.

The transport zones in your system are now as follows:

<table>
<thead>
<tr>
<th>Transport Zone</th>
<th>Regions</th>
<th>Postal Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Country</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>United States</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Canada</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>United States</td>
<td>New York</td>
</tr>
</tbody>
</table>

If your company now receives another sales order with the ship-to party address “New York NY 10001, United States”, the system finds transport zone A since it is valid for all ship-to addresses in the United States and transport zone C since the ship-to address matches the region defined for this zone. Again, transport zone A leads to transport lanes 001 and 002 and transport zone C leads to transport lane 004. Since you prioritized transport lane 004, the system selects this transport lane. This is illustrated in the following table:
Example C

Several of your company’s new customers are located in Alaska. Since Alaska is so close to Canada, you want to be able to use your Canadian ship-from site to ship goods to these customers. Therefore, you add the US postal code range of Alaska to your existing transport zone B for Canada and prioritize transport lane 003 over the two lanes for all US regions.

The transport zones in your system are now as follows:

<table>
<thead>
<tr>
<th>Transport Zone</th>
<th>Regions Country</th>
<th>Postal Codes Country</th>
<th>Postal Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>United States</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Canada</td>
<td>United States</td>
<td>99500-99950</td>
</tr>
<tr>
<td>C</td>
<td>United States</td>
<td>New York</td>
<td></td>
</tr>
</tbody>
</table>

If your company receives a sales order with ship-to address “Anchorage, AK 99518, United States”, the system finds transport zone A since it is valid for all ship-to addresses in the United States and transport zone B since the postal code of the ship-to party address matches the US postal code range defined for this zone. Transport zone A leads to transport lanes 001 and 002 and transport zone B leads to transport lane 003, that is to your ship from site in Canada. Since you prioritized transport lane 003, the system selects this lane. This is illustrated in the following table:

<table>
<thead>
<tr>
<th>Transport Lane</th>
<th>Ship-From Site</th>
<th>Transport Zone</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>Texas, US</td>
<td>A (United States, all regions)</td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>Massachusetts, US</td>
<td>A (United States, all regions)</td>
<td></td>
</tr>
<tr>
<td>003</td>
<td>British Columbia, Canada</td>
<td>B (Canada)</td>
<td>1</td>
</tr>
</tbody>
</table>

Shipment Scheduling

Following ship-from determination, the customer demand must be scheduled. Starting from the requested delivery date in the sales order, sales quote, service order, or stock transfer order, backward scheduling determines the following dates:

- The requested shipment date, based on the shipment duration maintained in the transport lane
  This is the date when the product must be shipped to guarantee on-time delivery.
- The requested execution start date, based on the goods issue processing time maintained in the product master data
  This is the date when the products must be available from production or procurement so that the logistics process can begin.

If you only schedule the order and do not want to check the demand against your supply, the system sets the requested delivery date as the confirmed delivery date, that is the date when the products will be delivered to the customer. For more information, see Availability Checking Based on Scheduling. [page 125].
If you want to check the demand against your supply, a product availability check is performed after backward scheduling. It checks if the requested execution start date from backward scheduling can be confirmed. The check is based on the availability check scope determined in the product master data. For more information, see Availability Checks [page 16].

Note that if ship-from determination found a supplier from which the product is to be delivered (third-party order processing scenario), the system takes the supplier lead time (from the purchasing contract or from the product master if you do not have a purchasing contract with your supplier) into account to determine the order date. Since the system does not know the goods issue processing time, the requested execution start date is the same as the order date. Based on the confirmed execution start date, which is the same as the requested execution start date, the system determines the confirmed delivery date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

Example for Shipment Scheduling

Your company receives a sales order requesting 100 units of boilers to be delivered on October 10, 2009. After the sales order is entered into the system, ship-from determination finds from which of your sites the order will be delivered. Starting from the requested delivery date (October 10, 2009), the system runs backward scheduling to find the requested execution start date when the products have to be available from your production or purchasing department to deliver on time. The requested execution start date generated by backward scheduling is October 1, 2009.

Your company has chosen to use availability checking with availability check scope and so the system executes an availability check for the boilers. The availability check cannot confirm the requested execution start date (October 1, 2009) because there are not enough supplies and therefore creates a late confirmation for October 5, 2009 (confirmed execution start date).

The system then executes forward scheduling using the confirmed execution start date (October 5, 2009) as its starting point. Forward scheduling provides your planning department with the confirmed delivery date (October 14, 2009) when the boilers should arrive at the customer site.

The key figures determined by ship-from determination and scheduling are then used by your planning, production, and logistics departments to plan and execute their functions. Note that material planning uses the requested dates and outbound delivery logistics uses the confirmed dates.

6.1.2.2 Availability Checking Based on Scheduling

Overview

If you use availability checking based on scheduling, the system does not match the demands with your supplies but schedules the quote or order and confirms the requested quantity at the dates determined through scheduling.

You may want to use this availability check method if you are not interested in exact availability check results and only need rough transport estimations since you know, for example, that all products requested are on stock.

You can access the availability check function from the following locations:

- **Sales Quote** view of the New Business work center
- **Sales Orders** view of the Sales Orders work center
- **Service Order Processing** view of the Service Orders work center
- **Customer Demand** view of the Outbound Logistics Control work center or the Supply Planning work center
- **Confirmation Update Runs** view of the Outbound Logistics Control work center or the Supply Planning work center
Prerequisites

Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

One of the following settings must have been made if you want to use availability checks based on scheduling:

- The product availability check has not been activated in the Business Configuration work center.
- The product availability check has been activated in the Business Configuration work center but you have not specified an availability check scope on the Availability Confirmation tab of the Materials view in the Product Development work center. For more information, see Availability Checking with Availability Check Scope [page 137].

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control. In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

Process Flow

The process flow for checking the availability based on scheduling consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. **Ship-From Determination**
   
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For sales orders, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. **Backward Scheduling**

   Starting from the requested delivery date that the customer entered in the sales order, service order, project stock order, or sales quote and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.

   This is illustrated in the following figure:
Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.

Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. **Confirmation Determination**
   When checking the availability based on scheduling, the system sets the requested execution start date as the confirmed execution start date and confirms the requested quantity at that date.

4. **Forward Scheduling**
   Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.
   This is illustrated in the following figure:

   ![Diagram](image)

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks [page 16].

**See Also**

Sales Orders Quick Guide
6.1.2.3 Complete Delivery Orders

Overview
You can use complete delivery orders to ensure that the complete quantity of all material items of a sales order or stock transfer order, or the complete quantity of all spare part items of a service order is shipped together on the same date and in a single delivery. This avoids partial deliveries, which often result in a product that is useless for your customer. In addition, complete delivery orders help you save logistics costs.

The complete delivery requirements must be adhered to in planning but the system offers enough flexibility for special situations. In execution, the process is not as strict and the request for complete delivery may be overruled.

You can access this function from the following locations:
- Sales Orders view of the Sales Orders work center
- Service Order Processing view of the Service Orders work center
- New Stock Transfer Order common task of the Outbound Logistics Control or the Supply Planning work center

Prerequisites
The Complete Delivery checkbox has been selected in the sales order or the service order or the Complete Delivery Order checkbox has been selected in the stock transfer order. For more information, see Sales Orders Quick Guide, Quick Guide for Service Order Processing, or Customer Demand Quick Guide [page 107].

If you have selected the Complete Delivery checkbox for a customer in the Accounts view of the Account Management work center or the Business Partner Data work center, this information is automatically transferred to any order that you create for this customer. For more information, see Accounts Quick Guide or Business Partner Quick Guide.

Order Processing
Delivery Rules and Delivery Groups
When you create a sales order, service order, or stock transfer order for complete delivery, you want all items to be shipped together in one outbound delivery. In the standard process, all items therefore have the same requested date, ship-to address, and freight forwarder, which you enter in the order header. In addition, the system assigns the same delivery rule, which by default is Single-Delivery - Full Quantity to all items and treats the entire order as one delivery group.

If you change the default delivery rule to any of the other “single delivery” rules for an item, it is still included in the same delivery group. If, however, you select Multiple Deliveries for an item, this item is still included in the complete delivery order but is not assigned to any delivery group. You may want to do this, to take an item that cannot be confirmed on time out of the order and still be able to create a delivery proposal for the other items.

If you change the requested date, ship-to address, or freight forwarder for an order item, the system assigns this item to a different delivery group. This means that you can have a complete delivery order containing several delivery groups.
You create a sales order for complete delivery with a requested date of October 20 and ABC100 as the ship-to party. The three line items 0010, 0020, and 0030 all inherit this information. You now decide that you do not need item 0020 on October 20 but 5 days later and change the requested date for this item to October 25. As a result, items 0010 and 0030 remain in one delivery group and item 0020 is assigned to another delivery group within the complete delivery order.

Note that the spare part items in a service order that the service performer must pick up at the warehouse are assigned to a different delivery group than the spare part items that are pre-shipped to the customer.

Ship-From Determination and Availability Check

Depending on your system settings, you carry out an availability check for the sales order either immediately when you enter an item or by clicking Check Availability. The system first tries to determine a common source of supply for all items of a delivery group in a complete delivery order. If one of the items cannot be delivered from the same source as the others, a warning message is displayed and the availability check cannot be performed. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

When a common source of supply is found, the system aligns the confirmed delivery dates of all the items of a delivery group and determines a common confirmed delivery date for these items. Based on this common confirmed date, the availability status is determined for each item. For more information, see Availability Checks for Complete Delivery Orders [page 130].

Note that for sales orders that are to be fulfilled externally (third-party order processing scenario), the complete delivery order information is not passed on to purchasing and therefore it is also not passed on to the external supplier.

If a sales order contains a sales kit, the system determines the source of supply for the sales kit based on the sources of supply for the sales kit items. The system also checks the availability of the sales kit based on the availability of the sales kit items.

You can display the Simulated Confirmation Schedule hidden column in the sales order to see earlier possible delivery dates calculated for each individual order item and, if necessary, remove a late item from the delivery group by assigning the Multiple Deliveries delivery rule.

Supply Chain Planning and Control

When you release the sales order or service order, or save the stock transfer order, a customer demand is created that needs to be released to execution. You can release a customer demand as follows:

- Manually in the Customer Demand view of the Outbound Logistics Control work center or the Supply Planning work center
- Manually in the Delivery Due List view of the Outbound Logistics Control work center
- Automatically in the Release Due Deliveries Runs view of the Outbound Logistics Control work center

Releasing a line item of a delivery group in a complete delivery order is only possible if all the items of the delivery group can be released. If one item of the delivery group could not be confirmed, you cannot release any item of the delivery group. At the same time, all other items of the delivery group are released when you release one item of a delivery group.

To get an overview of your complete delivery orders, you can use the Complete Delivery Orders show option in the Customer Demand view or the Delivery Due List view.

To get an overview of the availability statuses of the orders for which you are responsible, you can group the order line items in the Customer Demand view by delivery group. Note that the delivery group inherits the status from the item with the worst availability situation. This means, for example, that if the status of one item of a complete delivery order is red, the availability status of the entire delivery group is Not Complete.
Note that on the Sales Order Logistics Details screen or the Service Order Logistics Details screen, you can temporarily switch off complete delivery. You can see how the confirmed dates and quantities of the individual items of an order would look if their confirmed delivery dates were not aligned and perform actions on item level without taking the other items of a delivery group into account. For more information, see Temporarily Switch Off Complete Delivery in the Tasks section of the Customer Demand Quick Guide [page 107].

Outbound Delivery Processing

When the items of a delivery group are released, a delivery proposal is created in the Delivery Proposals subview of the Outbound Logistics work center. All confirmed schedule lines of a delivery group are contained in the same delivery proposal.

If a schedule line of a delivery proposal is rejected in the Delivery Proposals subview of the Outbound Logistics work center, only the item you selected is rejected. The other items of the delivery group are not rejected automatically. Rejected items receive the release status Not Released in the Customer Demand view, where they can be reconfirmed within the same delivery group and released again. Alternatively, they can be changed in the sales order so that they are removed from the original delivery group.

Depending on whether you work without tasks or with tasks, the warehouse manager either posts a goods issue directly or creates a warehouse request for a complete delivery order.

When the warehouse manager posts a goods issue for the items of a complete delivery order, the request for complete delivery should not be violated but if necessary, partial quantities can be confirmed just as in the standard process.

When the warehouse manager creates a warehouse request for the items of a complete delivery order, all items belonging to the same delivery group are transferred to one warehouse request. If possible, the request for complete delivery should not be violated. However, you may still confirm partial quantities or split a delivery because an item is not available or because you need two trucks to ship all order items.

When the outbound delivery is released, the same follow-on activities are performed as in the standard process. For more information, see:

- Standard Outbound Delivery Processing for Sales Orders – Standard Shipping
- Intracompany Stock Transfer Processing

See Also

Sales Order Processing

6.1.2.4 Kits Process Flow

Overview

A kit is defined as a logical group of items that can be sold or purchased together as one unit. Wholesale and component manufacturing industries like to offer product bundles as single selling units. In the Business ByDesign system a single selling or purchasable unit comprising of various components is called a kit.

For example, a laptop and an adaptor are two different products that can be grouped together to be sold or purchased as a single unit. This combination of the laptop and adaptor is available on paper as a unit and has a price associated with it. However, the kit itself does not exist as a physical entity.

The various components of a kit are listed in the kit item list. In the case of the laptop and adaptor, both the individual products exist as physical entities. They are stored and transported, and so have inventory value. However, since they are a part of a kit, their individual prices are not relevant and only the price of the kit as a whole is considered.
Create a Kit

1. **Create a Kit**
   To create a kit, go to Products view under Product and Service Portfolio work center. Click **New**, and select **Kit**.
   You can also create a kit from the **New Kit** common task in the Product and Service Portfolio work center and the **Product Data** work center.
   The kit you create represents a group of items that is sold or purchased together as one unit.
   For more information, see Create a Kit.

2. **Add purchasing information to the Kit**
   If you want to create a purchasing kit, you can add purchasing information for this kit. To do so, in the **Purchasing** tab under **General Information**, select the status **In Preparation**. This activates the **Purchasing** indicator under **Relevant Processes**.

3. **Add sales information to the Kit**
   If you want to create a sales kit, you can add sales details for the sales kit in the **Sales** tab under **General Information**. This includes information such as the sales organization, distribution channel, and so on. You can also assign advanced sales details to each distribution chain, for example, a specific sales unit of measure, warranties, internal comments, sales notes, customer part numbers, tax information and so on. However, you must enter a sales organization and distribution channel for the sales kit.
   This activates the **Sales** indicator under **Relevant Processes**.
   For more information, see Assign Sales Details to the Kit.

4. **Add valuation information to the Kit**
   You can add valuation details for the kit which includes information such as basic valuation details, and a status to each company and business residence that provide financial data for a kit. You can also assign advanced valuation details such as a specific inventory valuation unit of measure, and cost information for each relevant set of books.
   You can do so, in the **Valuation** tab under **General Information**. This activates the **Valuation** indicator under **Relevant Processes**.
   For more information, see Assign Valuation Details to the Kit.

5. **Add tax information to the Kit**
   If you create a purchasing kit, by default the highest value added tax (VAT) is applied as the standard tax rate.
   You can maintain separate tax rates for the kit in the **Taxation** tab under **General Information**.

6. **Create a Kit Item List**
   Using the kit ID created during the process of creating a kit, you can create a kit item list, which consists of all the items that are included in that particular kit. Each of these items has an inventory process associated with it, but is not price relevant within the kit.
   For more information, see Create a Kit Item List in the Tasks section of the Kits Quick Guide.

Kits in Sales

1. **Create and Release a Sales Order**
   You can create a sales order with a sales kit as a line item and release it.
   For more information, see Sales Orders Quick Guide.

2. **Release a Customer Invoice**
   You can create and release a customer invoice document.
   For more information, see Quick Guide for Invoice Requests.

3. **Determine Ship-From Information and Check Availability**
Once the sales order containing a sales kit has been released, the system displays a customer demand per sales kit in the Customer Demand view of the Outbound Logistics Control work center. You can determine the shipment scheduling, ship-from information, and the availability for sales orders that contain sales kits. You can also use this view to release confirmed sales kits to logistics execution. For more information, see Customer Demand Quick Guide [page 107].

4. **Release a Sales Kit**
   Apart from the Customer Demand view, you can also release sales kits in the Delivery Due List view of the Outbound Logistics Control work center, where the sales orders are listed based on confirmed schedule lines. In this delivery due list, the supply planner can release the sales kits to hand them over to logistics execution. Once the sales kit has been released, you cannot change data such as product, date, quantity, ship-to party in the corresponding sales order.
   For more information about delivery due lists, see Delivery Due List Quick Guide [page 303].

5. **Process an Outbound Delivery**
   The system displays the released sales kits as delivery proposals in the Delivery Proposals sub-view and as delivery requests in the Delivery Requests sub-view of the Delivery Control view in the Outbound Logistics work center. In this view, you can process an outbound delivery for the sales kit with tasks by creating a warehouse request or without tasks by posting a goods issue.
   For more information about delivery proposals and delivery requests, see Delivery Control Quick Guide.
   If you process the outbound delivery with tasks, you can create a warehouse task in the Warehouse Requests view and confirm the task in the Task Control view.
   For more information about warehouse requests, see Warehouse Requests Quick Guide.
   For more information about task control, see Task Control Quick Guide.
   Whether you post the goods issue in one step directly or use the task support, the outbound delivery is processed and inventory changes are communicated to invoicing, accounting, and supply control.

6. **Post Costs/Revenues**
   The delivery of a sales kit and its components triggers the creation of a journal entry in the system which posts the costs of components delivered. The valuation and the account determination are based on the component products delivered as part of the sales kit. The invoicing of the sales kit triggers the creation of a journal entry which posts the revenues. You can view the entry in the Journal Entries view of the General Ledger work center.
   For more information, see Journal Entries Quick Guide
   There is no change in the account determination logic for the sales kit items and the component items. Revenue recognition is not allowed for sales order items with sales kit products. For more information see, Sales Document Items Quick Guide

**Kits in Purchasing**

1. **Create and Release a Purchase Order**
   You can create a purchase order with a kit as a line item and release it.
   For more information, see Purchase Orders Quick Guide.

2. **Create a Purchase Order Acknowledgement**
   For more information, see Purchase Order Acknowledgement.

3. **Process an Inbound Delivery**
   When you receive a kit, you can use inbound processing to coordinate the inbound logistic activities.
   Kits are only supported for inbound supplier deliveries.
   For more information, see Supplier Delivery Processing.

4. **Post Goods Receipt**
On delivery of a kit, you can create a goods receipt to track it. The goods and services receipt can be created with reference to purchase orders with same or different suppliers. For more information, see Directly Post a Goods Receipt with Label Creation.

The valuation and the account determination are based on the component products delivered as part of the purchase kit. The system sends the goods and services receipt to Supplier Invoicing for invoice verification, exception handling, and payment processes. It also forwards the data to Financials, posts the goods return receipt there, and updates individual materials and fixed asset assignments if applicable. You can view the entry in the Journal Entries view of the General Ledger work center. For more information, see Journal Entries Quick Guide.

5. Release a Supplier Invoice
You can create and release a supplier invoice document. For more information, see Supplier Invoice Processing with Reference.

Limitations
Kits are not supported in the following scenarios:

- Subsequent debit and subsequent credit memo items, customs duty, down payments, recurring invoices, invoice templates, and invoices without reference to purchase orders scenarios in supplier invoicing.
- Materials in Progress
- Intracompany stock transfer
- Supplier or customer returns
- Service and repair scenarios
- Strategic sourcing (contracts, quotes, shopping cart)
- Self-service procurement (non-stock materials)
- Invoices

6.1.2.5 Availability Checks for Complete Delivery Orders

Overview
Availability checks for complete delivery orders enable you, as a sales representative or supply planner, to check and align the availability of the items in a complete delivery order. In complete delivery orders, the system assigns all order items that are to be shipped together to one delivery group. In the straightforward complete delivery process, the order therefore only contains one delivery group. The availability check tries to find a common source of supply and aligns the confirmed dates of all items in a delivery group. This helps you ensure that the complete quantity of all material items of a sales order or stock transfer order, or the complete quantity of all spare part items of a service order is shipped on the same date and in a single delivery. Note that quantities are not aligned.

When you enter a sales kit as a line item for a sales order for complete delivery, the system checks the availability of the sales kit based on the availability of the sales kit items.

The availability check for complete delivery orders is available for sales orders, service orders, and stock transfer orders. You can access the availability check function from the following locations:

- Sales Orders view of the Sales Orders work center
- Service Order Processing view of the Service Orders work center
- Customer Demand view of the Outbound Logistics Control work center or the Supply Planning work center
Confirmation Update Runs view of the Outbound Logistics Control work center or the Supply Planning work center

Carrying Out Availability Checks

For complete delivery orders, you can use the product availability check or check the availability based on scheduling or with replenishment lead time as you would for other sales orders, service orders, or stock transfer orders. For more information, see Availability Checks [page 16].

Irrespective of the availability check method you choose, the system first carries out a ship-from determination for a customer demand to determine possible sources of supply. For complete delivery orders, this means that the system not only finds sources of supply for each item but also determines a common source for all the items of a delivery group. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

Note that for sales orders that are to be fulfilled externally (third-party order processing scenario), the complete delivery order information is not passed on to purchasing and therefore it is also not passed on to the external supplier.

You can check the availability, for example, before releasing the order to logistics control and before releasing the customer demand to logistics execution.

Availability Checks in the Sales Order, Service Order, or Project Transfer Order

When you enter a line item for a sales order or service order for complete delivery, the system determines the source of supply for this item and checks the availability depending on whether the source that was found is internal or external. When you enter a second line item with the same requested date, ship-to address, and freight forwarder, the system tries to find a common source of supply for the two items and aligns the confirmation dates so that both items of the delivery group have a common confirmed delivery date. The item with the latest confirmation date determines the confirmation date for all items of the delivery group.

You create a complete delivery sales order with October 17 as the requested date. The availability check determines that item 10 is available on that date and therefore the item receives a green ATP status. You then enter item 20. The availability check determines that this item is available on October 19, that is, later than requested. Since the system now aligns the confirmed delivery dates, both items receive a yellow traffic light and the confirmed delivery date for both items is October 19.

Note that the following items are not considered when the confirmed delivery dates in a delivery group are aligned:

- Order items of a delivery group that cannot be confirmed at all (confirmation with zero quantity)
  Since there is no date for which this “zero confirmation” can be made, these items are not taken into account for the date alignment. They do, however, define the availability status of the delivery group and are the reason why none of the items of the delivery group can be released to logistics execution.
- Order items of a delivery group that were canceled
  Canceled items remain assigned to the delivery group but are ignored for the date alignment.
- Order items of a delivery group that are released or partially released
  If execution rejects individual items of a delivery group or if new items are added to a delivery group after the order has been released, items in the delivery group that are already released or partially released are ignored for the date alignment for the other items.

Changing the Result of the Availability Check in the Sales Order or Service Order

If you are not satisfied with the result of the availability check, you can change it in the sales order or service order before releasing the order. Note that you can display the Simulated Confirmation Schedule hidden column to help you identify late items as it simulates the earliest delivery date and quantity for each item to show earlier possible delivery dates.
To change the result of the availability check, you can do one of the following, for example:

- Remove an item that is late
  In this case, the availability is checked again for all items in the order.

- Change the requested date for an item that is late
  The item is assigned to a different delivery group. The availability is now checked again for the existing delivery group and for the new one.

- Assign a different source of supply by clicking Assign Source of Supply
  Since all items of a complete delivery order must have the same source of supply, ship-from determination is repeated for all items to verify that they can all be delivered from the selected source of supply. If this is not possible, a warning message is displayed and the confirmations are removed.

- Change the default delivery rule
  The default delivery rule for sales order or service orders for complete delivery is *Single Delivery - Full Quantity*. This means that the availability check tries to find a date on which the full quantity of all items in a delivery group can be confirmed. Changing the default delivery rule may solve your problem.

You create another complete delivery sales order with October 19 as the requested date. You want to order two pieces of item 10. Since both pieces are available on the requested day, the item receives a green ATP status. You then enter item 20, of which you want to order six pieces. The availability check determines that the four pieces would be available on the requested date but all six pieces are not available until October 25, that is, later than requested. For this reason, both items now receive a yellow ATP status. Since you only want to make sure that as much as possible is delivered on the requested date, you can change the default delivery rule to *Single On-Time Delivery*, which means that the requested delivery date has to be met, but the delivery may comprise less than the requested quantity. The item remains in the same delivery group and the availability is checked again for this item. Now four pieces can be confirmed on the requested date. The confirmed delivery dates of both items are aligned and both receive a green ATP status.

- Remove an item that is late from the delivery group by assigning the Multiple Deliveries delivery rule to this item
  You can now create a delivery proposal for the other items and no longer need to consider the late item. Note that in this case, the availability is checked again for all items in the order.

### Availability Checks in the Customer Demand View

Before releasing the customer demand to logistics execution, you may want an overview of the availability statuses of your delivery groups. You can do this by grouping the order line items by delivery group in the Customer Demand view.

The following availability statuses exist on delivery group level:

- **Complete**
  The required quantity is fully confirmed on time for all items of the delivery group.

- **Complete - Late or Partial**
  The required quantity is partially confirmed or confirmed on a later date than requested for at least one of the items of the delivery group.

- **Not Complete**
  The required quantity cannot be confirmed at all (confirmation with zero quantity) for at least one of the items of the delivery group.

- **Confirmation Pending**
  The availability check was not performed, for example, if no common source of supply could be determined in the sales order.
If there are availability issues, you may want to check the availability again before releasing the customer demand. You can do this in the Customer Demand view or you can schedule a confirmation update run, provided that you use the product availability check.

Note that when you check the availability for an item that is part of a complete delivery order in the Customer Demand view, the system only checks the availability for this item but not for all other items of the complete delivery order. This means that the confirmed dates for the other items stay the same. Since a date alignment takes place for items of complete delivery orders, the availability situation for the whole group may stay as before.

You now check the availability again for item 20 of your first sales order in the Customer Demand view since you know that a goods receipt has taken place in the meantime. The confirmed delivery date for item 20 is now October 17 but since it is part of a delivery group, the confirmed dates are aligned and October 19 remains as the confirmed delivery date for both items of the group. If you want October 17 as the confirmed delivery date for the entire group, you must check the availability for all items of the group. Note that again this may not lead to the desired result as the availability situation for item 10 may have deteriorated in the meantime and it is always the item with the latest confirmed delivery date that determines the confirmation date for all items of the delivery group.

Changing the Result of the Availability Check in the Customer Demand View

If you want to change the result of the availability check manually, you can use the following functions:

- **Force a confirmation.**
  Note that forcing a confirmation in the Customer Demand view should only be used to solve quantity issues, for example, to overwrite a “zero confirmation”. If you want to force the confirmation to improve the confirmed delivery date, you must first switch off complete delivery temporarily (see below).

- **Cancel a confirmation.**
  Note that the system only cancels the confirmation of the item you selected. The confirmations of all other items of the delivery group remain as before.

Availability Checks on the Sales Order Logistics Details Screen or Service Order Logistics Details Screen

On the Sales Order Logistics Details screen or the Service Order Logistics Details screen, you can check the availability again, force a confirmation, or cancel a confirmation in the same way as in the Customer Demand view.

In addition, you can temporarily switch off complete delivery. The system now checks the availability again for the individual order items without taking the other items of the delivery group into account. In this way, you can see the confirmation of each and every item individually, for example, that only one item of a delivery group has a late delivery and this is why the entire delivery group has this late delivery status. In this case, you could, for example, force the confirmation of this one, late item. When you switch complete delivery on again, the system realigns the confirmed delivery dates of all items in the delivery group. Note that you must switch complete delivery back on to be able to save your changes.

You create another complete delivery sales order with October 20 as the requested date. Item 10 is confirmed on October 25, item 20 is confirmed on November 10, and item 30 is confirmed on October 21. Since all items belong to the same delivery group, the availability status for this group is Complete - Late or Partial and the confirmed delivery date is November 10.

When you temporarily switch off complete delivery, you see that item 20 is causing the problem because the confirmation date is much later than the requested date. You therefore force the confirmation of item 20 to the requested date (October 20) after you have checked that the item will be on stock then. When you switch complete delivery back on, the system realigns the confirmation dates and sets October 25 as the confirmed delivery date for all items of the group. Since the situation has improved considerably, you save your changes.
You must also first switch off complete delivery temporarily if you want to change the source of supply and assign any of the alternative sources to your sales order or service order. Note that the same source of supply must be assigned to all items of a delivery group. Otherwise, the system will not let you save your changes.

**Confirmation Update Runs for Complete Delivery Orders**

When you create a confirmation update run, you can select the sorting parameter *Items of Complete Delivery Orders First* to specify that these items are to be given priority over other items when it comes to reorganizing the confirmations. Note that the run also aligns confirmation dates for items of delivery groups in complete delivery orders. For more information, see Quick Guide for Confirmation Update Runs [page 160].

**Result of the Availability Check**

Confirmations are the result of availability checks. They are required for the follow-on processes in logistics execution. By ensuring that the dates of all items in a delivery group of a complete delivery order are aligned and a common source of supply is found, you make sure that all items are grouped in the same delivery proposal and eventually in one outbound delivery.

**See Also**

Complete Delivery Orders [page 128]

**6.1.2.6 Availability Checking with Replenishment Lead Time**

**Overview**

If you use availability checking with replenishment lead time, you specify the maximum length of time required for the in-house production or external procurement of a product. In this case, the system does not match the demand with your supply but confirms the requested quantity at the end of the replenishment lead time you specified. The system determines the end of the replenishment lead time by adding the replenishment lead time from the product master to the current date, taking into account the working day calendar of the ship-from location. When the availability is checked again for the same order a few days later, the system uses the order entry date as the current date and not the “real” current date. In this way, the end of the replenishment lead time stays the same and your confirmation date remains stable.

You may want to use this availability check method in make-to-order scenarios where you do not have any supply available.

You can access the availability check function from the following locations:

- *Sales Quote* view of the *New Business* work center
- *Sales Orders* view of the *Sales Orders* work center
- *Service Order Processing* view of the *Service Orders* work center
- *Customer Demand* view of the *Outbound Logistics Control* work center or the *Supply Planning* work center
- *Confirmation Update Runs* view of the *Outbound Logistics Control* work center or the *Supply Planning* work center
Prerequisites

Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

One of the following settings must have been made if you want to use availability checks with replenishment lead time:

- The product availability check has not been activated in the Business Configuration work center and you have entered a replenishment lead time on the Availability Confirmation tab of the Materials view in the Product Development work center.

- The product availability check has been activated in the Business Configuration work center but you have only entered a replenishment lead time (without an availability check scope and availability check horizon) on the Availability Confirmation tab of the Materials view in the Product Development work center.

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control.

In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

Process Flow

The process flow for checking the availability with replenishment lead time consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. **Ship-From Determination**
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For sales orders, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. **Backward Scheduling**
   Starting from the requested delivery date that the customer entered in the sales order, service order, stock transfer order, project stock order, or sales quote and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the requested execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.
   Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.
   Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. **Confirmation Determination**
When checking the availability with replenishment lead time, the system always confirms the requested quantity on the confirmed execution start date. How the system determines the confirmed execution start date is illustrated in the following graphics:

- If the requested execution start date is within the replenishment lead time, the system confirms the requested quantity at the end of the replenishment lead time.

- If the requested execution start date is beyond the replenishment lead time, the system confirms the requested quantity at the requested execution start date.

- If the requested execution start date and the end of the replenishment lead time are in the past, the system confirms the requested quantity on the current date.

4. **Forward Scheduling**

Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks [page 16].
See Also

Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time [page 144]

Sales Orders Quick Guide

6.1.2.7 Availability Checking with Availability Check Scope

Overview

If you use availability checking with availability check scope, the system checks the customer demand against the most up-to-date planning data, that is, the available stock and the product supply situation. This is to determine which products can be delivered to your customer in which quantities and at what times.

You can access the availability check function from the following locations:

- **Sales Quote** view of the **New Business** work center
- **Sales Orders** view of the **Sales Orders** work center
- **Service Order Processing** view of the **Service Orders** work center
- **Customer Demand** view of the **Outbound Logistics Control** work center or the **Supply Planning** work center
- **Confirmation Update Runs** view of the **Outbound Logistics Control** work center or the **Supply Planning** work center

By defining the availability check scope, you tell the system which types of supply are included in the check. If you do not specify an availability check scope, the system does not match demand and supply but schedules the quote or order. For more information, see Availability Checking Based on Scheduling [page 125].

You can choose from the following options for the availability check scope:

- **Stock**
  The available stock is considered as available supply for the product availability check.

- **Stock and all receipts**
  The available stock and all receipts from both purchasing and production are considered as available supply for the product availability check. This includes purchase proposals, firm purchase proposals, purchase requests, purchase orders, acknowledged purchase orders, production proposals, firm production proposals, production requests, inbound deliveries advised, and inbound deliveries received.

- **Stock and released receipts**
  The available stock and released receipts from both purchasing and production are considered as available supply for the product availability check. This includes purchase orders, acknowledged purchase orders, production requests, inbound deliveries advised, and inbound deliveries received.

- **Supply except unfirm receipts**
  The available stock, released receipts, and firm receipts from both purchasing and production are considered as available supply for the product availability check. This includes firm purchase proposals, purchase requests, purchase orders, acknowledged purchase orders, firm production proposals, production requests, inbound deliveries advised, and inbound deliveries received.
Prerequisites

Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

The product availability check has been activated in the Business Configuration work center and you have defined which availability check scopes you want to use in your company in general.

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click [Edit Project Scope]. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control.

In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

Master Data Settings

You must repeat the settings you make in the Materials view of the Product Development work center for each planning area.

- The product for which you want to check availability has been created as a planning material on the Planning tab.
- The availability check scope has been set on the Availability Confirmation tab. This determines which types of supply the system includes in the check for the product.

Process Flow

The process flow for checking the availability with an availability check scope describes how the system uses the information about the product, quantity, ship-to location, and requested delivery date provided in the quote or order to match the demand with the types of supply specified in the availability check scope. It consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. Ship-From Determination
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For a sales order, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. Backward Scheduling
   Starting from the requested delivery date that the customer entered in the sales order, service order, stock transfer order, project stock order, or sales quote and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the requested execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.
   Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.
Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. Confirmation Determination
Starting from the requested execution start date, the system checks if the customer demand can be covered by the supply against which you decided to check (that is, the availability check scope you have entered). During the check, the system takes receipts in the past and all previously confirmed quantities into account. Note that this also includes temporarily confirmed quantities from orders that have not been saved. This means that new orders can only be confirmed when the total receipts exceed the total confirmed quantities. Note the following general rules:

- If the requested execution start date cannot be confirmed on time, the system confirms at a later point in time according to the supply and demand situation.
- If the requested quantity cannot be confirmed by the requested execution start date, the system issues partial confirmations according to the supply and demand situation. If no quantity can be confirmed at all, the system issues a confirmation with zero quantity.
- If the confirmed execution start date determined by the system is earlier than the requested delivery date, the system confirms the requested delivery date (no early confirmation).
- If the confirmed execution start date determined by the system is in the past, the system sets it to the current date (no confirmation in the past).

Example
A customer wants 20 pieces on the requested delivery date. The receipt of 100 pieces is completely reduced by a different customer demand of 100 pieces. An additional receipt of 50 pieces is partly reduced by a different customer demand of 40 pieces. A further receipt of 6 pieces can still not fully cover the demand. In this case, the product availability check issues two confirmations: first, a partial confirmation of 10 pieces and then a second, late confirmation of 6 pieces.

The following graphic is used to illustrate this example:

4. Forward Scheduling
Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks [page 16].
If the customer demand comes from a sales order, service order, stock transfer order, or project stock order, the system confirms the requested quantity temporarily and turns the temporary confirmation into a real confirmation once the sales order, service order, stock transfer order, or project stock order is saved. If the order is deleted, the temporarily reserved quantity is unlocked and can be used for other orders.

See Also
Sales Orders Quick Guide

6.1.2.8 Availability Checking with Availability Check Scope and Availability Check Horizon

Overview

If you use availability checking with availability check scope and availability check horizon, the system checks the customer demand against the supply within a certain period of time, the check horizon, and determines which products can be delivered to your customer in which quantities and at what times.

You can access the availability check function from the following locations:

- **Sales Quote** view of the **New Business** work center
- **Sales Orders** view of the **Sales Orders** work center
- **Service Order Processing** view of the **Service Orders** work center
- **Customer Demand** view of the **Outbound Logistics Control** work center or the **Supply Planning** work center
- **Confirmation Update Runs** view of the **Outbound Logistics Control** work center or the **Supply Planning** work center

By defining the availability check scope, you tell the system which types of supply are included in the check. You can choose from the following options for the availability check scope:

- Stock
- Stock and all receipts
- Stock and released receipts
- Supply except unfirm receipts

For more information, see Availability Checking with Availability Check Scope [page 137].

In addition, you can enter an availability check horizon for all of the four check scopes to specify the number of days (today plus a certain number of days) within which the system checks the demand against the supply, taking the working day calendar of the ship-from location into account.

When defining an availability check horizon, you should bear in mind the following:

- The period you choose for your check horizon should match the check scope you selected. If you decide to check against more uncertain types of supply, such as production proposals, your check horizon should be considerably longer than when checking against stable types of supply, such as available stock.
- For products you manufacture in-house, the check horizon should cover your cumulative manufacturing lead time. For purchased products, the horizon should be greater than or equal to the purchasing lead time.

If you use a check horizon, you should carry out material planning in regular intervals, ideally on a daily basis since the confirmed quantities are then compared with actual receipts. This is necessary because orders for which there are no receipts within the check horizon are confirmed at the end of the check horizon. If the orders are checked
again the following day and if material planning still has not determined receipts for them, the orders get a new confirmation date - the new end date of the check horizon.

Prerequisites

Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

The product availability check has been activated in the Business Configuration work center and you have defined which availability check scopes you want to use in your company in general.

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control.

In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

Master Data Settings

You must repeat the settings that you make in the Materials view of the Product Development work center for each planning area.

- The product for which you want to check availability has been created as a planning material on the Planning tab.
- The availability check scope has been set on the Availability Confirmation tab. This determines which types of supply the system includes in the check for the product.
- The availability check horizon has been entered on the Availability Confirmation tab. This determines the number of days within which the system checks the demand against the supply.

Process Flow

The process flow for checking the availability with an availability check scope and horizon describes how the system uses the information about the product, quantity, ship-to location, and requested delivery date provided in the quote or order to match the demand with the types of supply specified in the availability check scope within the check horizon you specified. It consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. Ship-From Determination
   When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For sales orders, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. Backward Scheduling
   Starting from the requested delivery date that the customer entered in the sales order, service order, stock transfer order, project stock order, or sales quote and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from
location, the system determines the requested execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.

Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.

Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. **Confirmation Determination**

Starting from the requested execution start date, the system checks if the customer demand can be covered by the supply against which you decided to check (that is, the availability check scope you have entered) within the check horizon specified. During the check within the check horizon, the system takes receipts in the past and all previously confirmed quantities into account. Note that this also includes temporarily confirmed quantities from orders that have not been saved. This means that new orders can only be confirmed when the total receipts exceed the total confirmed quantities. Remaining quantities are confirmed at the end of the check horizon. The following graphics are used to illustrate how the system finds the confirmed execution start date:

- If the requested execution start date is within the check horizon and there are enough supplies to cover the full demand in one delivery, the system confirms the requested execution start date.

- If the requested execution start date is within the check horizon and there are not enough supplies to cover the full demand in one delivery, the system issues partial confirmations according to the supply and demand situation.

- If the requested execution start date is within the check horizon and there are no supplies to cover the demand, the system confirms the total requested quantity at the end of the check horizon.
If the availability is checked again a few days later and the requested execution start date is still within the check horizon and there are still no supplies to cover the demand, the system confirms the requested quantity at the end of the check horizon, which has now moved accordingly. To obtain a stable confirmation date, you need to use a replenishment lead time in addition to the check horizon. For more information, see Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time [page 144].

If the requested execution start date is beyond the check horizon, the system confirms the requested quantity on the requested execution start date.

Example
A customer wants 20 pieces on the requested delivery date. The receipt of 100 pieces is completely reduced by a different customer demand of 100 pieces. An additional receipt of 50 pieces is partly reduced by a different customer demand of 40 pieces. A further receipt of 6 pieces can still not fully cover the demand. In this case, the product availability check confirms three partial deliveries of 10 pieces, 6 pieces, and then the remaining 4 pieces at the end of the check horizon.

The following graphic is used to illustrate this example:
4. **Forward Scheduling**

Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks [page 16].

If the customer demand comes from a sales order, service order, stock transfer order, or project stock order, the system confirms the requested quantity temporarily and turns the temporary confirmation into a real confirmation once the sales order, service order, stock transfer order, or project stock order is saved. If the order is deleted, the temporarily reserved quantity is unlocked and can be used for other orders.

**See Also**

Sales Orders Quick Guide

**6.1.2.9 Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time**

**Overview**

If you use availability checking with availability check scope, availability check horizon, and replenishment lead time, the system checks the customer demand against the supply within a certain period of time and determines which products can be delivered to your customer in which quantities and at what times.

You can access the availability check function from the following locations:

- **Sales Quote** view of the New Business work center
- **Sales Orders** view of the Sales Orders work center
- **Service Order Processing** view of the Service Orders work center
- **Customer Demand** view of the Outbound Logistics Control work center or the Supply Planning work center
- **Confirmation Update Runs** view of the Outbound Logistics Control work center or the Supply Planning work center
By defining the availability check scope, you tell the system which types of supply are included in the check. For more information, see Availability Checking with Availability Check Scope [page 137].

By defining an availability check horizon, you specify the number of days (today plus a certain number of days) within which the system checks the demand against the supply, taking the working day calendar of the ship-from location into account. For more information, see Availability Checking with Availability Check Scope and Availability Check Horizon [page 140].

By defining a replenishment lead time, you specify the maximum length of time required for the in-house production or external procurement of a product.

The benefit of entering a replenishment lead time is that you obtain a confirmation date that does not move, as opposed to the confirmation date of the check horizon. The reason for this is that the system determines the end of the replenishment lead time by adding the replenishment lead time from the product master to the current date, taking into account the working day calendar of the ship-from location. When the product availability is checked again for the same order a few days later, the system uses the order entry date as the current date and not the “real” current date. In this way, the end of the replenishment lead time stays the same and your confirmation date remains stable.

The following two graphics are used to illustrate this:

- The requested delivery date is between the check horizon and the replenishment lead time. Therefore, the system confirms the requested quantity at the end of the replenishment lead time.

- If the availability is checked again a few days later and the requested delivery date is still between the check horizon and the replenishment lead time, the system confirms the requested quantity at the end of the replenishment lead time, that is, on the same date as during the first check.

If you enter the replenishment lead time without a check scope and check horizon, the system does not perform a product availability check but confirms the requested quantity at the end of the replenishment lead time. For more information, see Availability Checking with Replenishment Lead Time [page 134].
Prerequisites

Configuration Settings

- Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

The product availability check has been activated in the Business Configuration work center and you have defined which availability check scopes you want to use in your company in general.

The product availability check is activated in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click [Edit Project Scope]. In the Scoping step of the project, ensure that Demand Management and Order Confirmation is selected within Supply Chain Planning and Control.

In the Questions step, expand the Supply Chain Planning and Control scoping element and select Demand Management and Order Confirmation. Select Product Availability Check and answer the questions related to product availability checks.

Master Data Settings

- You must repeat the settings you make in the Materials view of the Product Development work center for each planning area.

  - The product for which you want to check availability has been created as a planning material on the Planning tab.
  - The availability check scope has been set on the Availability Confirmation tab. This determines which types of supply the system includes in the check for the product.
  - The availability check horizon has been entered on the Availability Confirmation tab. This determines the number of days within which the system checks the demand against the supply.
  - The replenishment lead time has been entered on the Availability Confirmation tab. The replenishment lead time must be equal to or greater than the check horizon.

Process Flow

The process flow for checking the availability with an availability check scope, horizon, and replenishment lead time describes how the system uses the information about the product, quantity, ship-to location, and requested delivery date provided in the quote or order to match the demand with the types of supply specified in the availability check scope within the check horizon you specified. Beyond the check horizon the system creates or updates the confirmation based on the replenishment lead time you specified. The process consists of four main steps: ship-from determination, backward scheduling, confirmation determination, and forward scheduling.

1. **Ship-From Determination**
   - When a sales order, service order, stock transfer order, project stock order, or sales quote is created, the system determines available sources of supply. For sales orders, for example, possible sources of supply would be ship-from sites, purchasing contracts, and list prices. For more information, see Ship-From Determination and Shipment Scheduling for Customer Demand [page 118].

2. **Backward Scheduling**
   - Starting from the requested delivery date that the customer entered in the sales order, service order, stock transfer order, project stock order, or sales quote and taking into account the shipping duration of the
transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system determines the requested execution start date at the ship-from location. Note that no calendar is considered for the shipping duration.

Note that in pick-up scenarios where service engineers pick up the products they need from the ship-from location rather than having them delivered to the customer that created the service order, the system does not determine a delivery date. However, it determines a shipment date (that is, the pick-up date) and the execution start date, taking into account the goods issue processing time.

Note that in third-party order processing scenarios where you sell products directly from an external supplier, the system takes the supplier lead time into account to determine the order date. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

3. Confirmation Determination

Starting from the requested execution start date, the system checks if the customer demand can be covered by the supply against which you decided to check, taking the availability check horizon and replenishment lead time into account. During the check within the check horizon, the system takes receipts in the past and all previously confirmed quantities into account. Note that this also includes temporarily confirmed quantities from orders that have not been saved. This means that new orders can only be confirmed when the total receipts exceed the total confirmed quantities. Remaining quantities are confirmed at the end of the replenishment lead time. The following graphics are used to illustrate how the system finds the confirmed execution start date:

- If the requested execution start date is beyond the replenishment lead time, the system confirms the requested quantity on the requested execution start date.

- If the requested execution start date is between the check horizon and the replenishment lead time, the system confirms the requested quantity at the end of the replenishment lead time.

- If the requested execution start date is within the timeframe between today and the check horizon, the system creates quantity confirmations between today and the end of the check horizon according to the current demand and supply situation. The remaining quantity that could not be confirmed is confirmed at the end of the replenishment lead time.
4. **Forward Scheduling**

Starting from the confirmed execution start date and taking into account the shipping duration of the transport lane, the goods issue processing time of the product, and the working day calendar of the ship-from location, the system calculates the confirmed delivery date at the ship-to location.

The result of the availability check is displayed as availability status information. The availability status is assigned based on the comparison of the requested delivery date and the confirmed delivery date. For more information, see Availability Checks [page 16].

If the customer demand comes from a sales order, service order, stock transfer order, project stock order, the system confirms the requested quantity temporarily and turns the temporary confirmation into a real confirmation once the sales order, service order, stock transfer order, or project stock order is saved. If the order is deleted, the temporarily confirmed quantity is unlocked and can be used for other orders.

**See Also**

Sales Orders Quick Guide

6.1.2.10 Confirmation Update Run

**Overview**

You can access the confirmation update run function in the Outbound Logistics Control work center or in the Supply Planning work center. The confirmation update run is a variant of the product availability check that you can use to check the availability of a large number of different demand categories. This enables you to easily carry out the following, for example:

- Adjust your confirmations to changes in the product supply situation resulting from material planning
- Adjust your confirmations to changes in the material master, such as a different replenishment lead time for a product
- Give priority to a more recent sales order from a valuable customer

The confirmation update run reorganizes the confirmations to reallocate the available quantity to the customer demand selected for the update run. In the first step, the confirmations for each customer demand selected are reset, and in the second step, each customer demand selected is confirmed again based on the product availability check settings made for the products.

The product availability check uses the “first come, first served” principle, which means that the available quantity is allocated to the customer demand that is checked first. The confirmation update run enables you to define the sequence in which you want to check your customer demand and allocate available quantity.

**Control Parameters, Sorting Parameters, and Selection Criteria**
If you select the **Update Source of Supply** checkbox in the **Control Parameters** section, ship-from determination is performed again during the availability check for each item. As a result, new sources of supply may be assigned provided that the master data was changed. Note that the system may also change sources of supply that you selected manually on the **Order Logistics Details** screen in the **Customer Demand** view of the **Outbound Logistics Control** work center or **Supply Planning** work center.

Sorting parameters affect the sequence in which the customer demand is checked and confirmed. You can choose and combine the following parameters:

- Confirmed execution start date
- Delivery priority
- Document creation date
- Items for complete delivery first
- Requested delivery date

For example, you can define that all order items are first sorted in descending order according to delivery priority, which is the default sorting direction for the delivery priority, and that those with the same delivery priority are then sorted in ascending order according to the order creation date.

The selection criteria you enter specify for which customer demand the availability is checked by the confirmation update run. You can choose and combine the following criteria, for example:

- Product
- Planning area
- Product category
- Order
- Account

For example, you can define that you want to check any customer demand for products A and B, or only sales orders for product C that were ordered by a specific customer.

When entering the selection criteria for your confirmation update run, you can specify that the run checks the availability for a specific product only if material planning resulted in a changed planning situation or if the product master data was changed. If nothing has changed for a product since the last check, it is not included in the products to be checked during the next run. To specify this, you must select the **Products with Availability-Relevant Changes Only** checkbox on the **Net Change Run** tab.

### Prerequisites

#### Configuration Settings

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

The confirmation update run is activated in your solution configuration. To find this function, go to the **Business Configuration** work center and choose the **Implementation Projects** view. Select your implementation project and click **Edit Project Scope**. In the **Scoping** step of the project, ensure that **Outbound Logistics** is selected within **Manufacturing, Warehousing, and Logistics**.
Other Settings

- You have made the settings required for carrying out a product availability check. For more information, see:
  - Availability Checking with Availability Check Scope  [page 137]
  - Availability Checking with Availability Check Scope and Availability Check Horizon  [page 140]
  - Availability Checking with Availability Check Scope, Availability Check Horizon, and Replenishment Lead Time  [page 144]
- You have created, activated, and scheduled a confirmation update run. For more information, see Quick Guide for Confirmation Update Run  [page 160].

Since the run usually takes a large number of objects into account, we recommend that you schedule the run at a time when there is not much activity in the system, for example, overnight.

Process Flow

1. The system selects the customer demand to be checked according to the selection criteria you entered. Customer demand that was manually confirmed in a forced confirmation as well as demand created in a third-party order processing scenario is not included in the confirmation update run.
2. The system sorts the customer demand selected according to the sorting parameters you entered.
3. The system first resets the actual confirmations for each customer demand selected and then reorganizes the confirmations according to the sorting parameters you specified and according to the product availability check settings you made for the product.
4. You can display the results of the update run in the application log. The Settings tab gives you information about the objects that were selected in the run and for which confirmations may have changed. Note that you can still change the confirmations manually.

If you do not want to use a confirmation run anymore, you can set it to obsolete. However, if you later decide that you want to use the run again, you can reset the status. Note that the run first needs to be activated again after you have reset the status.

See Also

Availability Checks  [page 16]

6.1.2.11 Third-Party Order Processing

Overview

You, as supply planner, sales representative, or buyer working as the third-party order processing coordinator of your company, can use third-party order processing to coordinate and monitor the direct shipment of a product to your customer by a supplier rather than your own company.

The following is an example of a typical process flow based on the business scenarios Order-to-Cash and Procure-to-Pay (Stock). Your company sells a product to a customer. However, you do not supply the product to the customer yourself. Instead you order it from a supplier and instruct this supplier to send it to the customer’s address. The supplier then invoices your company accordingly. Based on the shipment information from your supplier, your company, in turn, invoices the customer. Variants of this process flow are possible.
For more information, see business scenarios:

- Order-to-Cash (Third-Party Order Processing — Material)
- Order-to-Cash (Sell-from-Stock)
- Procure-to-Pay (Stock)

This process supports materials bundled together into kits.

If you use kits in your sales processes, please note that the sales kits are now called kits in SAP Business ByDesign system.

**Prerequisites**

**Configuration Settings**

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

Third-Party Order Processing is enabled in your solution configuration. To find this business option, go to the Business Configuration work center and choose the Implementation Projects view. Select your implementation project and click Edit Project Scope.

For this example business process, the settings for the business scenarios Order-to-Cash and Procure-to-Pay (Stock) have been made.

Additionally, for Third-Party Order Processing, the following has been defined:

**In Scoping, these business topics must be activated in the following sequence:**

- The Sell Standard Products business topic in the Product and Service Portfolio for Sales business package
- The Sales Orders business topic in the Selling Products and Services business package
- The Third-Party Procurement business topic in the Purchase Request and Order Management business package
- In the Purchase Requests business topic of the Purchase Request and Order Management business package, the scoping question Do you want purchase orders to be created automatically from purchase requests? has been answered with Yes.

If your company does not keep products in stock but always deliver them directly from your suppliers, you have to deselect the Shipping business topic in the Outbound Logistics business package. This business topic is automatically selected when the Sell Standard Products and Sales Orders business topics are selected.

**The following master data settings are fulfilled:**

- In the product master, the product is defined as a product to be purchased and sold, which means that both the status of the Purchasing tab and the status of the sales organizations in the Sales tab are set to Active. This is done in the Materials view of the Product Data work center.
- A purchasing contract or list price for one or more suppliers from which the product can be delivered has been created in the Sourcing and Contracting work center.
- The product is assigned to a product category for which automatic purchase order creation is activated. In this case, the purchase order is created automatically when the sales order is submitted. This is done in the Purchase Requests and Orders work center (Define Automatic Creation of Purchase Orders common task).
You can also configure the solution to post third-party direct shipment documents to inventory in Financials. To find the business option to configure this, select your implementation project and click Edit Project Scope. In the Scoping step of the project, ensure that Inventory Valuation is selected within Financial and Management Accounting. In the Questions step, expand the Inventory Valuation scoping element and select Valuation of Purchases and Material Movements. Under Group: Valuation of Purchases and Material Movements, select and answer the question for the Activation of Inventory Postings for Third-Party Direct Shipment business option.

Process Flow

Third-Party Order Processing

1. Creating the Sales Order

In the Sales Orders view of the Sales Orders work center, the sales representative creates a sales order for an account and enters an item for a product.

The system:

- Carries out sourcing to determine a source. For the purposes of this scenario, this product can be supplied only by a supplier. Therefore, the system sets the Fulfillment indicator to External and automatically proposes a supplier.
- The sales representative can change the supplier by assigning a new source of supply.

For more information, see Sales Orders Quick Guide.
Triggers an availability check which is based on the supplier lead time. If you have a purchasing contract with the supplier, the supplier lead time is taken from this contract. Otherwise, the supplier lead time is taken from the product master where it could be defined supplier specific. For example, if the confirmed delivery date is later than the requested delivery date because of the supplier lead time, a yellow ATP traffic light is displayed. The requested quantity is either confirmed at the requested delivery date or at a later date depending on the supplier lead time. For more information, see Availability Checking in Third-Party Order Processing Scenarios.

Requests a product valuation to determine the purchasing price specific to the supplier and to calculate the profit margin of the sales order. For more information, see Profit Margin.

2. Creating the Purchase Order

The sales representative saves and releases the sales order and sends an order confirmation to the customer. Depending on the output settings, he or she uses e-mail, fax or print to do so or a B2B message is sent to the customer automatically.

The system:

- Sets both the status of the sales order and the delivery status in the sales order to *In Process*.
- Creates a customer demand with the delivery type *Third-Party* in the Customer Demand view of the Outbound Logistics Control work center. The release status of the customer demand is set to *Released* and the delivery status to *Not Started*.
  After you have released the sales order, you can no longer change the supplier in the sales order. For more information, see Customer Demand Quick Guide [page 107].
- Creates a purchase request and a purchase order in the Purchase Requests and Orders work center as for the purpose of this scenario the automated purchase order creation has been defined. The purchase order has the process type *Third-Party*. The status of this purchase order is set to *Sent*, meaning that the supplier has been informed.
  For more information, see Purchase Orders Quick Guide.
- Displays the purchase order of the process type *Third-Party* in the Monitor Purchase Orders view of the Supply Control work center. Here, the supply planner can monitor the progress of the purchase order from a planning and logistics perspective.
  For more information, see Quick Guide for Monitor Purchase Orders [page 231].

3. Receiving the Supplier Confirmation

Once the supplier has replied to the purchase order, the buyer creates a purchase order acknowledgement to record the delivery quantity and the delivery date confirmed by the supplier. This is done in the Purchase Orders view of the Purchase Requests and Orders work center.
For more information, see Create a Purchase Order Acknowledgement.

The system:

- Changes the status of the purchase order from *Sent* to *Acknowledgment Received*.
- Updates the customer demand with schedule lines containing the quantities and delivery dates based on the confirmation of the supplier.
- Creates a third-party purchase order in the Third-Party Purchase Orders view of the Third-Party Order Fulfillment work center. This third-party purchase order has the status *Ordered*.

4. Receiving the Delivery Acknowledgement

Once the supplier has shipped the product to the customer and sent you a copy of the delivery note, the buyer or the sales representative records it by going to the Third-Party Purchase Orders view of the Third-Party Order Fulfillment work center and creating the third-party delivery notification.
For more information, see Quick Guide for Third-Party Purchase Orders.

The buyer or the sales representative saves and releases the third-party delivery notification.

The system:
• Creates a third-party inbound delivery with the status Released.
• Creates a third-party outbound delivery with the status Released.
• Creates a goods and activity confirmation based on the information in the third-party outbound delivery. This confirmation is sent to financial accounting. Based on this outbound delivery, the system creates the outbound delivery invoice request. This is visible in the Invoice Requests view of the Customer Invoicing work center with the status To Be Invoiced. For more information, see Quick Guide for Invoice Requests.

If you have selected the option of posting third-party direct shipment documents to inventory in the solution, the goods and activity confirmation is posted to Financials with two additional items for inventory that represents the third-party outbound and inbound deliveries.

• Updates the total goods receipt quantity in the purchase order. The items appear in the Purchasing Document Items view of the Inventory Valuation work center. For more information, see Purchasing Document Items Quick Guide.
• Changes the purchase order status to Follow-up Document Created and the delivery status to Completely Delivered and updates it with the total delivery quantity
• Updates the final delivery date in the sales order. The items appear in the Sales Document Items view of the Cost and Revenue work center. For more information, see Sales Document Items Quick Guide.
• Changes the delivery status in the sales order to Finished and updates the quantity delivered. The overall status of the sales order remains In Process.
• Changes the delivery status of the customer demand to Finished.
• Updates the schedule lines of the customer demand with the fulfilled quantities and the shipment date.
• Informs supplier invoicing that an invoice for the purchase order can be verified.

5. Receiving the Supplier Invoice
Once the supplier has sent you the invoice, the accountant creates and posts a new supplier invoice with reference to the third-party purchase order in the Invoice Entry view of the Supplier Invoicing work center. For more information, see Create an Invoice or Credit Memo with Reference to Preceding Documents.

The system:
• Saves the document in the Invoices and Credit Memos view of the Supplier Invoicing work center. For more information, see Quick Guide for Invoices and Credit Memos (in Supplier Invoicing).
• Forwards the details of the transaction to the general ledger. The system creates a journal entry for the supplier invoice, posts the supplier invoice as payables in the general ledger, and releases the invoice for payment. For more information, see Journal Entries Quick Guide.
• Updates the purchase order status to Finished and sets the invoice completed status to Invoiced.

6. Creating the Customer Invoice
Based on the outbound delivery invoice request, the accountant creates and releases the customer invoice in the Invoice Requests view of the Customer Invoicing work center. Or, the accountant waits until the next scheduled invoice run when the system automatically processes the invoice requests and creates and releases the invoice. For more information, see Quick Guide for Invoice Requests.

The system:
• The system creates a journal entry for the customer invoice and posts the customer invoice as revenues and receivables as journal entry in the general ledger. In addition, it creates an open item in the customer account. When the payment is received, this open item is cleared. The payment is posted as a cash receipt in the general ledger.
• Updates the sales order item invoice status to *Finished*. If no other items exist, the system sets the sales order status to *Completed*.

6.1.3 Tasks

6.1.3.1 Export Business Data Using Microsoft Excel®

**Overview**

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

**Prerequisites**

- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - *Self Services Overview* in the *Home* work center
  - *Download Center* in the *Application and User Management* work center
  - *Download* link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking *Check My Computer Settings* on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

**Procedure**

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
   - For a report, you can either export a chart or a table. To do so, select the report, and click *Switch to Chart* or *Switch to Table*.
   - For a worklist, select the worklist and click *Go*.
3. Click *Export*, then choose *To Microsoft Excel*.
4. **Optional: Personalizing your excel export**
   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click *Personalize [This screen]*.
      b. In the side panel, select *Display Settings*.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting *All* in the *Export Columns* field.
         - The default value for this field is *Visible*, which exports only the currently displayed columns.
   2. To select the language for your excel export, do the following
a. In the Display Settings dialog box, set the Language Selection field to Show and click **OK**.

b. Click **Save**.

c. Click **Export**, then choose **To Microsoft Excel**.

d. Select a language in the dialog box that opens.

   - The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.

5. Select the template in the dialog box that is displayed.

   - If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
   - If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
   - If there is more than one template in the system for this export scenario, the Template List dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.

6. Click **Download**.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click **Open** or **Save** depending on what you want to do with the exported data.

   Depending on whether you click **Open** or **Save**, there are two possible results:

   - If you click **Open**, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
   - If you click **Save**, a **Save As** dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully.

   You can later navigate to the location where you have saved the template and open it.

6.2 Delivery Due List View

6.2.1 Delivery Due List Quick Guide

The **Delivery Due List** view of the **Outbound Logistics Control** work center gives you an overview of all the sales order, service order, stock transfer order, and project stock order items that can be released to logistics execution. The items are listed based on confirmed schedule lines. The main purpose of this view is to release these items to the logistics department manually. Once these items have been released to logistics execution, most of the data such as product, date, quantity, ship-to party cannot be changed in the corresponding orders. The released order items are then displayed as delivery proposals in the **Delivery Proposals** view of the **Outbound Logistics** work center. For more information about delivery proposals, see Delivery Control Quick Guide.
For Sales Kits-
You can display the hidden columns — Sales Kit Product, Parent Line Item ID, Base Quantity and Not Goods Issue Relevant to view sales kit information.

For Project Stock Orders-
- You can display the hidden columns — Project ID and Project Task ID to view project stock order information.
- If you want to view the order schedule lines corresponding to project stock orders, you can use the advanced search and select Project Stock Order in the Order Category field.
- You can display the hidden fields — Project ID and Project Task ID in the advanced search under Customer Demand Data, to filter the order schedule lines corresponding to project stock orders, based on the search parameters.

Business Background

Complete Delivery Orders
For more information, see Complete Delivery Orders. [page 128].

Sales Kit Process Flow
A kit is defined as a logical group of items that can be sold or purchased together as one unit. Wholesale and component manufacturing industries like to offer product bundles as single selling units. In the Business ByDesign system a single selling or purchasable unit comprising of various components is called a kit.
For more information, see Sales Kit Process Flow. [page 274].

Sourcing Material from Stock for Projects
During the execution of a project, you may need to procure material for use in the project. You can choose to either source the material from stock or purchase the material.
For more information, see Sourcing Material from Stock for Projects.

Business Scenario: Order-to-Cash (Sell-from-Stock)
The Order-to-Cash (Sell-from-Stock) business scenario enables you to sell goods from stock using a wide range of standard features to handle sales quotes, sales orders, deliveries, customer invoices, and payments. This scenario includes features, such as, available-to-promise (ATP) check, pricing, credit card, credit limit check, and automatic order creation.
For more information, see Order-to-Cash (Sell-from-Stock).

Business Scenario: Order-to-Cash (Make-to-Order)
The Order-to-Cash (Specified Products) business scenario enables your company to produce and sell products for a specific customer demand.
You can create a sales quote or sales order with a product specification that includes customer-specific requirements, plan the multilevel demand for a sales order item, and create supply for the required products. You can order and receive materials based on requirements from the customer, release the production order, and create production tasks. During task confirmation, it is ensured that only those materials that were replenished for a specific customer demand are consumed. Output products are always confirmed as specified stock. A final inspection identifies if any of the units do not conform to the customer requirements.
You can post a goods issue. The system creates an outbound delivery and the products are shipped to the customer. An invoice is created based on the outbound delivery and the system updates financial accounting. For more information, see Order-to-Cash (Make-to-Order).

Business Scenario: Intracompany Stock Transfer

The Intracompany Stock Transfer business scenario enables you to transfer stock from one site to another site within the same company. You create the stock transfer proposal in the receiving site to plan the shipping of stock. You create the stock transfer order in the sending site manually, or by releasing the stock transfer proposal. You complete the outbound processing steps in the sending site in the same way as you would complete outbound processing when based on sales orders. When you create the outbound delivery, an advised inbound delivery notification is created in the receiving site automatically. You then complete the inbound processing steps in the receiving site in the same way as you would complete inbound processing when based on purchase orders. For more information, see Intracompany Stock Transfer.

Business Scenario: Materials in Projects

The Materials in Projects business scenario is relevant for project-based service providers who handle materials in addition to services (for example, infrastructure service providers, IT, or energy infrastructure as gas pipeline or wind power). They need to plan and schedule materials on projects, procure these materials from within the project, and sell these materials along with the project services within one project invoice. This scenario enables you to source materials from your own inventories by creating project stock orders. You can choose to either source the material from stock or purchase the material. For more information, see Materials in Projects.

Tasks

- Any action that is performed at the sales kit level applies to all the sales kit items. For example, if you release the confirmed schedule lines for a sales kit, the system will release the confirmed schedule lines for all the sales kit items.

Open Order Logistics Details for a Sales Order, Service Order, Stock Transfer Order, or Project Stock Order

1. Select the row for a sales order, service order, stock transfer order, or project stock order and click Edit to open the Order Logistics Details screen for the relevant order category. Note that for sales orders, service orders, or project stock orders, you can manually re-source the order and only display most of the order information on this screen. For stock transfer orders, you can change most of the order information on this screen until the order has been released. For more information about the tasks that you can perform on this screen, see Display Order Logistics Details for a Sales Order or Service Order and Edit Order Logistics Details for a Stock Transfer Order in the Tasks section of the Customer Demand Quick Guide [page 107].

2. Optional: Choose the Document Flow tab to display the document flow for the selected order through the supply chain. For more information, see Document Flow.

Export Order Schedule Lines to Microsoft Excel®

For more information about this task, see here [page 50].
Release a Due Delivery Item

Select the row for the order item that you want to release and click [Release].

The selected item is released and visible as a delivery proposal in the Delivery Proposals view of the Outbound Logistics work center.

- If an item is part of a complete delivery order and therefore belongs to a delivery group, it is only displayed in the list if all the items of the delivery group can be released. If you select such an item for release, the system also releases all other items of the delivery group.

To get an overview of your complete delivery orders, use the Complete Delivery Orders show option and group the list by delivery group.

For more information, see Complete Delivery Orders [page 128].

If the sales order contains a sales kit, this task is available only for the sales kit and not for individual sales kit items.

Open Product Planning Details

- This action is only available if you are authorized to view the planning details of a specific product.

It is not available for sales kit.

Select the row for the sales order, service order, stock transfer order, or project stock order for which you want to view the product planning details and click Open Product Planning Details.

You obtain detailed information about the supply and demand situation for the selected product. For details about which tasks you can perform on the Product Planning Details screen, see the Tasks section of the Quick Guide for Products in Supply Planning [page 73].

The following common tasks are available in the Delivery Due List view:

Stock Overview

For more information about this task, see here [page 26].

New Stock Transfer Order

1. Start the New Stock Transfer Order common task.

2. Specify a ship-from site ID, a ship-to site ID, and a ship-to location ID.

   - The ship-to site is also the ship-to location:
     In this case, the ship-to-site also has the role of the ship-to location. The ship-to location ID (which is the same as the ship-to site ID) is entered automatically when the user enters the ship-to site ID and presses Enter.

   - The ship-to site and ship-to location are different and there is only one ship-to location:
     In this case, the ship-to location ID is entered automatically when the user enters the ship-to site ID and presses Enter.

   - The ship-to site and ship-to location are different and there are more than one ship-to locations:
In this case, the ship-to location ID cannot be entered automatically when the user enters the ship-to site ID as the assignment is not unique. If, however, the user enters the ship-to location ID, the ship-to site ID is entered automatically as this assignment is unique.

For more information, see Locations and Location Layouts.

3. Optional: Select a delivery priority.
   Note that if you select **Immediate** as the priority, the system automatically releases the stock transfer order to outbound logistics provided that the order can be confirmed today.

4. Optional: To specify that you want to ship all items with the same requested date, ship-to address, and delivery rule together in one outbound delivery, select the **Complete Delivery Order** checkbox.

5. On the **Line Items** tab, click **Add Row** and enter the product ID and the requested quantity of the product that you want to ship.

6. Repeat this step for each product you want to ship.

7. Click **Release** to release the stock transfer order and save your entries.

6.2.2 Tasks

6.2.2.1 Export Business Data Using Microsoft Excel®

**Overview**

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

**Prerequisites**

- You have installed the latest **Add-In for Microsoft Excel®**. Depending on your solution set-up, you can do this from the:
  - **Self Services Overview** in the **Home** work center
  - **Download Center** in the **Application and User Management** work center
  - **Download** link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking **Check My Computer Settings** on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

**Procedure**

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
To select the language for your excel export, do the following:
   a. In the Display Settings dialog box, set the Language Selection field to Show and click OK.
   b. Click Save.
   c. Click Export, then choose To Microsoft Excel.
   d. Select a language in the dialog box that opens.

The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.

5. Select the template in the dialog box that is displayed.

- If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.
- If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.
- If there is more than one template in the system for this export scenario, the Template List dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.

6. Click Download.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click Open or Save depending on what you want to do with the exported data.

Depending on whether you click Open or Save, there are two possible results:
- If you click Open, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.
- If you click Save, a Save As dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully. You can later navigate to the location where you have saved the template and open it.
6.3 Automated Actions View

6.3.1 Quick Guide for Confirmation Update Runs

The Confirmation Update Runs subview enables you to create, maintain, and monitor mass data runs for availability checks and the subsequent updating of sales orders, service orders, and stock transfer orders. The availability checks verify if the confirmed dates and quantities for sales orders items are still valid or need to be updated. This information is then updated accordingly.

You can access the Confirmations Update Runs subview from the following locations:

- Supply Planning work center
- Outbound Logistics Control work center

The Confirmation Update Runs subview is only visible if the Outbound Logistics business package is selected within the Manufacturing, Warehousing, and Logistics business area in the Implementation Projects view of the Business Configuration work center.

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

**Business Background**

**Confirmation Update Run**

You can access the confirmation update run function in the Outbound Logistics Control work center or in the Supply Planning work center. The confirmation update run is a variant of the product availability check that you can use to check the availability of a large number of different demand categories. This enables you to easily carry out the following, for example:

- Adjust your confirmations to changes in the product supply situation resulting from material planning
- Adjust your confirmations to changes in the material master, such as a different replenishment lead time for a product
- Give priority to a more recent sales order from a valuable customer

The confirmation update run reorganizes the confirmations to reallocate the available quantity to the customer demand selected for the update run. In the first step, the confirmations for each customer demand selected are reset, and in the second step, each customer demand selected is confirmed again based on the product availability check settings made for the products.

For more information, see Confirmation Update Run [page 148].

**Mass Data Runs (MDR)**

A Mass Data Run (MDR) is the automatic mass processing of a task or a business transaction. MDRs enable mass processing of business data and are used in business processes, for example, invoice runs, payment authorization runs, or balance confirmation runs. When a user schedules an MDR the system represents it as a background job. During scoping, it is possible to provide default variants of the MDRs.
MDRs are created and maintained in the work centers. Using the Job Scheduler, users schedule the run to execute once or regularly at specified times.

In the Background Jobs view of the Application and User Management work center, you can monitor and reschedule MDR jobs that are created by users in other work centers.

For more information, see the documentation about mass data runs.

**Application Log**

Application logs are created as a result of business processes that require logging of business steps, for example, the execution of mass data runs. The Application Log displays detailed information about business process steps and their results allowing you to review these at a later point in time.

For more information, see the documentation about the application log.

**Tasks**

Create a Confirmation Update Run

1. To open the New Confirmation Update Run screen, click New. Alternatively, you can click Copy to copy an existing confirmation update run. The Confirmation Update Run screen then opens with the run description, sorting parameters, and selection criteria filled automatically by the system. You can then edit and add to this information, where appropriate.

2. In the General Data section, enter an ID and, if required, a description for the run.

3. Optional: In the Control Parameters section, select the Update Source of Supply checkbox if you want the system to redetermine the source of supply for each item during the run. As a result, the system may assign different sources of supply provided that master data was changed. Use this function carefully as it may also change the source of supply that you selected manually on the Order Logistics Details screen. In addition, you may experience performance issues.

4. In the Sorting Parameters section, click Add Row to specify the first sorting parameter to be considered for the run. Sorting parameters affect the sequence in which the customer demand is checked and confirmed.

5. In the Sequence ID column, enter a number, choose Ascending or Descending in the Direction column, and select the criterion according to which you want the system to sort customer demand from the dropdown list in the Criteria column. If you select the Items for Complete Delivery First criterion, the sorting direction is automatically set to Descending and cannot be changed. This criterion specifies that if complete delivery orders are among the customer demand that is checked and confirmed, the complete delivery order items are given priority over other items. For more information, see Complete Delivery Orders [page 128]. Note that you can combine the sorting parameters and define, for example, that all order items are first sorted in descending order according to delivery priority (that is, from priority Immediate, to Urgent, Normal, and Low) and that the demand with the same delivery priority is then sorted in ascending order according to the document creation date.

6. Repeat steps 4 and 5 for each sorting parameter you want the system to consider.
7. On the relevant tab of the **Selection Criteria** section, click **Add Row** and use the **Inclusion/Exclusion** list and the **Search Pattern** list to specify for which customer demand the availability is checked by the confirmation update run. Depending on what you selected from the **Search Pattern** list, you must enter a single value in the **From** field, a single value in the **To** field, or a value range in the **From** and **To** fields. Note that you can combine the selection criteria and define, for example, that you want to check any customer demand for products A and B, or only sales orders for product C that were ordered by a specific customer.

8. Repeat step 7 for each selection criterion you want the system to consider.

9. On the **Net Change Run** tab, select the **Products with Availability-Relevant Changes Only** checkbox if you want to specify that the run checks the availability for a specific product only if material planning resulted in a changed planning situation or if the product master data was changed.

10. To activate the run, click **Set to Active**. Note that you can also later activate the run by clicking **Actions** and choosing **Set to Active** on the overview screen.

11. To save the run and return to the **Confirmation Update Runs** screen, click **Save and Close**.

**Schedule a Confirmation Update Run**

1. To open the **Schedule Job** screen, select the row for the run you want to schedule, and click **Schedule**. Note that you can only schedule active runs. Note that a job is a scheduled instance of a mass data run.

2. Choose one of the following options as required:
   - Choose **Start Immediately** to run the job immediately.
   - Choose **Run After Job** and select a job. The job will then run immediately after the job you specify here. It makes sense, for example, to schedule a confirmation update run after a planning run has taken place and then schedule a delivery request run after the confirmation update run.
   - Choose **Single Run** to define a date and time for the run. If you want to run the job at regular time intervals, choose **Recurrence** and choose a recurrence for the run, for example, daily, weekly, or monthly. We recommend that you do not schedule jobs in shorter intervals than one hour. In most cases, once a day should be enough. Since you may experience performance and locking issues if you schedule your runs for times when the system load is high, we also recommend that you schedule your jobs to run at night.

   Avoid scheduling parallel jobs. If you have to schedule the same run more than once, make sure that the jobs do not overlap as this may cause locking issues, and in exceptional cases the job may terminate. After scheduling your runs, double-check in the **Job Monitor** for parallel jobs. For more information, see the documentation about background jobs.

3. Click **Save and Close** to save the run and return to the **Confirmation Update Runs** screen. The run has been scheduled and will be executed as specified.
Export Confirmation Update Runs to Microsoft Excel®
For more information about this task, see here [page 50].

6.3.2 Quick Guide for Release Due Deliveries Runs

The Release Due Deliveries Runs subview of the Outbound Logistics Control work center enables you to create and activate runs for the mass release of outbound due schedule lines. The Release Due Deliveries Runs subview is only visible if the Outbound Logistics business package is selected within the Manufacturing, Warehousing, and Logistics business area in the Implementation Projects view of the Business Configuration work center.

Configuration settings are usually performed by an administrator. If you do not have the required authorization, contact your administrator.

Business Background

Mass Data Runs (MDR)

A Mass Data Run (MDR) is the automatic mass processing of a task or a business transaction. MDRs enable mass processing of business data and are used in business processes, for example, invoice runs, payment authorization runs, or balance confirmation runs. When a user schedules an MDR the system represents it as a background job. During scoping, it is possible to provide default variants of the MDRs. MDRs are created and maintained in the work centers. Using the Job Scheduler, users schedule the run to execute once or regularly at specified times. In the Background Jobs view of the Application and User Management work center, you can monitor and reschedule MDR jobs that are created by users in other work centers. For more information, see Mass Data Runs (MDR).

Application Log

Application logs are created as a result of business processes that require logging of business steps, for example, the execution of mass data runs. The Application Log displays detailed information about business process steps and their results allowing you to review these at a later point in time. For more information, see the documentation about the application log.

Tasks

Create a Release Due Deliveries Run

1. Click New to open the New Release Due Deliveries Run screen.
2. In the General Data section, enter an ID and, if required, a description for the run. Note that alternatively you can click Copy to copy an existing planning run. The New Release Due Deliveries Run screen then opens with the run description, control parameters, and selection criteria filled automatically by the system. You can then edit and add to this information, where appropriate.
3. Specify criteria for selecting schedule lines in the Control Parameters section as required. The system automatically includes or excludes schedule lines based on these criteria.

   a. From the Selection Of dropdown list, use the default setting Pick-Ups and Shipments or select Shipments or Pick-Ups to specify whether the number of days you enter in the Shipment/Pick-Up Date in Past and Within Next field refers to both pick-ups and shipments, or to pickups only or shipments only. In the Shipment/Pick-Up Date in Past and Within Next field, enter the number of days up to which you want to include schedule lines. For example, if you enter 5, the system includes all schedule lines with a shipment or pick-up date of any time in the past and up to five days in the future. Note that if you do not enter anything here, the system ignores the selection you made in the Selection Of dropdown list and selects all schedule lines to be released.

   b. In the Execution Start Date in Past and Within Next field, enter the number of days up to which you want to include schedule lines. For example, if you enter 5, the system includes all schedule lines with an execution start date of any time in the past and up to five days in the future. Note that you can use this field to further restrict the number of confirmed schedule lines that the system selects.

   c. From the Time Zone dropdown list, select the setting that best suits your needs.

   d. In the Application Log Content dropdown list, select which data should be written to the application log according to your needs.

4. On the relevant tab, click Add Row and use the Inclusion/Exclusion list and the Search Pattern list to specify which schedule lines you want to release in the release due deliveries run. Depending on what you selected from the Search Pattern list, you must enter a single value in the From field, a single value in the To field, or a value range in the From and To fields.

   If the schedule line is for an item that is part of a delivery group in a complete delivery order, all schedule lines for the other items of the delivery group are released as well. If not all schedule lines can be released, none of the schedule lines is released. When you schedule a run that includes complete delivery order items, the number of selected order items shown on the General tab of the application log may therefore be less than the number of items that were released. For more information, see Complete Delivery Orders [page 128].

5. On the Second Scope of Check tab, select the Enable Second Scope of Check checkbox, if you want the system to do a second availability check based on stock while releasing outbound due schedule lines.

6. Repeat this step for each selection criterion you want the system to consider.

7. Click Set to Active to activate the run. Note that you can also later activate the run by clicking Actions and choosing Set to Active on the overview screen.

8. Click Save and Close to save the run and return to the Release Due Deliveries Runs screen.
Schedule a Release Due Deliveries Run

1. Select the row for the run you want to schedule, and click [Schedule] to open the Schedule Job screen. Note that you can only schedule active runs.

2. Choose one of the following options as required:
   - Choose Start Immediately to carry out the run immediately.
   - Choose Run After Job and select a job. The run will then be carried out immediately after the specified job.
   - Choose Single Run to define a date and time for the run. If you want to carry out the run at regular time intervals, choose Recurrence and choose a recurrence for the run for example, daily, weekly, or monthly.

3. Click [Save and Close] to save the run and return to the Release Due Deliveries Runs screen. The run has been scheduled and will be executed as specified.

Export Release Due Deliveries Runs to Microsoft Excel

For more information about this task, see here [page 50].

6.3.3 Tasks

6.3.3.1 Export Business Data Using Microsoft Excel®

Overview

You can export reports and worklists to Microsoft Excel® documents. You can use these documents for further analysis, and in some cases, edit and upload them to the solution.

You can export data from a report or from a worklist.

Prerequisites

- You have installed the latest Add-In for Microsoft Excel®. Depending on your solution set-up, you can do this from the:
  - Self Services Overview in the Home work center
  - Download Center in the Application and User Management work center
  - Download link that is available directly on the user interface
- The settings for your browser must be set correctly. You can review the information about computer settings by clicking Check My Computer Settings on the logon screen.
- You must be authorized to perform an export to Microsoft Excel®.

Procedure

1. Go to the screen with the data you want to export.
2. Depending on the type of data, choose one of these options:
• For a report, you can either export a chart or a table. To do so, select the report, and click **Switch to Chart** or **Switch to Table**.

• For a worklist, select the worklist and click **Go**.

3. Click **Export**, then choose **To Microsoft Excel**.

4. **Optional: Personalizing your excel export**

   1. To select the columns in your exported excel, do the following:
      a. In the title bar, click **Personalize This screen**.
      b. In the side panel, select **Display Settings**.
      c. In the Display Settings dialog box, you can export all the columns in the view by selecting **All** in the **Export Columns** field.
         
         The default value for this field is **Visible**, which exports only the currently displayed columns.

   2. To select the language for your excel export, do the following:
      a. In the Display Settings dialog box, set the **Language Selection** field to **Show** and click **OK**.
      b. Click **Save**.
      c. Click **Export**, then choose **To Microsoft Excel**.
      d. Select a language in the dialog box that opens.

         The column selection preference in this dialog box allows you to override the personalized setting. This selection is valid for the current export only.

5. Select the template in the dialog box that is displayed.

• If there is only one template that has the logged in language variant, then the export will be performed in the logged in language, and no user interaction is required.

• If there is only one template in the system for this export scenario, but the logged in language variant is not available, then export will be performed in the English language.

• If there is more than one template in the system for this export scenario, the **Template List** dialog box is displayed. In this dialog, you can select the Microsoft Excel template that you want to use for the export. The template will dictate how your exported data will be formatted. The Microsoft Excel version that is relevant for each template is displayed.

6. Click **Download**.

7. A message shows that you can open or save the file which contains the data that you have just exported from the solution. Click **Open** or **Save** depending on what you want to do with the exported data.

   Depending on whether you click **Open** or **Save**, there are two possible results:

• If you click **Open**, a worksheet opens with the data in Microsoft Excel. The file has a temporary name, but it is not saved. You can use all the functions of Microsoft Excel to organize the data and to save that worksheet.

• If you click **Save**, a **Save As** dialog box opens. You can specify an appropriate file name and a location to save the exported Microsoft Excel file to. A message will inform you when the download has completed successfully. You can later navigate to the location where you have saved the template and open it.
6.4 Reports View

6.4.1 Outbound Delivery Performance - Quick Analysis

Overview

This report provides a multilevel investigation of the level of performance your company provides through correct and on-time deliveries.

By a quick graphical or table overview, you can see in which business areas the delivery performance is not meeting goals. It is only relevant if your organization has a transport relationship with your customers, if you just provide services or cash sales then this report is not relevant.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:

- Sales Unit
  The department or section that is responsible for sales.
- Distribution Channel
  The method used to get a product to the customer.
- Account
  The customer who ordered products from your organization.
- Planning Area
  The grouping of demand and supply for a selected product from a planning perspective within a site.
- Product
  The identifier of the product along with the description.
- Order Item Creation Date
  The date on which the order item was created.
- Requested Delivery Date
  The date on which the customer requires ordered goods to be delivered.
- Delivery Date
  The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

Report Content

This report shows an aggregated view and comparison of the date and quantity percentages on aggregation level, for example month, customer, and product group.

Additional information is available for the following key figures and characteristics:

Key Figures
- **Requested Quantity**
The quantity that is actually requested by the customer.

- **Promised Quantity**
The quantity that was promised to be delivered to the customer.

- **Confirmed Quantity**
The quantity that is confirmed by an availability check against the requested quantity.

- **Delivered Quantity**
The quantity that is delivered to the customer.

- **% Delivered Qty by Requested Date**
Quantity delivered by the requested date divided by the overall delivered quantity; given as a percentage.

- **% Delivered Qty by Promised Date**
Quantity delivered by the promised date divided by the overall delivered quantity; given as a percentage.

- **% Delivered Qty by Confirmed Date**
Quantity delivered by the confirmed date divided by the overall delivered quantity; given as a percentage.

- **On Time Delivery% - Requested Date**
Number of deliveries delivered on the requested date given as a percentage.

- **On Time Delivery% - Promised Date**
Number of deliveries delivered on the promised date given as a percentage.

- **On Time Delivery% - Confirmed Date**
Number of deliveries delivered on the confirmed date given as a percentage.

**Characteristics**

- **Order Type**
The classification of the order. It can either be a sales order, service order, or stock transfer order.

- **Delivery Priority**
The delivery priority of the sales order. The priority can be **Immediate**, **Urgent**, **Normal**, or **Low**.

- **Requested Delivery Month**
The month in which the customer requires ordered goods to be delivered.

- **Requested Delivery Week**
The week in which the customer requires ordered goods to be delivered.

- **Promised Delivery Month**
The month in which the delivery is promised to arrive at its destination.

- **Promised Delivery Week**
The week in which the delivery is promised to arrive at its destination.

- **Confirmed Delivery Month**
The month in which the delivery is confirmed to arrive at its destination.

- **Confirmed Delivery Week**
The week in which the delivery is confirmed to arrive at its destination.

**Analyzing the Report**

When analyzing the reports you have to decide whether you want to do a rough analysis on aggregated level, for example on customer or product level. You can also easily group the results in time blocks like calendar weeks or calendar months. Use the date and quantity reports for detailed analysis and in-depth research on order and delivery level. If you aggregate the reports, mind that the results depend on the displayed key figures and characteristics. The combination of these key figures has to be handled carefully to ensure that the results are usable and interpretable.

To further analyze data in this report, you can drag characteristics to rows and columns.
Add or remove key figures by clicking the Select Key Figures icon under Columns next to the Key Figures dropdown list.

From this report, you can navigate to:

- Product details
- Account details
- Sales unit details
- Sales responsible details
- Ship-from site details

See Also

Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]

6.4.2 Outbound Delivery Performance by Quantity

Overview

This report provides a multilevel investigation of the level of performance your company provides through correct and on-time deliveries.

By a quick graphical or table overview, you can see in which business areas the delivery performance is not meeting goals. It is only relevant if your organization has a transport relationship with your customers, if you just provide services or cash sales then this report is not relevant.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:

- Sales Unit
  The department or section that is responsible for sales.
- Distribution Channel
  The method used to get a product to the customer.
- Account
  The customer who ordered products from your organization.
- Planning Area
  The grouping of demand and supply for a selected product from a planning perspective within a site.
- Product
  The identifier of the product along with the description.
- Order Item Creation Date
  The date on which the order item was created.
• Requested Delivery Date
  The date on which the customer requires ordered goods to be delivered.

• Delivery Date
  The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

Report Content

This report shows an in-depth analysis and measures which part of the delivered quantity was actually delivered on time. The report compares the delivery date with the other dates of the fulfillment process: requested date, promised date, and confirmed date to measure the performance of the delivery.

Outbound Delivery Performance by Quantity - Example

Requested Schedule Line: 10 pieces on February 17
Promised Schedule Line: 8 pieces on February 18, 2 pieces on February 20
Confirmed Schedule Line: 7 pieces on February 18, 3 pieces on February 21
Delivered Schedule Line: 9 pieces on February 20, 1 piece on February 21

<table>
<thead>
<tr>
<th>Requested Date</th>
<th>Promised Date</th>
<th>Confirmed Date</th>
<th>Delivery Date</th>
<th>Requested Quantity</th>
<th>Promised Quantity</th>
<th>Confirmed Quantity</th>
<th>Delivered Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 17</td>
<td>February 18</td>
<td>February 18</td>
<td>February 20</td>
<td>10</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>February 17</td>
<td>February 18</td>
<td>February 21</td>
<td>February 20</td>
<td></td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>February 17</td>
<td>February 18</td>
<td>February 21</td>
<td>February 21</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

The performance of the delivery is as follows:

• With regard to the requested date: Quantity on Requested Delivery Date = 0
• With regard to the promised date: Quantity on Promised Delivery Date = 0
• With regard to the confirmed date: Quantity on Confirmed Delivery Date = 3

Additional information is available for the following key figures and characteristics:

Key Figures

• Requested Quantity
  The quantity that is actually requested by the customer.

• Promised Quantity
  The quantity that was promised to be delivered to the customer.

• Confirmed Quantity
  The quantity that is confirmed by an availability check against the requested quantity

• Delivered Quantity
  The quantity that is delivered to the customer.

• Quantity on Requested Delivery Date
  The quantity that is delivered on the requested delivery date.

• Quantity on Promised Delivery Date
  The quantity that is delivered on the promised delivery date.

• Quantity on Confirmed Delivery Date
  The quantity that is delivered on the confirmed delivery date.

Characteristics

• Order Type
The classification of the order. It can be either a sales order, service order, or stock transfer order.

- **Delivery Priority**
  The delivery priority of the sales order. The priority can be *Immediate*, *Urgent*, *Normal*, or *Low*.

- **Requested Delivery Month**
  The month in which the customer requires ordered goods to be delivered.

- **Requested Delivery Week**
  The week in which the customer requires ordered goods to be delivered.

- **Promised Delivery Month**
  The month in which the delivery is promised to arrive at its destination.

- **Promised Delivery Week**
  The week in which the delivery is promised to arrive at its destination.

- **Confirmed Delivery Month**
  The month in which the delivery is confirmed to arrive at its destination.

- **Confirmed Delivery Week**
  The week in which the delivery is confirmed to arrive at its destination.

### Analyzing the Report

When analyzing the reports you have to decide whether you want to do a rough analysis on aggregated level, for example on customer or product level. You can also easily group the results in time blocks like calendar weeks or calendar months. Use the date and quantity reports for detailed analysis and in-depth research on order and delivery level. If you aggregate the reports, mind that the results depend on the displayed key figures and characteristics. The combination of these key figures has to be handled carefully to ensure that the results are usable and interpretable.

To further analyze data in this report, you can drag characteristics to rows and columns.

Add or remove key figures by clicking the *Select Key Figures* icon under *Columns* next to the *Key Figures* dropdown list.

From this report, you can navigate to:

- Product details
- Account details
- Sales unit details
- Sales responsible details
- Ship-from site details

### See Also

- Reports View
- *Overview of Reports in Supply Chain Management* [page 167]
- *Overview of Data Sources in Supply Chain Management* [page 169]

### 6.4.3 Outbound Delivery Performance by Time

#### Overview

This report provides a multilevel investigation of the level of performance your company provides through correct and on-time deliveries.
By a quick graphical or table overview, you can see in which business areas the delivery performance is not meeting goals. It is only relevant if your organization has a transport relationship with your customers, if you just provide services or cash sales then this report is not relevant.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:

- **Sales Unit**
  The department or section that is responsible for sales.
- **Distribution Channel**
  The method used to get a product to the customer.
- **Account**
  The customer who ordered products from your organization.
- **Planning Area**
  The grouping of demand and supply for a selected product from a planning perspective within a site.
- **Product**
  The identifier of the product along with the description.
- **Order Item Creation Date**
  The date on which the order item was created.
- **Requested Delivery Date**
  The date on which the customer requires ordered goods to be delivered.
- **Delivery Date**
  The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

Report Content

This report shows an in-depth analysis and measures the performance regarding the compliance on schedule line level. A schedule line (requested, confirmed, promised) can either be delivered as okay or not okay. If a schedule line is delivered as okay, the real delivery date meets exactly the compared value (that is, the requested date). Always the latest delivery is taken into account. The aggregated performance counts the schedule lines delivered as okay and compares the result to the number that was delivered as not okay.

**Outbound Delivery Performance by Time - Example**

- Requested schedule line: 10 pieces on February 17
  Delivery: 8 pieces on February 17, 2 pieces on February 23
  -> Date performance for requested date: 50%
- Requested schedule line: 5 pieces on February 15
  Delivery: 5 pieces on February 15
  -> Date performance for requested date: 100%

The date performance for the requested date for this customer is 75% overall.

Additional information is available for the following key figures and characteristics:

Key Figures
- Requested Quantity
  The quantity that is actually requested by the customer.
- Promised Quantity
  The quantity that was promised to be delivered to the customer.
- Confirmed Quantity
  The quantity that is confirmed by an availability check against the requested quantity
- Delivered Quantity
  The quantity that is delivered to the customer.
- Deviation to Requested Date
  The deviation between the requested delivery date and the delivery date in days.
- Deviation to Promised Date
  The deviation between the promised delivery date and the delivery date in days.
- Deviation to Confirmed Date
  The deviation between the confirmed delivery date and the delivery date in days.
- On Time Delivery % - Requested Date
  Number of deliveries delivered on the requested date given as a percentage.
- On Time Delivery % - Promised Date
  Number of deliveries delivered on the promised date given as a percentage.
- On Time Delivery % - Confirmed Date
  Number of deliveries delivered on the confirmed date given as a percentage.

Characteristics
- Order Type
  The classification of the order. It can be either a sales order, service order, or stock transfer order.
- Delivery Priority
  The delivery priority of the sales order. The priority can be Immediate, Urgent, Normal, or Low.
- Requested Delivery Month
  The month in which the customer requires ordered goods to be delivered.
- Requested Delivery Week
  The week in which the customer requires ordered goods to be delivered.
- Confirmed Delivery Month
  The month in which the delivery is confirmed to arrive at its destination.
- Confirmed Delivery Week
  The week in which the delivery is confirmed to arrive at its destination.
- Promised Delivery Month
  The month in which the delivery is promised to arrive at its destination.
- Promised Delivery Week
  The week in which the delivery is promised to arrive at its destination.

Analyzing the Report
When analyzing the reports you have to decide whether you want to do a rough analysis on aggregated level, for example on customer or product level. You can also easily group the results in time blocks like calendar weeks or calendar months. Use the date and quantity reports for detailed analysis and in-depth research on order and delivery level. If you aggregate the reports, mind that the results depend on the displayed key figures and characteristics. The combination of these key figures has to be handled carefully to ensure that the results are usable and interpretable.

To further analyze data in this report, you can drag characteristics to rows and columns.
Add or remove key figures by clicking the Select Key Figures icon under Columns next to the Key Figures dropdown list.

From this report, you can navigate to:
- Product details
- Account details
- Sales unit details
- Ship-from site details

See Also

Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]

6.4.4 Order Fulfillment Outbound Lead Time Averages

Overview

This report provides an analysis of the cycle time for delivered customer orders, from order creation date through to delivery date.

It measures the average of the requested cycle time (that is the cycle time between the order creation date and the requested date) and the order fulfillment cycle time (that is the time difference between the order creation date and the delivery date of the last delivery).

Only completely delivered order items are listed in the report. The report data can be broken down to each order schedule line. It displays order creation date, requested date, and delivery date. This report also highlights exceptions such as delays, early deliveries, and late deliveries.

However, the main goal of the Order Fulfillment Outbound Lead Time Averages report is to calculate average values on customer or product level. If you want to list the difference for single line item, you can use the Order Fulfillment Outbound Lead Time Detailed report.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*). You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:
- Sales Unit
  The department or section that is responsible for sales.
- Distribution Channel
  The method used to get a product to the customer.
- Account
  The customer that ordered products from your organization.
- Planning Area
The grouping of demand and supply for a selected product from a planning perspective within a site.

- **Product**
  The identifier of the product along with the description.

- **Order Item Creation Date**
  The date on which the order item was created.

- **Requested Delivery Date**
  The date on which the customer requires ordered goods to be delivered.

- **Delivery Date**
  The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

**Report Content**

This report shows an analysis of the average requested cycle time in days and the average order fulfillment cycle time in days.

Additional information is available for the following key figures and characteristics:

**Key Figures**

- **Requested Cycle Time (Days)**
  The time difference between the order creation date and the requested date.

- **Order Fulfillment Cycle Time (Days)**
  The time difference between the order creation date and the delivery date (goods receipt date) of the last delivery.

- **Average Requested Cycle Time (Days)**
  Sum of the requested cycle time divided by the number of delivered order items. Order items have to be completely delivered.

- **Average Order Fulfillment Cycle Time (Days)**
  Sum of the order fulfillment cycle time divided by the number of delivered order items. Order items have to be completely delivered.

**Characteristics**

- **Delivery Priority**
  The delivery priority of the sales order. The priority can be **Immediate**, **Urgent**, **Normal**, or **Low**.

- **Requested Delivery Month**
  The month in which the customer requires ordered goods to be delivered.

- **Requested Delivery Week**
  The week in which the customer requires ordered goods to be delivered.

- **Confirmed Delivery Month**
  The month in which the delivery is confirmed to arrive at its destination.

- **Confirmed Delivery Week**
  The week in which the delivery is confirmed to arrive at its destination.

- **Delivery Month**
  The month in which the delivery will reach its destination.

- **Delivery Week**
  The week in which the delivery will reach its destination.

**Analyzing the Report**

To further analyze data in this report, you can drag characteristics to rows and columns.

Add or remove key figures by clicking the **Select Key Figures** icon under **Columns** next to the **Key Figures** dropdown list.
From this report, you can navigate to:

- Order Fulfillment Outbound Lead Time Detailed  [page 188]
- Product details
- Account details
- Sales unit details
- Ship-from site details

See Also

Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]

6.4.5 Order Fulfillment Outbound Lead Time Detailed

Overview

This report provides an analysis of the cycle time for delivered customer orders, from order creation date through to delivery date.

It enables you to compare the requested cycle time (that is, the time difference between the order creation date and the requested date) with the order fulfillment cycle time (that is, the time difference between the order creation date and the delivery date of the last delivery).

The report data can be broken down to each order schedule line. It displays order creation date, requested date, and delivery date. This report also highlights exceptions such as delays, early deliveries, and late deliveries.

In the Order Fulfillment Outbound Lead Time Detailed report you can list the difference for every single line item. Aggregation is possible but the days are summed up, which does not make sense for all key figures. If you want to take a look at average values on customer or product level, you should use the Order Fulfillment Outbound Lead Time Averages report.

Features

Running the Report

Before running the report, you can specify the data you want to see by selecting specific variables. You must specify a value for all mandatory variables. In the system, if mandatory variables exist, they are indicated by an asterisk (*).

You can define your own user-specific variable and set it as the default variable.

Additional information is available for the following selected variables:

- Sales Unit
  The department or section that is responsible for sales.
- Distribution Channel
  The method used to get a product to the customer.
- Account
  The customer that ordered products from your organization.
- Planning Area
  The grouping of demand and supply for a selected product from a planning perspective within a site.
Product
The identifier of the product along with the description.

Order Item Creation Date
The date on which the order item was created.

Requested Delivery Date
The date on which the customer requires ordered goods to be delivered.

Delivery Date
The date on which the delivery will reach its destination. It is calculated from the shipment date plus the shipping duration maintained in the transport lane.

Report Content
This report shows an analysis of the order fulfillment cycle time in days and the requested cycle time in days. It provides the time difference between the order entry date and the requested date (requested cycle time). Additionally, the report computes the time difference between the order creation date and the delivery date. The delivery date is the calculated arrival date at the customer’s site based on the shipping duration maintained in the transport lane plus the shipment date. You can also display and calculate the deviation between these values.

Additional information is available for the following key figures and characteristics:

Key Figures
- Order Fulfillment Cycle Time (Days)
  The time difference between the order creation date and the delivery date (goods receipt date) of the last delivery.
- Requested Cycle Time (Days)
  The time difference between the order creation date and the requested date. Note that calculating this key figure only makes sense if the characteristic Order ID is part of the selection.
- Deviation to Requested Date
  The deviation between the requested delivery date and the delivery date.

Characteristics
- Delivery Priority
  The delivery priority of the sales order. The priority can be Immediate, Urgent, Normal, or Low.
- Requested Delivery Month
  The month in which the customer requires ordered goods to be delivered.
- Requested Delivery Week
  The week in which the customer requires ordered goods to be delivered.
- Confirmed Delivery Month
  The month in which the delivery is confirmed to arrive at its destination.
- Confirmed Delivery Week
  The week in which the delivery is confirmed to arrive at its destination.
- Delivery Month
  The month in which the delivery will reach its destination.
- Delivery Week
  The week in which the delivery will reach its destination.
- Order Type
  The classification of the order. It can either be a sales order, service order, or stock transfer order.

Analyzing the Report
To further analyze data in this report, you can drag characteristics to rows and columns.
Add or remove key figures by clicking the Select Key Figures icon under Columns next to the Key Figures dropdown list.

From this report, you can navigate to:

- Product details
- Account details
- Sales unit details
- Sales responsible details
- Ship-from site details

See Also

Reports View
Overview of Reports in Supply Chain Management  [page 167]
Overview of Data Sources in Supply Chain Management  [page 169]