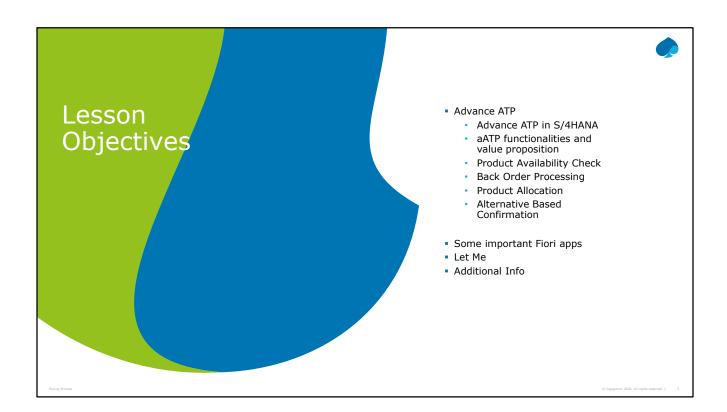


Take out Collection Management Processes & Best Practice with Demos on each agenda slide.



Take out Collection Management Processes & Best Practice with Demos on each agenda slide.

Availability Check Overview



Availability Checks for the **Available Quantity** (Stock or/and Planned Receipts) **not required for existing Orders in SAP**, thus made available for new orders being processed.

- Availability check determines the material availability date
- Availability Check occurs during Sales Order Processing and Delivery when the system determines the Product Availability
- In sales order, it determines if the desired delivery quantity can be met on the desired date
- It occurs in the Plant determined for the item
- It is a **Dynamic Check**, it takes the time line into consideration and makes proposals if requested delivery date cannot be met
- Availability check takes into account various activities that must be carried out before a delivery can takes place such as Time required to produce or procure the material, Scheduling of picking or packing time, transit time etc.



Pricing Process

Purpose



- When a customer places an order for a material and requests that the material be delivered to him on a specific date. This delivery date can only be confirmed after ensuring the material availability after considering all the inward as well as out ward stock movements
- The availability check shall happen and take into account the respective activities that must be carried before a delivery can take place
- Similarly the procurement department is also to be informed on the quantities which sales require to be able to deliver against the orders received. This information can trigger production orders for manufacture
- If sufficient quantities are not available to cover the requirements, purchase orders, can be created in purchasing on the basis of transfer of requirements planning

Pricing Proces

Use



- The Availability Check and Requirement Transfer help to determine delivery date for a customer
- These also help in determining whether the goods are ready or to be produced or to be procured externally



Pricing Proces

Challenges



- We need to ensure that when availability check fails, i.e., when the requested delivery date cannot be met from the nearest distribution center, then to check in other centers if goods delivery is possible from one of these centers.
- Another important factor to be taken into account is that some customers might be preferred customers and if availability check fails, provision should be in place to release goods already reserved for some customer order.

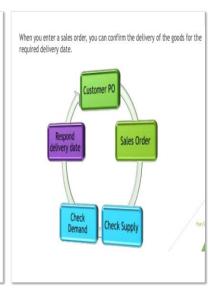


Pricing Process

Types of Availability Check

There are three types of Availability check

- Check on the basis of available to promise (ATP) quantities
 - The ATP quantity is calculated from the warehouse stock, the planned inward movements of stock and the planned outward movements of stock.
- Check against product allocation
 - Product allocation facilitates period-based distribution of products for certain customers or regions.
- Check against planning
 - The check against planning is used where quantities are produced in line with the expected sales quantities independent of sales orders



icing Process

Scope Of Availability Check



The following elements can be included in the availability check:

- Inventory
 - Unrestricted inventory (on hand + safety stock)
 - Stock in transit
 - Stock in quality inspection
- Incoming / Outgoing Movements
 - Purchase requisitions (Incoming)
 - Purchase orders(Incoming)
 - Planned orders (Incoming)
 - Production orders (Incoming)
 - Sales requirements (Outgoing)
 - Delivery requirements (Outgoing)
 - Reservations (Outgoing)
- Replenishment lead time



ricing Proces





Planned Inward Movements	Planned Outward Movements
Stock (UR)	Existing Orders (Order)
Quality Inspection (QM Lot – for Restock Only)	Deliveries (Deliv.)
Planned Orders (for Production Plants)	Dependent Requirements (DepReq)
Process Orders (for Production Plants)	Planned Replenishment Outwards (RelOrd)
Planned Purchase (for Remote WHS)	Reservations (Reserv)

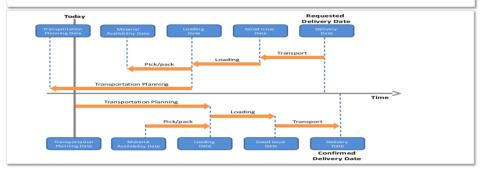
Note: An Outward Movement is always committed against the nearest planned inward movement/(s) before stock.

ATP is dynamic and takes the time line into considerations.

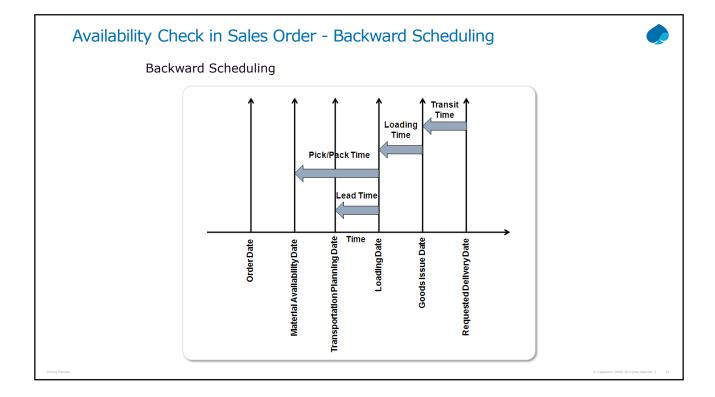
Availability Check in Sales Order - Availability Date

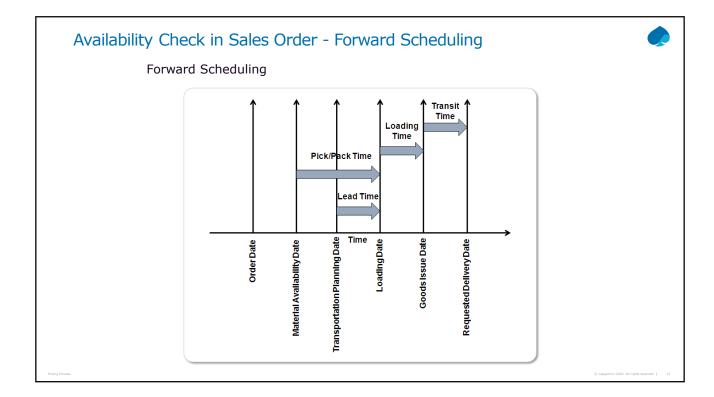


- When an order is created, the system determines the required material availability date on the basis of the customer's requested delivery date
- On this date we must begin picking, packing and loading the goods
- The following data is required for determining this date:
 - Route from the shipping point to the ship to party location
 - Shipping point from which the goods are issued
 - System considers transit time, pick-pack time, loading time from shipping point while carrying out availability check

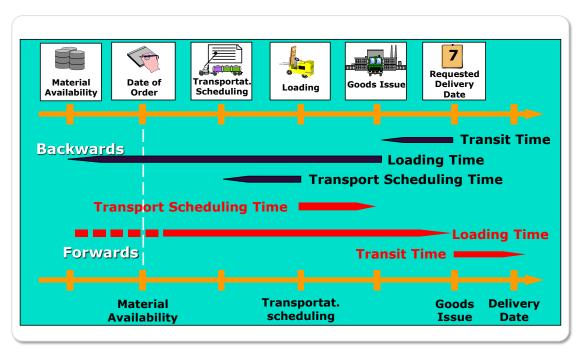


ricing Process



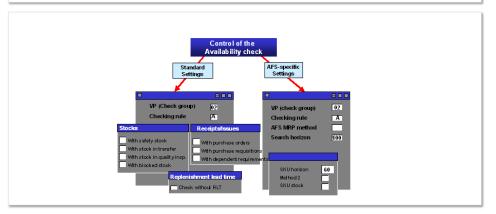


Availability Check in Sales Order - Backward and Forward Scheduling





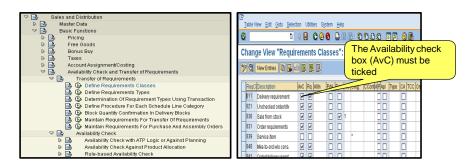
- A checking group must be defined in the "Availability Check" field in the "MRP 3" screen of the material master
- A Plant must be determined in the sales order. (Source: Customer material info master or Customer or Material)



....



1. The availability check must be switched on at the requirements class level

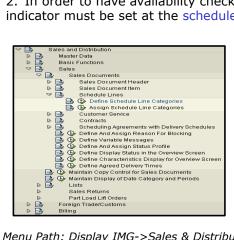


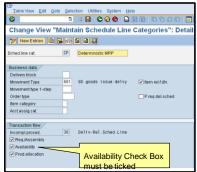
Menu Path: IMG-> Sales & Distribution-> Basic Functions-> Availability Check & TOR-> TOR-> Define Requirement Classes

icing Process



2. In order to have availability check in the sales document, the indicator must be set at the schedule line category level.



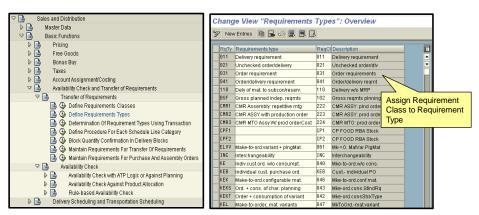


Menu Path: Display IMG->Sales & Distribution-> Sales-> Sales Documents-> Schedule Lines-> Define Schedule Line Categories

Pricing Proces



3. A requirements type must exist by which the requirements class can be found



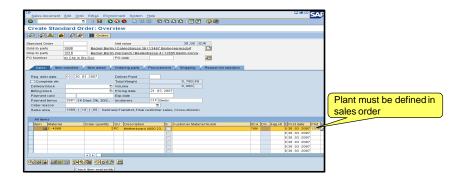
Menu Path: Display IMG-> Sales & Distribution-> TOR -> TOR -> Define Requirement Types

Basic Functions-> Availability Check &

icing Process



4. A plant must be determined in the sales order for the line item. It can either be proposed from the customer material info or customer master or material master or can be proposed manually in the document



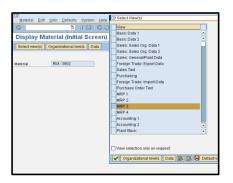
SAP Menu -> Logistics -> Sales & Distribution -> Sales -> Order -> VA01 -Create

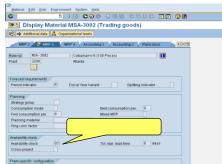
Pricing Proces





5. A checking group must be defined in the "Availability Check" field in the "MRP 3" screen of the material master.





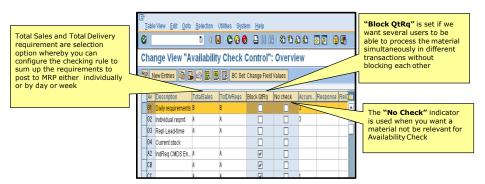
SAP Menu→ Sales & Distribution→ Master Data→ Products→ Material→ Trading Goods→ MM01 – Create

Pricing Proces



1. Define Checking Groups:

Use standard SAP checking group "01" for daily requirements and 02 for individual requirements. In order to create new group, copy an existing group, change the name (ensure that the name starts with "Z") and description to your preference



IMG-> Sales & Distribution-> Basic Functions-> Availability Check & TOR-> Availability Check-> Availability Check with ATP Logic or Against Planning-> Define Checking Groups

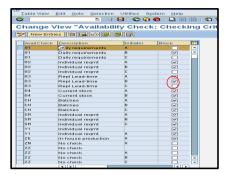
Pricing Proces





2. Defining Material Block for other users

Tick the "Block" checkbox to block a particular material from being checked for availability if it is being checked at the same time by another user. This ensures two users cannot confirm the same quantity for the same material at the same time.



IMG Sales & Distribution-> Basic Functions-> Availability Check & TOR-> Availability Check-> Availability Check with ATP Logic or Against Planning-> Define Material Block For Other Users

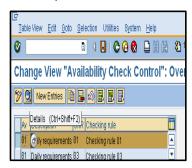
ricing Proces

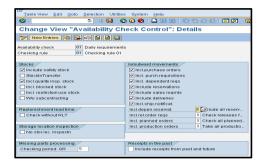


3. Control of Availability Check

We indicate what stock in hand, which inward and outward stock movements should be taken into consideration while carrying out availability check.

The Control group specifies in combination with the checking rule the scope of availability check





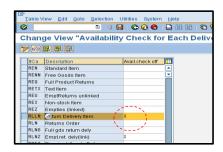
IMG Sales & Distribution-> Basic Functions-> Availability Check & TOR-> Availability Check-> Availability Check with ATP Logic or Against Planning-> Carry Out Control For Availability Check

cing Process



4. Determining the Procedure for Each Delivery Item Category

Here we have the option for switching off availability check. This option is used for return items.



IMG-> Sales & Distribution-> Basic Functions-> Availability Check & TOR-> Availability Check-> Availability Check with ATP Logic or Against Planning-> Determine Procedure For Each Delivery Item Category

icing Process



5. Defining the Default Settings

Here we define default setting for each sales area.



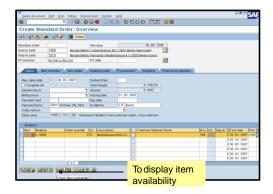
IMG-> Sales & Distribution-> Basic Functions-> Availability Check & TOR-> Availability Check-> Availability Check with ATP Logic or Against Planning-> Define Default Settings

Pricing Proces

Availability Check - Order Processing



In the sales menu you select *Environment -> Availability Ovw* to display availability status for a material with reference to the plant and checking rule



During order creation, availability check can be carried out by clicking on the button as shown in the screenshot. We can also display item availability as shown in the screen shot

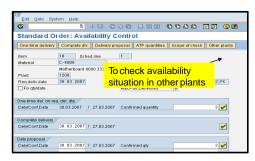
ricing Proces

Availability Check - Order Processing



On the Availability Control screen, we can choose between the following delivery proposals:

- One-time delivery on the requested delivery date
- 2) Complete delivery
- Delivery proposal: In this section, the system checks whether and for which dates partial deliveries can be made.
- On the Availability Overview screen, we can view:
- 1) Availability Checking Group and Checking Rule.
- 2) Scope of Check
- 3) Quantity available and simulated requirements and the number of storage location





ricing Process

Availability of a Material Availability of a material can be displayed as below: Stock Overview: Basic List **"** 1. Stock for a material by storage Motherboard 4000 233 MHz Semi-finished product location and plant SAP Menu -> Logistics -> Materials Unit of Meas. **Plant** Management -> Environment -> Stock -> MMBE - Stock Overview Storage Company Code Location Edt Qoo Setings System Hep 1 4 日 COO 日前ほ むせむむ 日日 日本 2. To check Stock Availability for a Plant Availability: C-4000 material by plant SAP Menu -> Logistics -> Materials

Stock

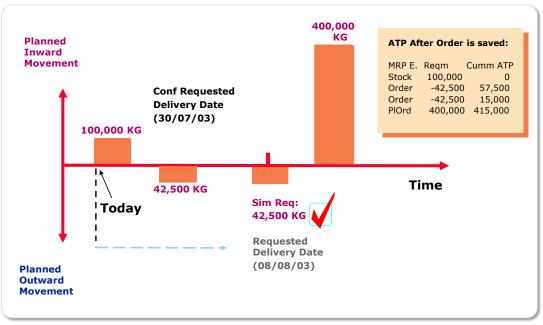
Management -> Environment ->

-> MB53 - Stock of Material by Plant

Deleter December

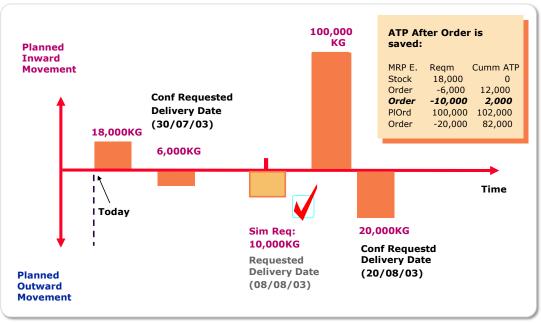
Availability Check: Sales Order Commit Against Stock (1)





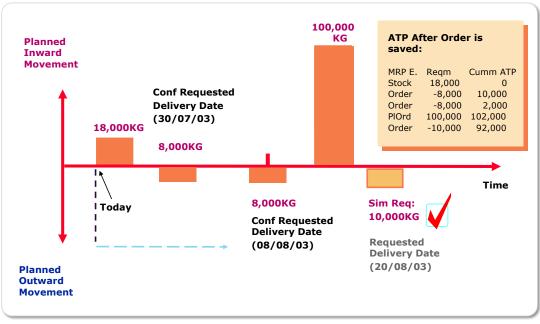
Availability Check: Sales Order Commit Against Stock (2)





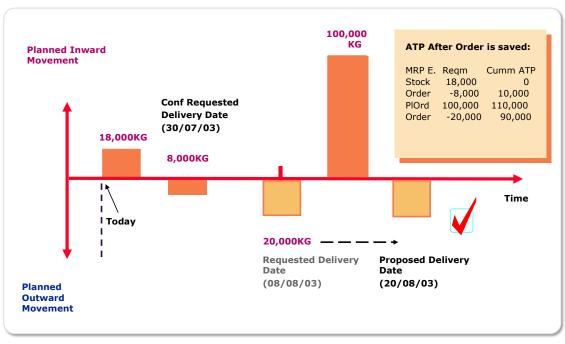
Availability Check: Sales Order Commit Against Nearest Plan





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Availability Check: Sales Order Commit Against Stock and Nearest Plan (Complete Delivery)







Replenishment lead time is the time that is needed to order or produce the requested material.

The system determines replenishment lead time according to specific times defined in the material master record.

- Depending on the type of material, replenishment lead time can be Calculated according to various time periods
 - For example, In the case of trading goods, it is determined according to the purchasing processing time, and the goods receipt processing time
- Replenishment lead time is only included in the check performed on the basis of the ATP quantity

Pricing Process

Sales Order - Availability Check With RLT



- Availability is only checked up to the end of RLT
- If the material availability date lies after the RLT, the item itself can be confirmed despite insufficient stock being available
- In this case, the system assumes that any quantity requested by the customer can be procured by the material availability date and considers the goods to be available

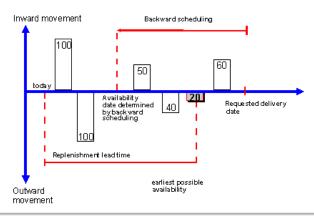


Pricing Process

Sales Order - Availability Check With RLT



Example: The customer wants 20 units delivered in full by the requested delivery date. Using backward scheduling, the system determines a material availability date. But no goods are available as the inward movement of 100 pieces is used up by an outward stock movement. Therefore no stock is available for the material availability date determined by the system. But since RLT is taken into account, the material availability date is proposed at the end of RLT.



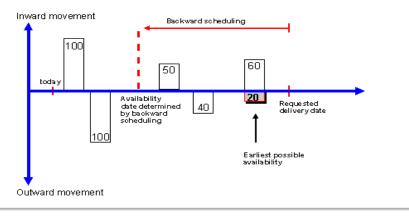
Pricing Process

Sales Order - Availability Check Without RLT



If RLT is not to be taken into account in the availability check, the system conducts an unrestricted availability check.

Example: The customer wants 20 units delivered in full by the requested delivery date. The quantity can only be confirmed on the date on which stock would be actually available. In this case, this is on the date when 60pieces are added to stock.



Pricing Process

Sales Order - Delivery Proposal in Availability Check



If the goods ordered by the customer are not available on the requested date, the system proposes delivery proposals. The system determines these proposals on the basis of the availability situation.

System proposes following delivery proposals:

- One-time delivery on the requested delivery date
- Complete delivery
- Delivery proposal



Pricing Process

Sales Order - Effect of Credit Check on Availability



- System carries out customer credit limit check before availability check
- The order confirmation for a customer is blocked, if customer's credit worthiness is questionable. The sales order in this case is not only classed as unconfirmed, it is also blocked for delivery
- Thus, no stock is reserved. The stock is still available for other customers. The order can then only be processed further once the customer becomes creditworthy again

Pricing Process © Capgernial 2020, All rights reserved 3





ATP Check

order quantity

Distribution Process

Delivery of the

goods

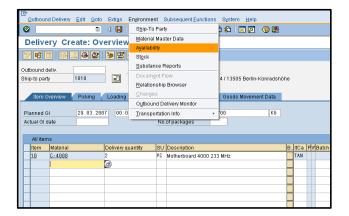
Sales Process

- Meet customer's requested delivery date
- Product is available but cannot meet delivery date
 - Propose new delivery date to the customer
 - Change shipping condition (i.e. Rush Order)
- Some product is available and can meet delivery date
 - Ship on hand inventory now
 - Ship on hand inventory now and ship remainder at later date
 - Ship full quantity at later date
- If product is not available, propose new date when it is available to the customer
- As a last resort, work with production scheduler to meet original requested date (Fixed Date/Quantity)

Pricing Process

Availability Check - Delivery Processing





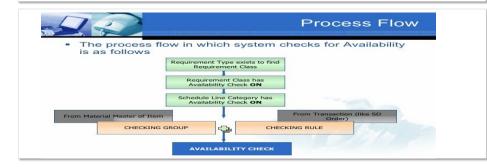
In the delivery document, we can go to the availability overview screen by using the path: Environment – Availability. The availability overview screen is shown as the second screenshot in the previous slide.

ricing Proces





- When a sales order is created, the quantity requested by the customer is transferred to material requirement planning (MRP) to ensure the quantities ordered are available to be delivered on time to the customer. This is called transfer of requirement (TOR)
- In other words, TOR informs MRP department about the quantities and deadlines by which incoming orders should be delivered



Pricing Process





- Transfer of requirements aims to ensure that the materials ordered are ready for requested delivery date
- If sufficient quantities are not available to cover the requirements, purchase orders or production orders can be created on the basis of transfer of requirements
- Transfer of requirement for inquires/quotations are switched off, whereas it is switched on for orders and deliveries
- The TOR is closely integrated with the Materials Management (MM) and Production Planning (PP) modules

Access NA Market and Access Ac

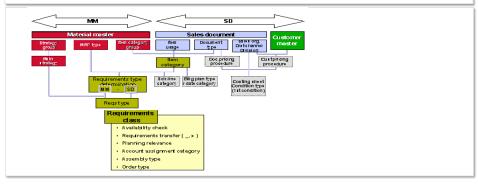
Sales Order - Types of Transfer of Requirements



The following types of transfer of requirements exists:

- Transfer of requirement with individual requirements
- Transfer of requirement with collective requirements

The requirement indicator is set in **Material Master Record**.



Pricing Process

Sales Order - Types of Transfer of Requirements



Individual Requirements

- A TOR occurs for each sales document that is created
- ☐ The advantage is that the sales document number can be identified by looking in the availability overview for each requirement

Collective Requirements

- ☐ A TOR occurs for group of requirements created either daily or weekly
- ☐ The documents created in collective requirement processing can not be individually identified from the availability overview

Pricing Process

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Sales Order - Control of Transfer of Requirements



The control features specific to Sales and Distribution need to be maintained in Customizing:

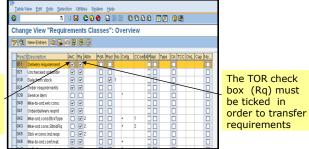
- Requirements Class: The requirements class contains all control features for planning. In addition, it is specified at a global level whether an availability check is to take place for the material in the sales and distribution documents on the basis of the ATP quantity (ATP = available to promise) and whether requirements are to be passed on
- Requirements Type: The requirements are identified by the requirements type. The requirements type refers to the requirements class and its control features
- Schedule Line Category: Schedule line category controls whether an availability check and transfer of requirements should be carried out in the sales documents
- Checking Group: It controls whether the system is to create individual or collective requirements in sales and shipping processing

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1. Defining the Requirements Classes

Requirements class is the key factor in the TOR. It is based on the requirement types of the sales document. These requirement classes are also used in PP, so be sure to involve PP and MM in any changes you envisage in the SD module.



The availability check box (AvC) must be ticked in order to carry out availability check.

IMG-> Sales & Distribution-> Define Requirement Classes

Basic Functions-> Availability Check & TOR-> TOR

->



2. Defining the Requirements Type

 $\bullet\mbox{The relationship}$ between requirement type and requirements class is many to one.



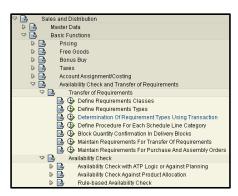
IMG → Sales & Distribution → Basic Functions → Availability Check & TOR → TOR → Define Requirement Types

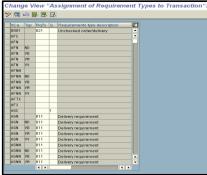
ricing Proces



3. Assign Requirements Type

Assign requirement type to the relevant item category in the sales order and the MRP type found on the material Master Record





IMG-> Sales & Distribution-> Basic Functions-> Availability Check & TOR-> TOR -> Determination of requirement types using transaction

ricing Proces



4. Defining Procedure For Each Schedule Line Category

•We deactivate a setting at the schedule line level only if it is already set at the requirements class level.



 $IMG \rightarrow Sales \& Distribution \rightarrow Basic Functions \rightarrow Availability Check \& TOR \rightarrow TOR \rightarrow Define Procedure For Each Schedule Line Category$

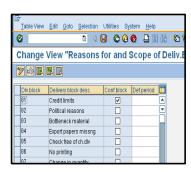
ricing Proces

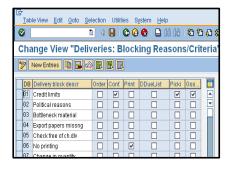


5. Block quantity confirmation in delivery blocks

This enables us to unreserve or not reserve any quantity that has been confirmed for an order for which a delivery is blocked.

We have the provision of setting this for different reasons and at different transactions





IMG
ightarrow Sales & Distribution
ightarrow Basic Functions
ightarrow Availability Check & TOR
ightarrow TOR
ightarrow Block quantity confirmation in delivery blocks

icing Process



6. Maintain Requirements for Transfer of Requirements

In the same way as the requirements used in access sequence, that is, a number of preconditions must exists of the transaction to be carried out, requirements can be used to determine that the TOR to MRP is not carried out unless a number of condition are met.





IMG → Sales & Distribution → Basic Functions → Availability Check & TOR → TOR → Maintain Requirements for Transfer of Requirements

Pricing Proce



Advance ATP (aATP) in S/4HANA



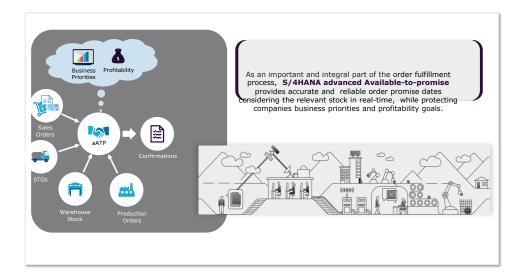
SAP has introduced **aATP** with its **1610** release Advanced Available-To-Promise (aATP) with new functionality to execute order fulfilment and improve supply chain processes in a better way compared to classic ATP.

- Backorder processing with intuitive requirement classification
- FIORI Applications for Release for Delivery
- Mass enabled fast availability check
- Use-case-driven product allocation check
- Intelligent and automated selection of best confirmation considering alternative plants and substitutable materials
- Easy-to-use and device-independent ATP explanation and simulation app
- Advanced transportation scheduling.

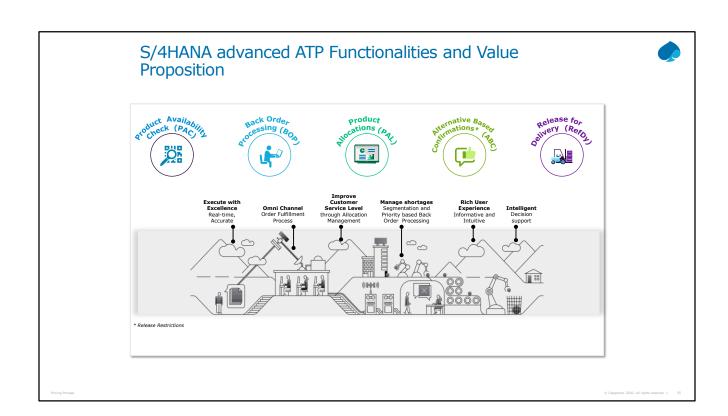
Pricing Process

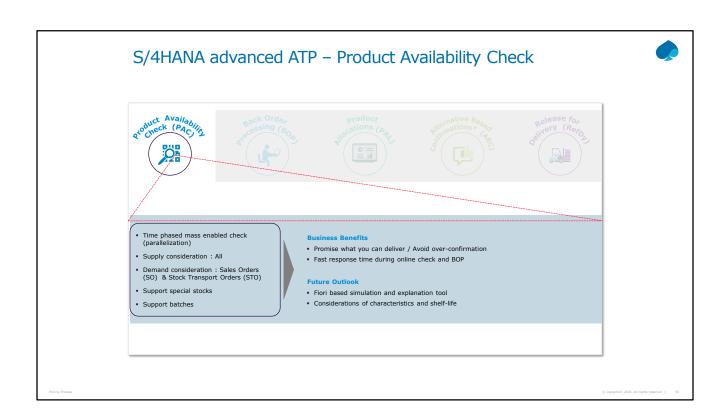
The Intelligent Order Promising – S/4HANA advanced ATP (aATP)

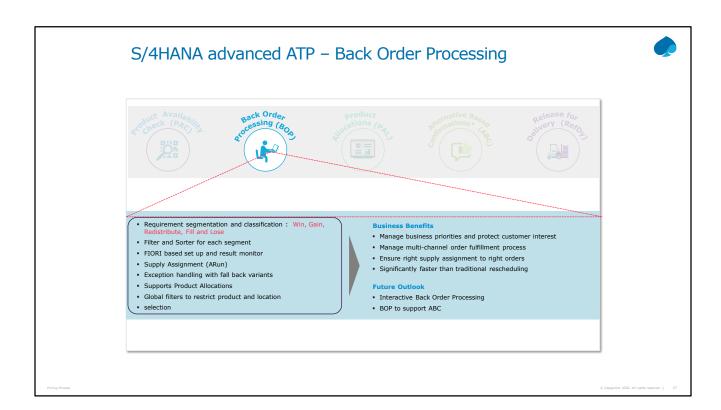


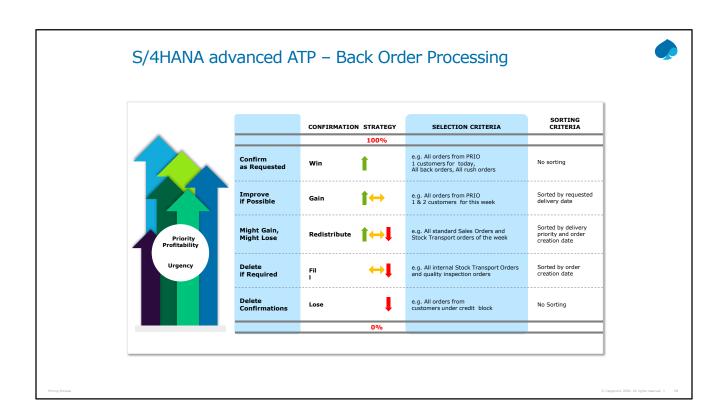


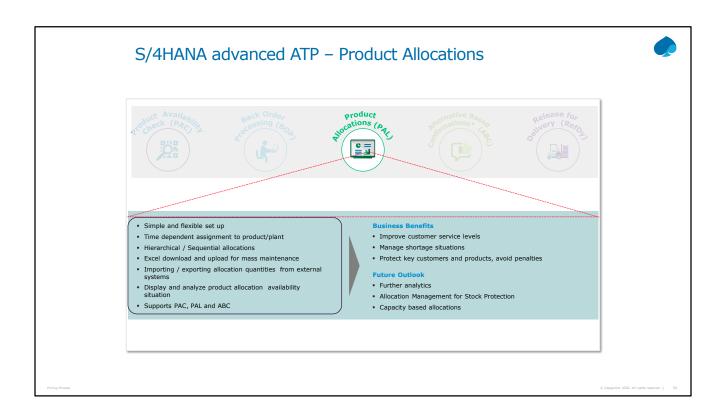
Pricing Proce

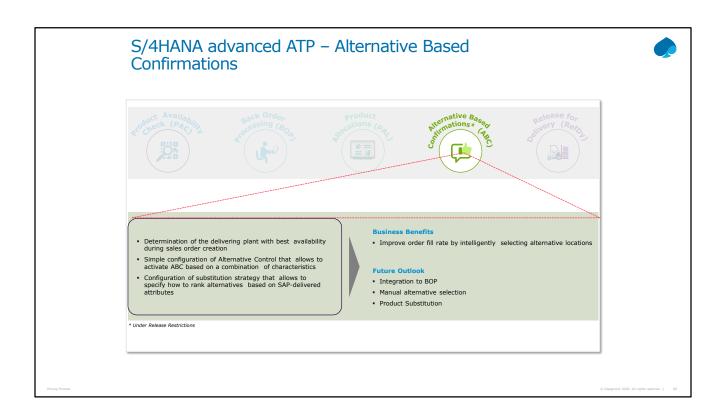


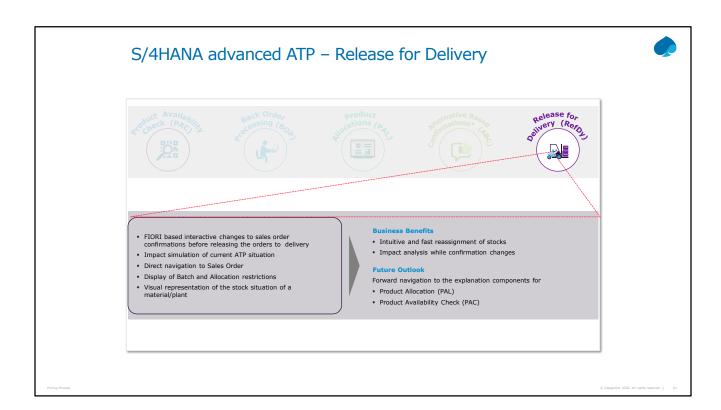


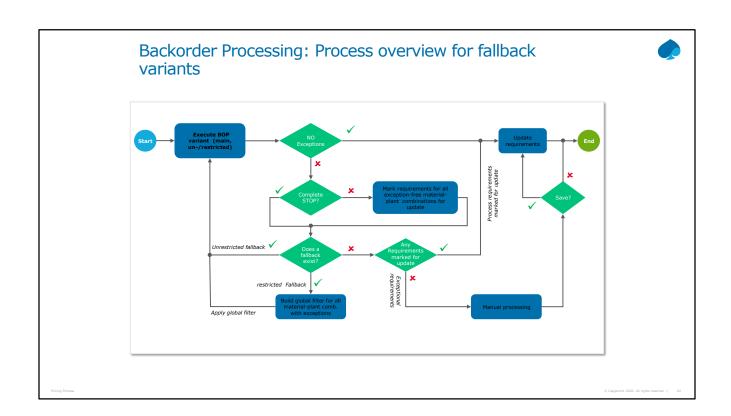






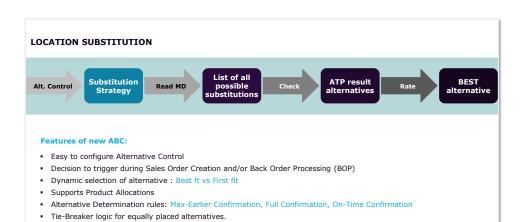




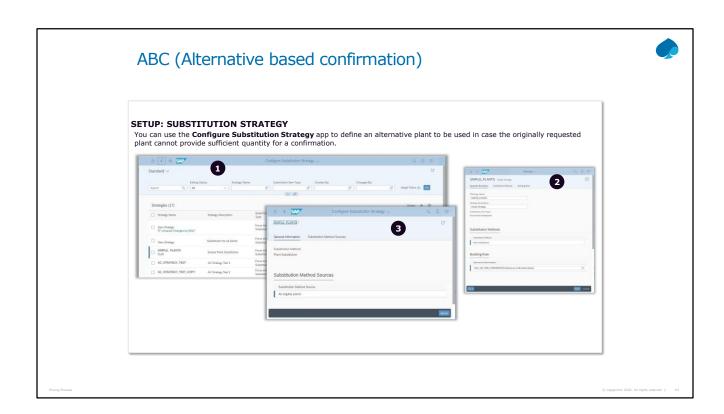


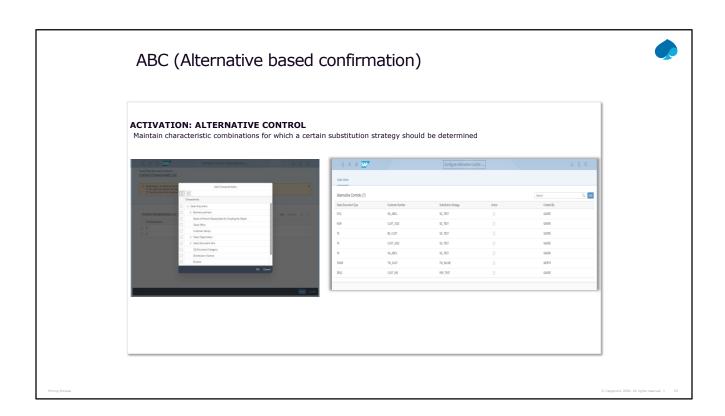
Alternative Based Confirmation

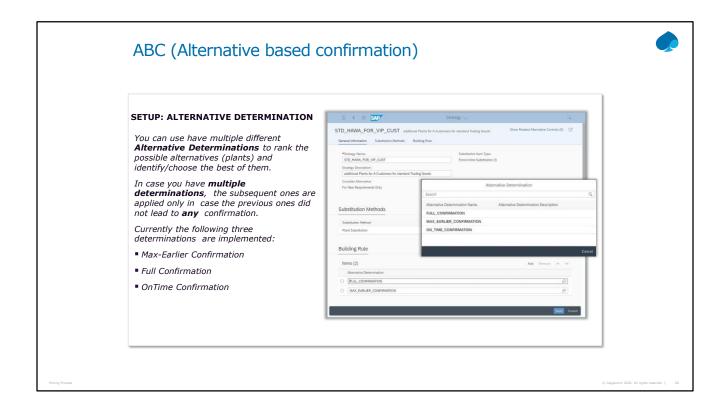




Pricing Proces







ABC (Alternative based confirmation)



SETUP: ALTERNATIVE DETERMINATION - TIE-BREAKER LOGIC

If there are multiple plants which can confirm equally

(e.g. several plants can confirm the full requested quantity on the requested date)

which one is chosen?



Currently the following tie-breakers are hard coded:

Prefer the alternative plant which is in the same country than the ship-to-party (if still not unique, then...) Prefer the alternative plant which is in the same region than the ship-to-party (if still not unique, then...)

Prefer the alternative plant with shorter transit time (if still not unique, then...)

Prefer the alternative plant with shorter overall delivery time, incl. pick & plan (if still not unique, then...)

Prefer the originally requested plant (if original plant is no valid alternative, due to its confirmation situation, then...)

Choose the plant according to alphabetical sorting (4-digit plant no. – numbers are preferred over characters)

Pricing Proces

Product Allocation – Logical "AND"



Scope



- Ability to calculate a feasible confirmation by simultaneously considering multiple productallocation
- objects as alternative sources of supply
- Checking of each product-allocation object within the alternative source of supply and final confirmation of the minimum object of all confirmations (logical "AND" connection of product allocation constraints)

Key Benefits



- Enhance the product allocation sequence to allow multiple overlapping sequence constraints within a sequence group (alternative source of supply)
- Allow to combine sequence constraints with different check date time types and periodicities
- Confirmation result that is the minimum of all product-allocation constraints within a sequence group (logical "AND"connection of constraints)

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Product Allocations: Capacity Allocations



Scope



- Integration of product allocation checks (PALs) based on capacity and production in the standard ATP check
- Enhance Fiori app "Manage Product Allocation Sequences" to offer maintenance of capacity/production based allocation plans
- Execution of an additional product allocation check based on capacity and production after the product availability check

Key Benefits



- Ability to execute a PAL after a PAC in addition to the sales product allocation check that is performed before a product availability check
- Modeling of restrictions based on production capacities or supply constraints in the additional product allocation check
- Allocation type wherein the first the product availability is checked and then, based on the results of the product availability check, the product allocation check is performed

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