

Advanced Available-to-Promise (aATP) OVERVIEW

Agenda

1 Introduction and Objective

2 aATP: Key Offerings

3 Day in Life

4 Demo

5 Business Cases

6 aATP Roadmap

What is ATP?

ATP is the Ability to promise the following:

- Right Product

- Right Quantity

- Right Date

- Right Location

$$\text{ATP} = \text{Stock} + \text{Receipt} - \text{Requirements}$$

<ul style="list-style-type: none">• Unrestricted Stock• In-Transit• Quality Stock	<ul style="list-style-type: none">• Purchase Order• Process Order• Planned Order• Purchase Requisition	<ul style="list-style-type: none">• Delivery• Sales Orders• Material Reservation• Purchase Order Reqmts at source• Dependent Demand from Process Order
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- Most companies continue to use Unrestricted Stock to promise to customers
- Use of Receipts is dependent on confidence on the dates of those elements. That only comes with superior planning capabilities.

Available to Promise High Level Roadmap

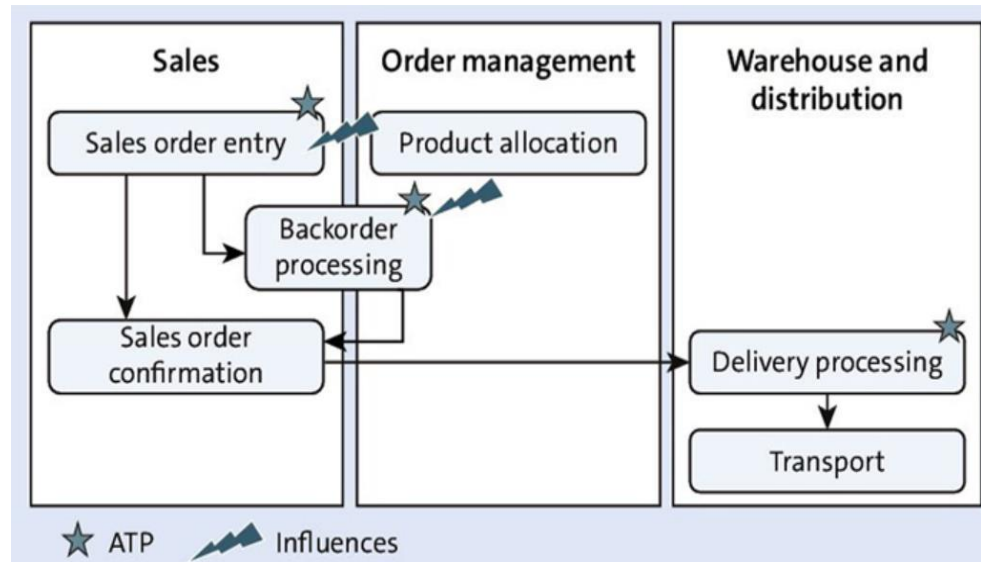
Typically, SAP has three primary ATP solutions:

- ✓ Classic ATP check in SAP ERP and SAP S/4HANA
- ✓ Classic ATP check in SAP ERP in combination with global available-to-promise (GATP), part of SAP Advanced Planning and Optimization (SAP APO)
- ✓ SAP S/4HANA with advanced ATP

Classic ATP in SAP ECC & S/4 does not look at the organization globally to meet demand. It simply provides a prediction of when inventory will be available in the source of supply determined on the order.

GATP in SAP APO can make source substitutions to improve fulfillment rates based on predetermined business rules.

aATP in the SAP S/4HANA requires additional licensing and includes all the features of classic ATP and some of the features of GATP.



In addition to product availability check, all three ATP solutions also provide features, including the following:

Product allocation

This is a mechanism to prevent larger customers from consuming all available inventory, causing a shortage for all other customers

Backorder processing

This is a re-ATP process (i.e., carrying out ATP again after initial order creation) to redistribute available inventory based on business rules.

Alternative Based Confirmations:

This is the ability to determine an alternate source of supply for the customer to improve fulfillment. This functionality is **only** available with aATP or GATP

S/4HANA AATP KEY OFFERINGS AT A GLANCE

Product Availability Check (PAC)



New Product availability check Algorithm designed for real time availability check especially optimized for large orders and mass processing.

Product Allocations (PAL)



Managing critical demand and supply situations got easier with *Product Allocation*,

- ✓ Key innovation is simplification design which helps to customize the process

Back Order Processing (BOP)



S/4HANA 1809 includes all new advanced Backorder Processing based on multi-step filter and prioritizer,

- ✓ Fiori Apps for customization of work list and backorder processing variants.
- ✓ Five new confirmation strategy Win, Gain, Redistribute, Fill and Lose.
- ✓ Fiori App for easy monitoring of backorder processing results with details of percentage increase and loss in confirmation.

Alternative Based Confirmations (ABC)



- ✓ Define substitution methods for location & product substitution.
- ✓ Inline plant substitution, product substitution with subitems
- ✓ Create alternative controls (a set of values assigned to a given set of selected characteristics).
- ✓ Display, edit, copy and remove existing alternative controls and their values.

Release for Delivery



Easy to review critical shortages and address emergency orders,

- ✓ Sort-Filter requirements based on multiple criteria.
- ✓ Easy simulation and adoption of best redistribution strategy.

Supply Protection



Used to protect quantities of material and prioritize the demand.

A protected quantity is always defined for the combination between a material and a plant as well as one or more characteristics.

S/4HANA aATP - PRODUCT AVAILABILITY CHECK



Product Availability Check (PAC)

New Product availability check Algorithm designed for real time availability check especially optimized for large orders and mass processing.
This is where you define your ATP equation

Key Characteristics:

- ✓ Time phased mass enabled check (parallelization)
- ✓ Considers all supply elements
- ✓ Considers Sales orders and STOs as demand elements
- ✓ Supports Special Stocks
- ✓ Support Batches
- ✓ Storage Location Level
- ✓ Confirmation based on Replenishment Lead Time

Business Benefits

- ✓ Promise what you can deliver
- ✓ Avoid Over confirmation
- ✓ Fast response during online checking and BOP

S/4HANA aATP – PRODUCT ALLOCATIONS (PAL)



Product Allocations (PAL)

Managing critical demand and supply situations got easier with *Product Allocation*,

- ✓ Key innovation is simplified design which helps to customize the process in 4 easy ways.
- ✓ Single window to maintain and view product allocation consumption with graphical representation.
- ✓ GUI based 30+ transactions are compiled in 4 Apps reducing no. of customizing and data maintenance steps.

Key Characteristics:

- ✓ Alignment between Planning and OTC to define allocation limits.
- ✓ Ensure FIFO customers don't take away everything.
- ✓ Define allocation ceilings for key channels/customers
- ✓ Simple and flexible set up
- ✓ Hierarchical / Sequential allocations using fields from SO header and Item
- ✓ Excel download and upload for mass updates/Display and analyze product availability situation

Business Benefits

- ✓ Improved customer service
- ✓ Better management of shortages / Protect key customers, avoid penalties

S/4HANA aATP – BACKORDER PROCESSING (BOP)



Back Order Processing (BOP)

S4HANA 1809 includes all new advanced Backorder Processing based on multi-step filter and prioritizer,

- ✓ Fiori Apps for customization of work list and backorder processing variants.
- ✓ Five new confirmation strategy Win, Gain, Redistribute, Fill and Lose.
- ✓ Fiori App for easy monitoring of backorder processing results with details of percentage increase and loss in confirmation.

Key Characteristics:

- ✓ Requirement segmentation and classification (Win, Gain, Redistribute, Fill and Lose)
- ✓ Filter and sort for each segment
- ✓ Fiori based set up and result monitor
- ✓ Exception handling with fall back variants
- ✓ Supports Product Allocations
- ✓ Display and analyze product availability situation

Business Benefits

- ✓ Ensure right supply assignment to right order
- ✓ Faster processing than traditional rescheduling
- ✓ Manage Multichannel order fulfillment process

S/4HANA aATP – ALTERNATIVE BASED CONFIRMATION (ABC)



Alternative Based Confirmation (ABC)

- ✓ Define substitution methods for plant substitution.
 - ✓ Activate inline, plant substitution for sales order line items.
- ✓ Create alternative controls (a set of values assigned to a given set of selected characteristics).
 - ✓ Display, edit, copy and remove existing alternative controls and their values.

Key Characteristics:

- ✓ Determination of the delivering plant with best availability during sales order creation
- ✓ Simple configuration of Alternative Control that allows to activate ABC based on a combination of characteristics
- ✓ Configuration of substitution strategy that allows to specify how to rank alternatives based on SAP-delivered attributes

Business Benefits

- ✓ Improve order fill rate by intelligently selecting alternative locations

S/4HANA aATP – RELEASE FOR DELIVERY



Release for Delivery

Easy to review critical shortages and address emergency orders,

- ✓ Sort-Filter requirements based on multiple criteria.
- ✓ Easy simulation and adoption of best redistribution strategy.

Key Characteristics:

- ✓ Fiori based interactive changes to Sales Order confirmations before releasing orders to delivery
- ✓ Impact simulation of current ATP situation
- ✓ Direct Navigation to Sales Order
- ✓ Display of batch and allocation restrictions
- ✓ Visual representation of the stock situation of material / plant

Business Benefits

- ✓ Intuitive and fast reassignment of stocks
- ✓ Impact analysis when confirmation changes

S/4HANA aATP – Supply Protection



Supply Protection

To protect quantities for material and to prioritize demand

- ✓ To avoid traditional sequence-based confirmation by reserving certain qty for special group

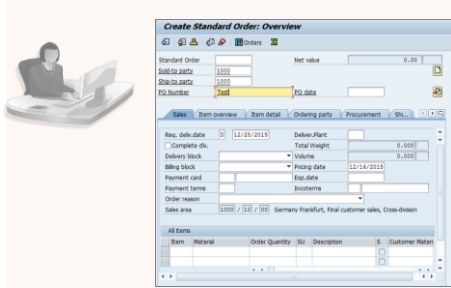
Key Characteristics:

- ✓ Prioritize demand by protecting quantity for specific group
- ✓ Individual groups can be protected against each other.
- ✓ Demand specific to high priority customers can be protected
- ✓ Control over the period of supply protection.
- ✓ Protection will be defined for material & plant combination along with additional characteristics like sales order attributes, customer.

Business Benefits

- ✓ Quantity reservation based on wide range of attribute-based grouping
- ✓ Easy data maintenance using FIORI apps

Day in life



Customer Service Receives Rush Order



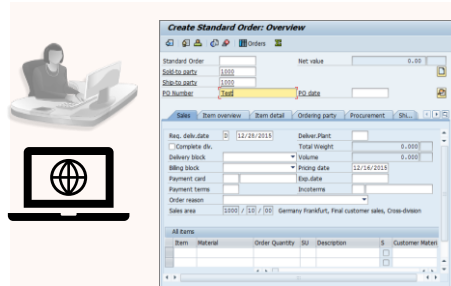
Order goes through the AATP rules:

1. What can be promised i.e Stock, Receipt?
2. Product Allocation: Rules to Restrict what can be promised for that SKU-Sorg-Channel-Division-Customer
3. Look at Alternative (Product/Location)



CSR interacts with customer to confirm

1. Confirmed Order is Saved
2. SO is converted to Delivery



Orders flow in via

1. **Manual entry**
2. **EDI**
3. **Web Orders**

Orders go through following AATP rules

1. What can be promised i.e Stock, Receipt?
2. Product Allocation: Rules to Restrict what can be promised for that SKU-Sorg-Channel-Division-Customer
3. Look at Alternative (Product/Location)



Order goes through BOP run:

1. Mass Processing of all eligible orders
2. Customer Segmentation via different strategies:
Win-Gain-Redistribute-Fill-Lose
3. Order Confirmation is applied basis BOP results
4. SO converted to Delivery

Demo

- Product Allocation (PAL)
- Backorder Processing (BOP)
- Alternative Based Confirmation (ABC)

PAL & BOP Scenario

- ATP Qty: 200 EA
- Sales Order Details before BOP

Sales orders	Customer	Del Priority	Material	Ordered Qty	Confirmed Qty	RDD	Monthly Allocation
5578	4	Low	AATP_MAT	100 EA	100 EA	19.04.2022	100 EA
5579	4	Low	AATP_MAT	50 EA	0 EA	15.04.2022	100 EA
5581	4	Low	AATP_MAT	50 EA	0 EA	14.04.2022	100 EA
5582	2	High	AATP_MAT	100 EA	100 EA	15.04.2022	150 EA
5583	2	High	AATP_MAT	100 EA	0 EA	14.04.2022	150 EA

- Sales Order Details after BOP

Sales orders	Customer	Del Priority	Material	Ordered Qty	Confirmed Qty	RDD	Monthly Allocation
5578	4	Low	AATP_MAT	100 EA	0 EA	19.04.2022	100 EA
5579	4	Low	AATP_MAT	50 EA	0 EA	15.04.2022	100 EA
5581	4	Low	AATP_MAT	50 EA	50 EA	14.04.2022	100 EA
5582	2	High	AATP_MAT	100 EA	50 EA	15.04.2022	150 EA
5583	2	High	AATP_MAT	100 EA	100 EA	14.04.2022	150 EA

BOP Results (Simulation)

SAP Monitor BOP Run

BOP Run List / BOP_DEMO_01 /
Material: AATP_MAT (LP Finished Product 2), Plant: 4111 (LP Trading Plant US 4111)

Requirements: 5 Processed: 5 Processed Requirements Fully Confirmed On-Time: 40%
Processing Issues: 0 Processed Requirements Fully Confirmed: 40%

All (5) Processing Issues (0) Confirmation Issues (3)

Requirement	Material	Plant	Confirmation Strategy	Recipient	Segment Name	Request	Earliest Confirmation	Overall Confirmation	Substitution	Processing Status	Confirmation Status
5583 000010 (0001)	AATP_MAT (LP Finished Product 2)	4111 (LP Trading Plant US 4111)	Redistribute	2 (DEMO6)	BOP_DEMO_SEG1 (SEGMENT 1)	14.04.2022 (CST) 100 EA	14.04.2022 (CST) 0 EA → 100 EA	14.04.2022 (CST) 0 EA → 100 EA		✓	☐
5582 000010 (0001)	AATP_MAT (LP Finished Product 2)	4111 (LP Trading Plant US 4111)	Redistribute	2 (DEMO6)	BOP_DEMO_SEG1 (SEGMENT 1)	15.04.2022 (CST) 100 EA	15.04.2022 (CST) → 15.04.2022 (CST) 100 EA → 50 EA	15.04.2022 (CST) → 15.04.2022 (CST) 100 EA → 50 EA		✓	⊗
5581 000010 (0001)	AATP_MAT (LP Finished Product 2)	4111 (LP Trading Plant US 4111)	Redistribute	4 (DEMO5)	BOP_DEMO_SEG2 (SEGMENT 2)	14.04.2022 (CST) 50 EA	14.04.2022 (CST) 0 EA → 50 EA	14.04.2022 (CST) 0 EA → 50 EA		✓	☐
5579 000010 (0001)	AATP_MAT (LP Finished Product 2)	4111 (LP Trading Plant US 4111)	Redistribute	4 (DEMO5)	BOP_DEMO_SEG2 (SEGMENT 2)	15.04.2022 (CST) 50 EA	0 EA → 0 EA	0 EA → 0 EA		✓	⊗
5578 000010 (0001)	AATP_MAT (LP Finished Product 2)	4111 (LP Trading Plant US 4111)	Redistribute	4 (DEMO5)	BOP_DEMO_SEG2 (SEGMENT 2)	19.04.2022 (CST) 100 EA	19.04.2022 (CST) → 100 EA → 0 EA	19.04.2022 (CST) → 100 EA → 0 EA		✓	⊗

CASE STUDY – AATP FOR PHARMACEUTICAL COMPANY

PROFILE

- ❑ Client is a multinational pharmaceutical company, manufactures & markets wide range of pharmaceuticals.

HOW ACCENTURE IS HELPING

- ❑ Designed standard order promising solution with aATP best business practices.
- ❑ Built a analytical tool to help marketing & customer service team to analyze the real time order confirmation issues to take action to resolve.
- ❑ Designed a solution to handle confirmation manually for exceptions (3-5% of total products)



BUSINESS PROBLEM



Old technology was used with huge manual efforts in order confirmation process.



Use of excel files prepared by individual teams on same dataset loses data integrity



Data handled offline, so no single source of truth.



INCONSISTENT PLANNING PROCESSES across the board

HIGH PERFORMANCE DELIVERED



Automated order confirmation process with rule-based framework



Use of web-based FIORI apps for product Allocation solution provided end user flexibility on decision making



Low volume of post go live incidents were reported



Improvement in order promising process resulted improved logistic execution process.



Effective change management ensuring marketing, planning & customer service team coordination on end-to-end process with high data integrity.

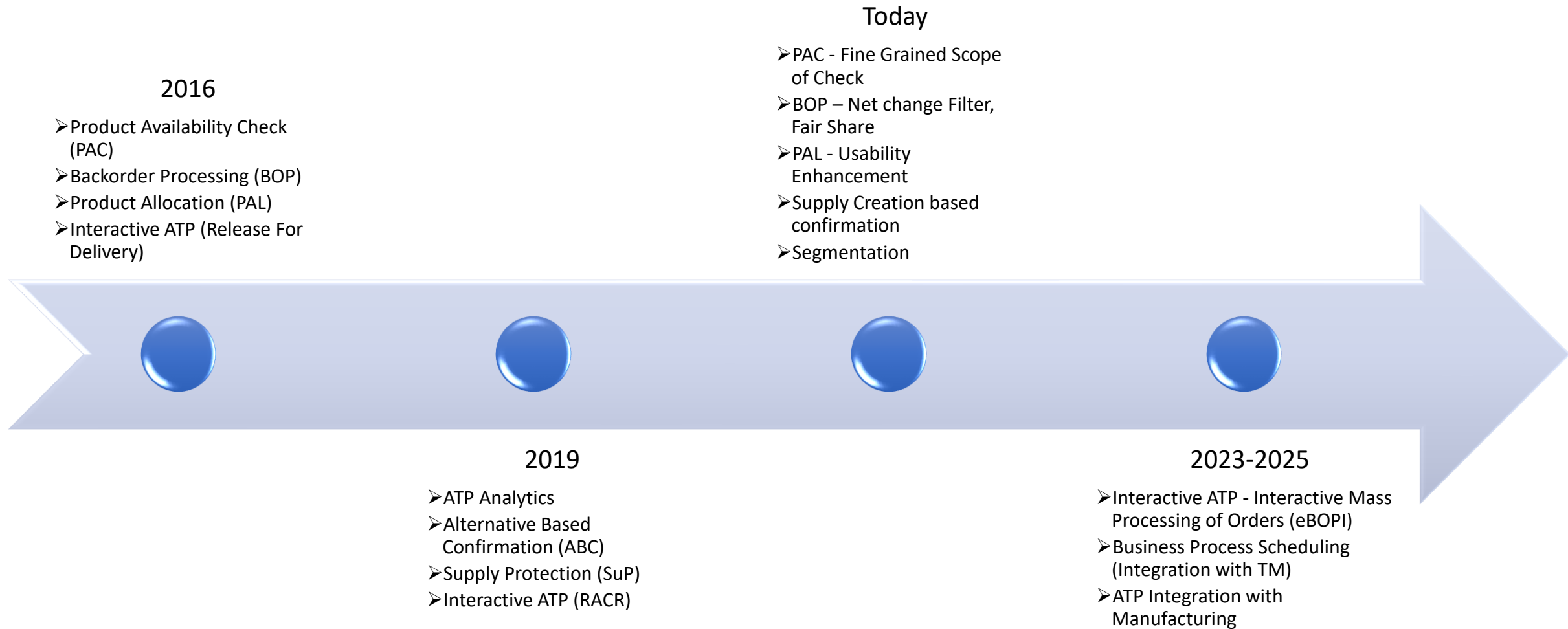
CASE STUDY – AATP FOR MFG COMPANY

- BOP Scope will have separate segments to select orders as per following horizon:
 - Firm Horizon: Orders with MAD between today to today +1 days (ie. Total 2 days plus where MAD is in past)
 - Redistribute Horizon: Orders with MAD between today+2 days to today +28 days (28th day included)
 - Non-Confirmation Horizon: All orders with MAD > MAD+28 days (29th day onwards)
- Run Frequency: Once every night. Before Delivery Due Job.
- Prioritization: We will have following levels:
 - Priority 1: Basis Customer Segments (tiers) (01- highest to 05 – lowest)
 - Priority 2: Basis Order Creation Data (ie **within a segment if there is a clash then FIFO will be applied**)

Customer Segmentation	Firm Horizon MAD → Today – Today+1	Reschedule Horizon MAD → Today+2 – Today+28	Non Confirmation Horizon MAD → > Today+28
Rush Order	NA	NA	NA
Tier 1	Gain 2	Gain 5	Lose 1
Tier 2	Gain 3	Gain 6	Lose 1
Tier 3,4,5	Gain 4	Redistribute 7	Lose 1

 Steps in which BOP will run

Advanced ATP ROADMAP



Q&A

Thank You!