Case Study: The Journey to Intelligent Order Promising at Callaway Golf

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Tim Park, Partner, SCM Accelerators LLC

Session ID #84503

About the Speakers

Manish Rathi

- Sr Principal, Callaway Golf
- 18+ years as a Supply Chain specialist focused on architecting and optimizing supply chain network.
- Better tennis player than golfer ☺

Tim Park

- Partner, SCM Accelerators LLC
- 20+ years as a Supply Chain strategy, operations, and technology practitioner
- Handicap: 15.2
- Favorite Club in the Bag:
  - Callaway Mack Daddy 4 Wedge

Key Session Objectives

1. **Why?** Hear the business challenges, business outcomes, and get insight into how SAP APO global ATP can enhance product availability checks

2. **What?** Learn how to apply advanced ATP methods in a make-to-order and constrained supply allocation environment

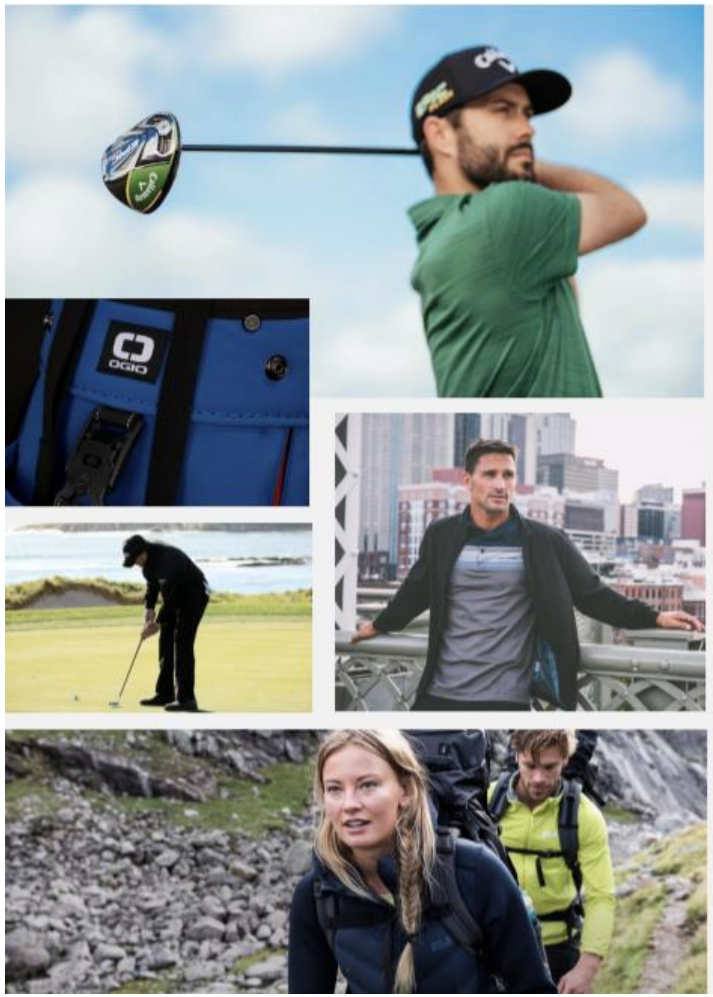
3. **How?** Get lessons learned of how we implemented global ATP using a proof of concept and multi-sprint roadmap to foster business engagement and change management sustainment

Agenda

- Understanding the challenges and requirements
- Core features of our SAP solution
- Our roadmap and implementation journey
- Wrap-up

About Callaway Golf

Premium golf equipment and active lifestyle company with a portfolio of global brands:



- Global Leader in Golf Equipment and Golf Apparel
- #1 in Sticks, Woods, Irons
- #2 in Golf Balls

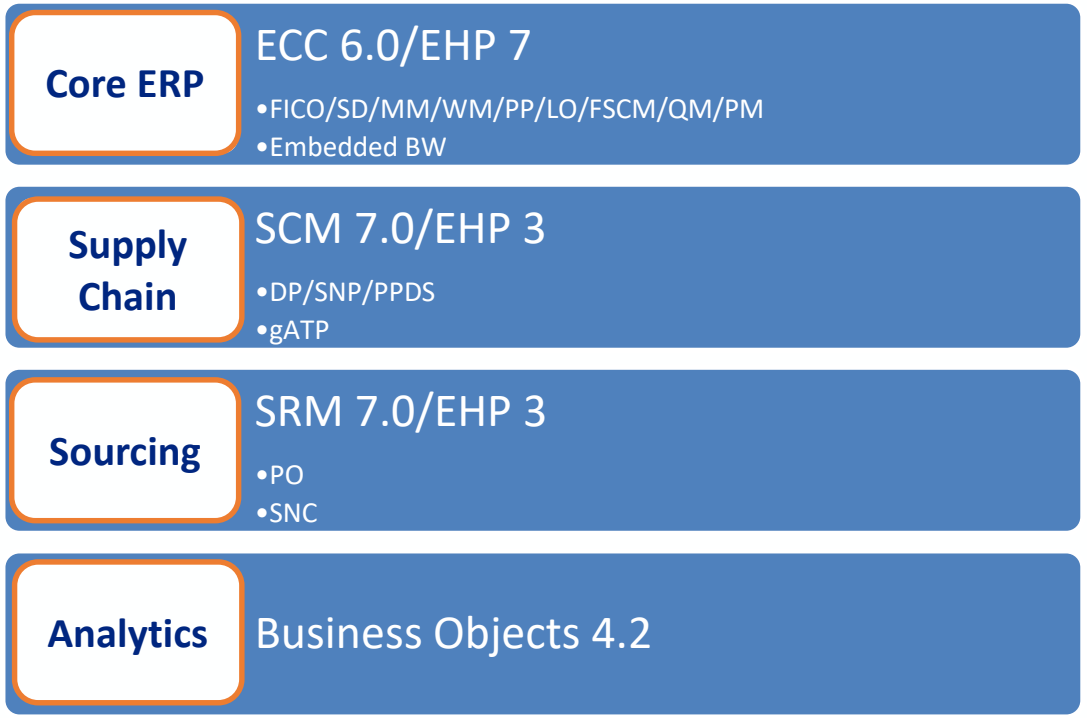
- Global Leader in Putters
- #1 Putter in Golf

- Lifestyle Brand known for its adrenaline-raising bags and gear

- Dynamic Lifestyle Apparel Brand with a distinct Southern California vibe

- Leading Outdoor & Active Lifestyle Apparel Brand in DACH region and China

Our SAP Journey



- Implemented SAP R/3 in 1995 for Core ERP
- Implemented BW 3.0 in 2005 for Reporting
- Implemented SCM in 2007 for Demand and Supply Planning
- Implemented Business Objects for Data Analysis
- Implemented SRM in 2012 for Sourcing
- Implemented SNC in 2015 for Supplier Collaboration
- Migrated to HANA DB in 2016

2019 (Current) and Beyond:

gATP, Hybris B2B/B2C, S/4HANA, EWM, MII

FORE!

IT Mandate

- High-performance and innovative
- Rich, fast, real-time response and reporting

Industry Dynamics

- Mature, competitive industry
- Consumers (green grass, wholesale, retail/direct to consumer) want it fast and custom

Internal

- Successfully executed turnaround to reinvigorate the Callaway brand: pivoted to growth strategy
- Continuous obsession with Operational Excellence
- Invest in golf equipment business while executing M&A strategy in complementary areas

Why APO Global ATP?

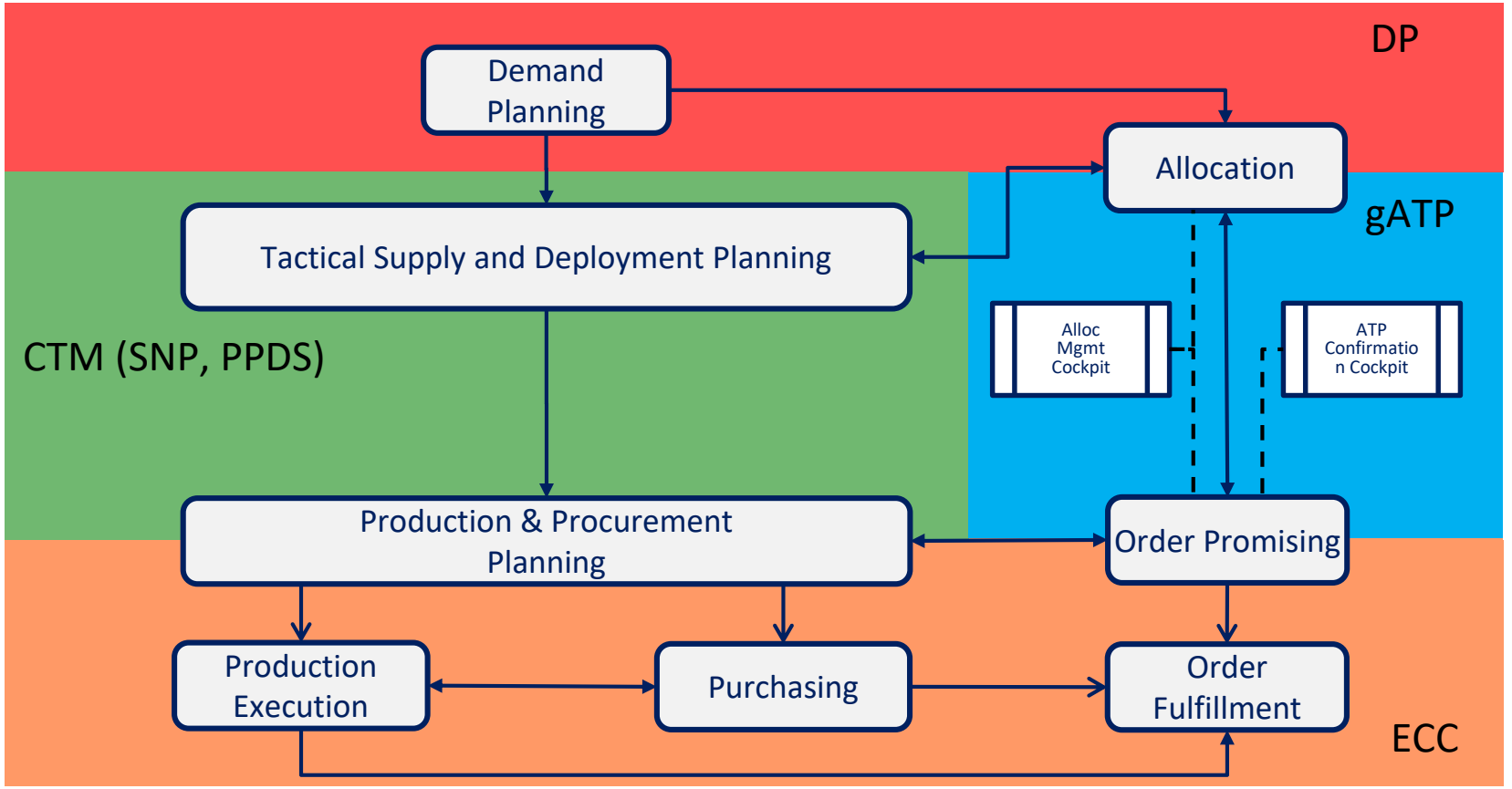
	ECC ATP 	APO gATP 	S/4HANA Advanced ATP 
Advanced ATP Methods	• Nothing Comparable	• Combination of basic methods • Rules Based ATP (RBA): substitution, stock transfer, order/location consolidation • Multi-Level ATP (MATP) • Capable To Promise (CTP) • Event Driven Quantity Assignment → Order Due List for BOP • Multi-item single delivery location	• Segmentation • BOP: Win Bands, Supply Assignment • Location substitution (ABC, Product not available at the time) • Industry-specific not supported yet (MATP, CTP, etc.)

- Key Decision Criteria:
  1. Fit Gap to Requirements → APO gATP provided the best-fit to meet our advanced ATP requirements in the shortest amount of time
  2. Cost-Benefit → the incremental cost (already own/use APO for Demand and Supply Planning) and duration to implement APO gATP provided high business and IT benefit
  3. SAP S/4HANA advanced ATP functionality and roadmap still in-progress

Value Proposition and Benefit Objectives

- Ability to provide more reliable promise and delivery dates based on network supply visibility in real-time
- Improved customer service levels → prioritization of business priorities and key account strategies with Allocation Management
- Elimination of manual processing to manage inventory across virtual plants
- Improved inventory turns and utilization (Finished Goods and Components) in our order fulfillment processes with intelligent, automated, rules-based supply assignment

Integrated Solution Scope



Core gATP solution features

1. Rules Based
2. Multi-Level ATP
3. ATP Confirmation Cockpit for ATP logging
4. Product Allocation (with Allocation and Order Management Cockpit)
5. Backorder Processing

Make to Order Scenario

- **Challenge**
  - MTO orders from our plants need to give accurate ATP dates based on Finished goods and component availability
  - Finished goods and component supply are spread across a network of plants
  - Production order dates feed sales order confirmation. Should release only based on inventory and we should not have to run the availability check on production order in order to get sales order dates

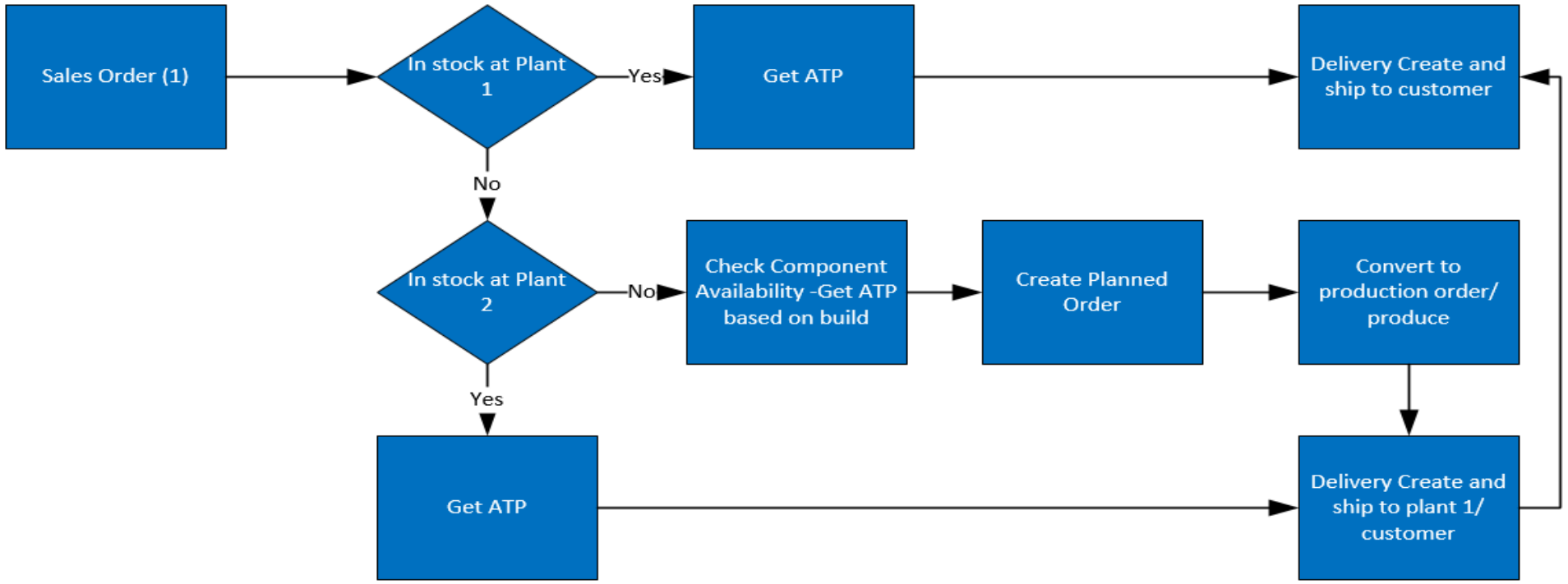
- **Business requirements**
  - Check for existing finished goods and component stock across locations before triggering production
  - Sales orders should be able to ATP based on multi-level BOM component check
  - If no FG supply exists, auto creation of FG planned order proposal based on component availability and lead-time

Make to Order Scenario:

1. Rules-Based ATP capability

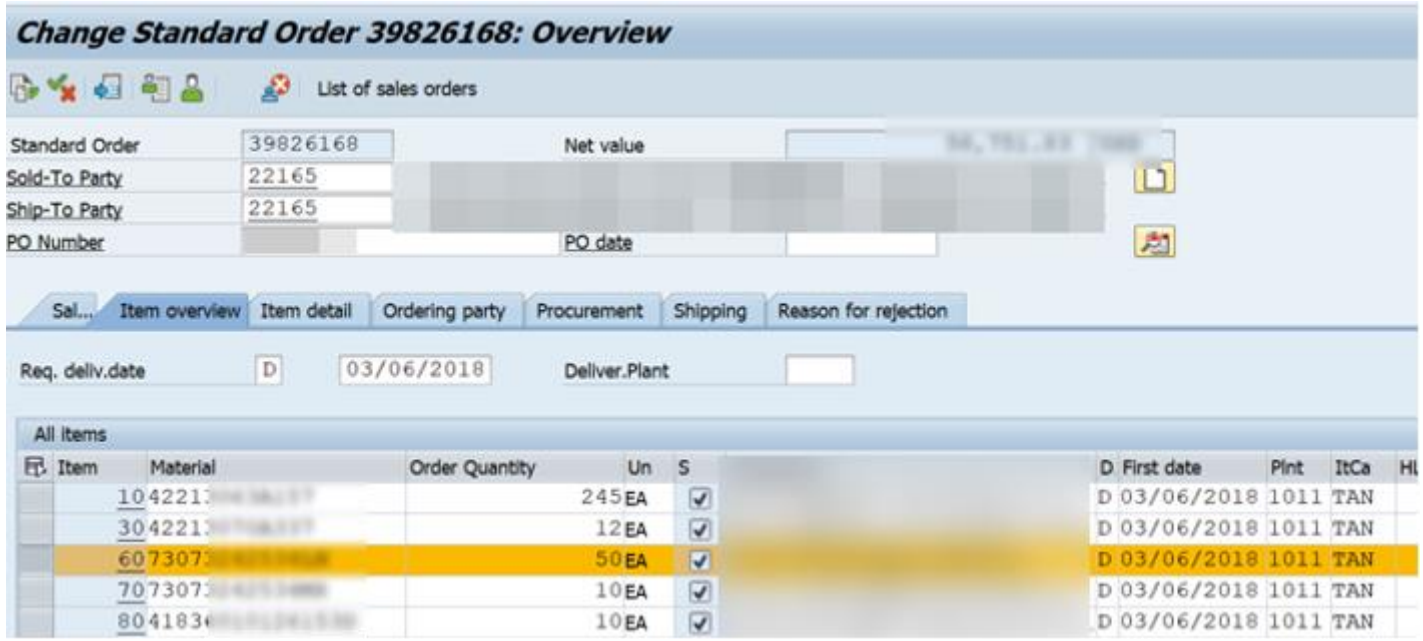
- **System Demonstration:**
  - MTO orders should provide a reliable confirmation date based on FG and Component availability
    - Check FG stock in Plant 1 first, then check FG stock in 2 (rules-based location substitution)
    - Check for component availability for build if no stock
    - Create a planned order at 2 rather than production order

- **Flow:**



1. Rules-Based ATP Scenario (cont.)

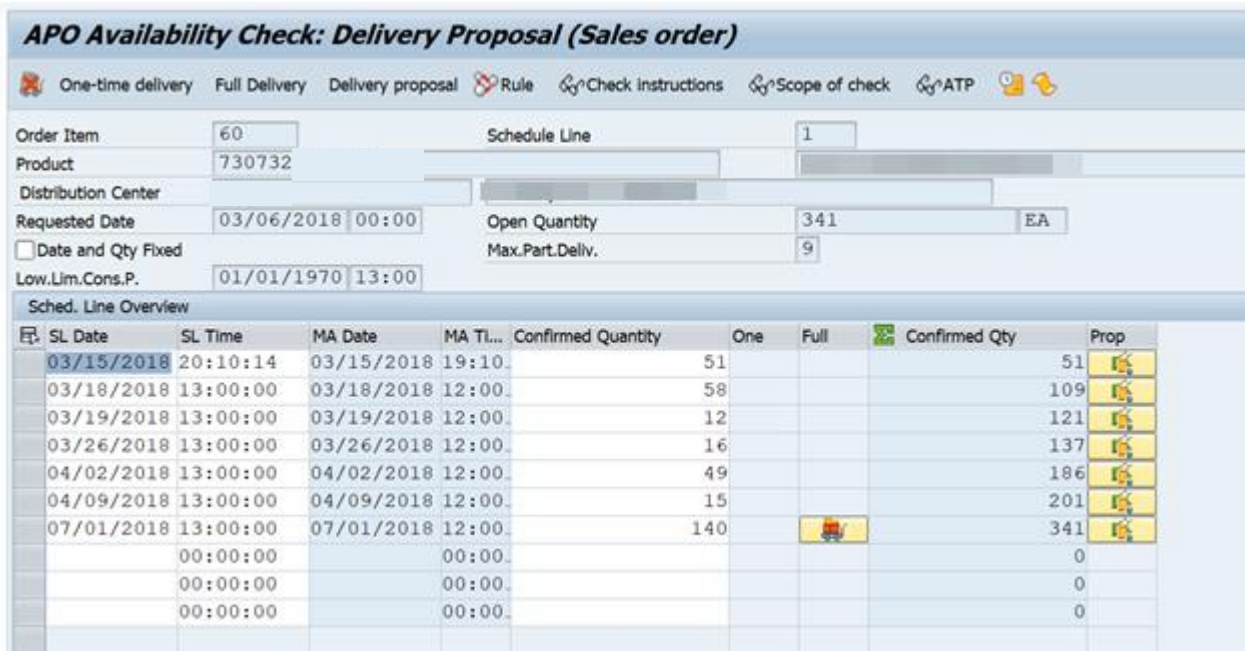
- Without the rules-based ATP check (RBA), the system can only confirm what is available on plant 1

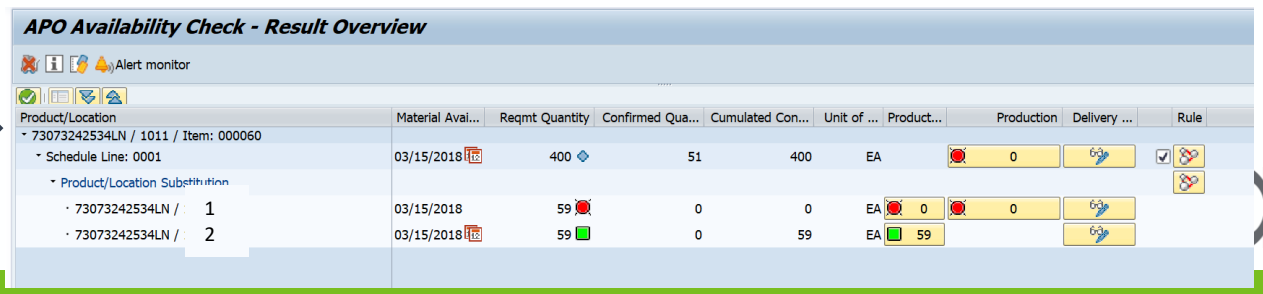


- Plant 1 currently has an availability of 341, so this sales order can confirm up to this quantity

1. Rules-Based ATP Scenario (cont.)

– Increasing the requested to quantity to above the available quantity of plant 1 will trigger RBA. The system will perform another ATP check on plant 2:



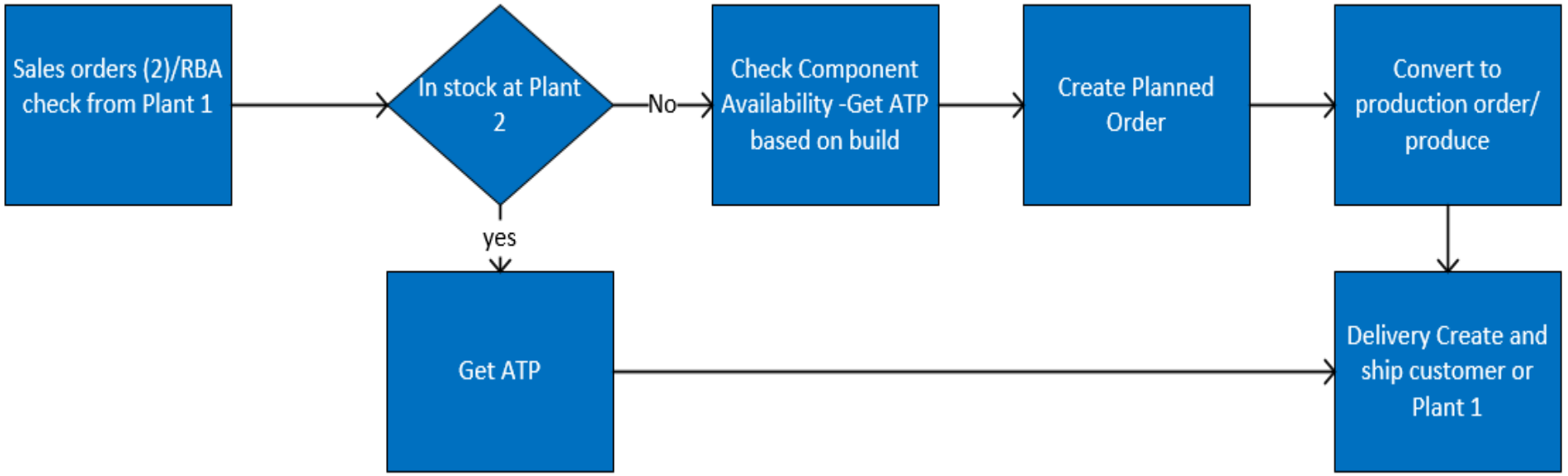


Make to Order Scenario:

2. Multi-Level ATP capability

- **System Demonstration:**
  - MTO orders should provide a reliable confirmation date based on FG and Component availability
    - Check Stock in 2
    - Check for component availability for build if no stock
    - Create a planned order at 2 rather than production order

- **Flow:**



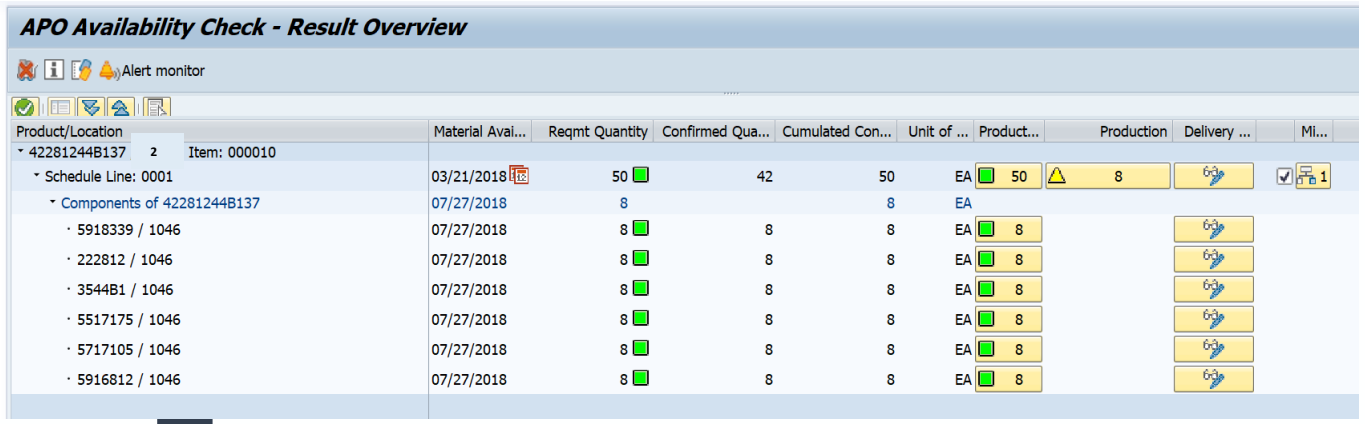
2. Multi-Level ATP Scenario (cont.)

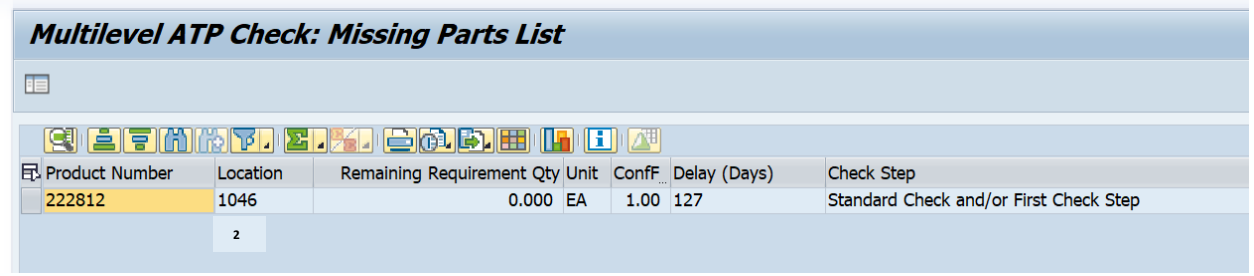
- Currently: when there is no stock on hand, the system either only confirms partially, based on RLT or triggers an assembly order in ECC → gATP offers a more flexible and enhanced ATP check.

Order quantity request exceeds available supply. MATP check triggered.

2. Multi-Level ATP Scenario (cont.)

- The confirmation will be based on the component with the smallest available quantity and the latest date. In this example, component 222812 is late, hence the confirmation on 7/27.

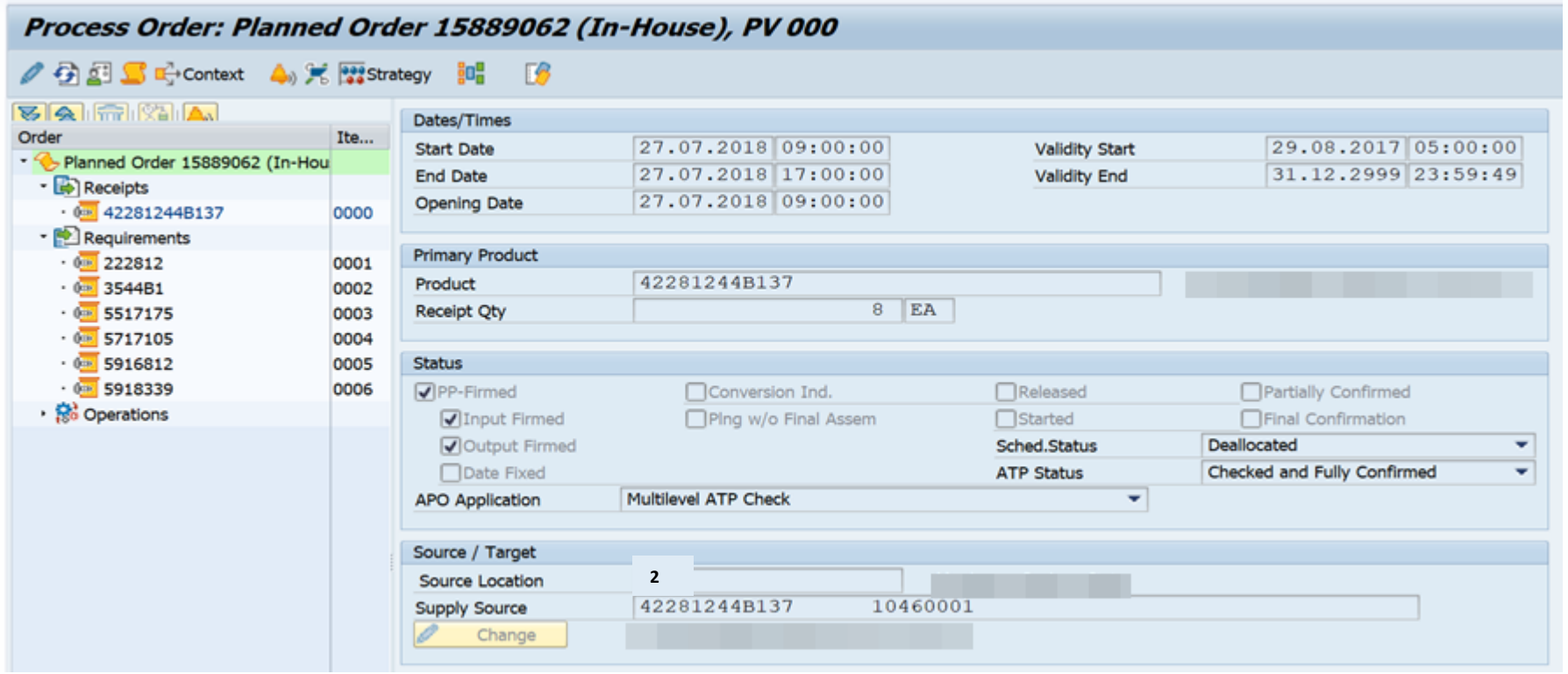




Missing Parts List display

2. Multi-Level ATP Scenario

– Multi-Level ATP Check: Upon sales order confirmation/save, the system will create a planned order with a quantity of 8, pegged to the sales order item, based on the production horizon:



Make to Order Scenario:

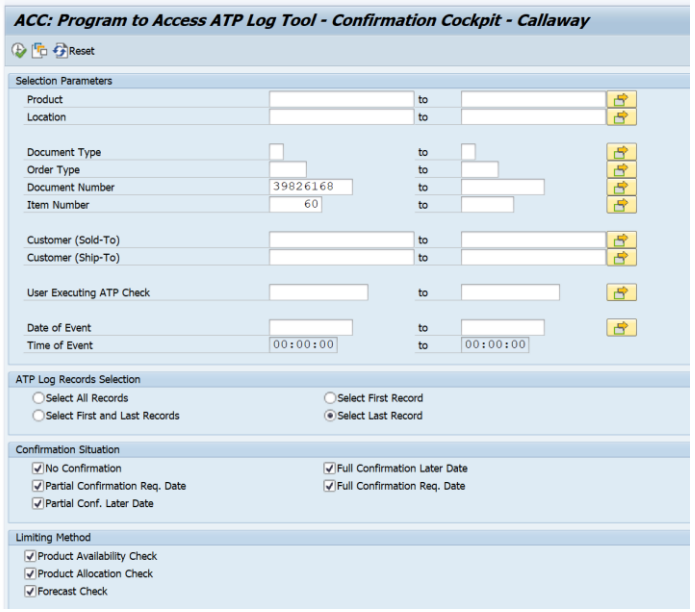
3. ATP Logging

- **Challenge: ATP Support**
  - Limited capabilities in native SAP ERP to root cause analyze ATP order promising history and events

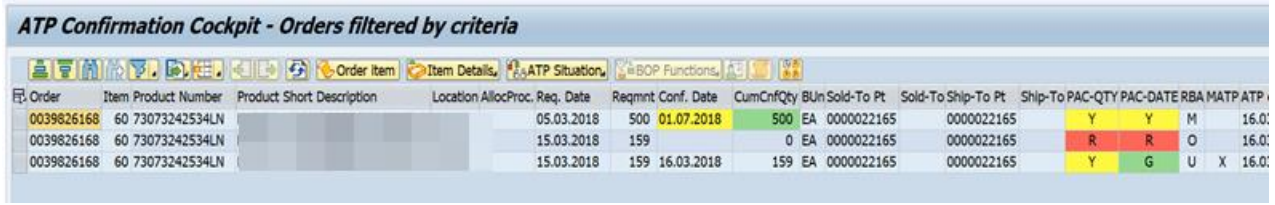
- **Business requirements**
  - Ability to log and review ATP confirmation history

3. ATP Confirmation Cockpit

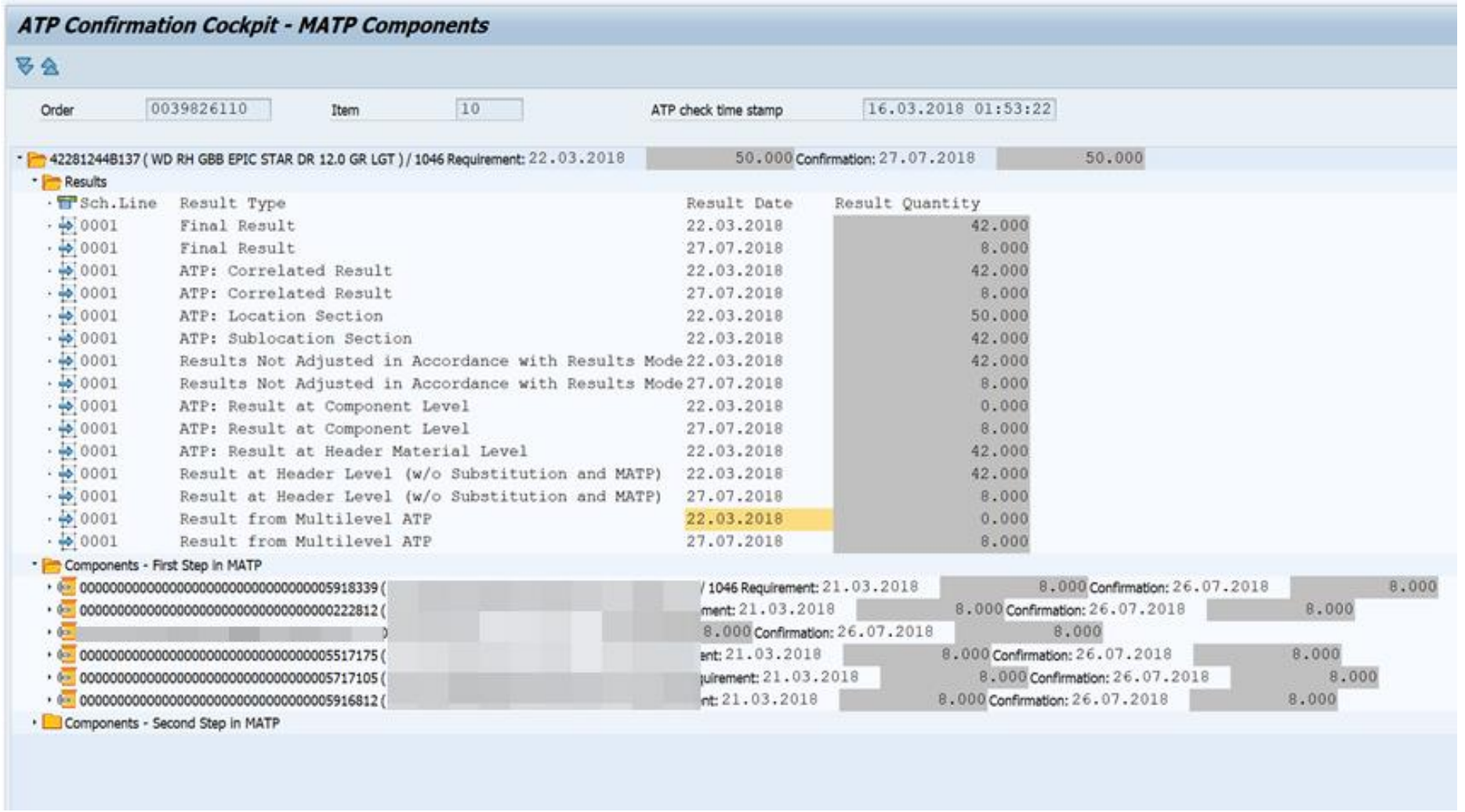
- For every ATP confirmation, ATP logs are captured with relevant data at the time of every availability check
  - Provides troubleshooting of data to get a better understanding of what events occur when partial or late confirmations or even a clear picture on why some orders get full confirmation
  - Provides analysis of historical sales order confirmation patterns to see if product availability or product allocations was a limiter
- A user-driven query report is provided to analyze the log data for troubleshooting, analytics, and process improvement analysis



ACC selection parameters allow the user to filter the result records based on selection parameters, ATP logs, confirmation situation, or limiting method



3. ATP Confirmation Cockpit Result Log



ATP Confirmation Cockpit - MATP Components

Order 0039826110 Item 10 ATP check time stamp 16.03.2018 01:53:22

42281244B137 (WD RH GBB EPIC STAR DR 12.0 GR LGT) / 1046 Requirement: 22.03.2018 50.000 Confirmation: 27.07.2018 50.000

Results

Sch.Line	Result Type	Result Date	Result Quantity
0001	Final Result	22.03.2018	42.000
0001	Final Result	27.07.2018	8.000
0001	ATP: Correlated Result	22.03.2018	42.000
0001	ATP: Correlated Result	27.07.2018	8.000
0001	ATP: Location Section	22.03.2018	50.000
0001	ATP: Sublocation Section	22.03.2018	42.000
0001	Results Not Adjusted in Accordance with Results Mode	22.03.2018	42.000
0001	Results Not Adjusted in Accordance with Results Mode	27.07.2018	8.000
0001	ATP: Result at Component Level	22.03.2018	0.000
0001	ATP: Result at Component Level	27.07.2018	8.000
0001	ATP: Result at Header Material Level	22.03.2018	42.000
0001	Result at Header Level (w/o Substitution and MATP)	22.03.2018	42.000
0001	Result at Header Level (w/o Substitution and MATP)	27.07.2018	8.000
0001	Result from Multilevel ATP	22.03.2018	0.000
0001	Result from Multilevel ATP	27.07.2018	8.000

Components - First Step in MATP

000000000000000000000000000000000005918339 (/ 1046 Requirement: 21.03.2018 8.000 Confirmation: 26.07.2018 8.000

000000000000000000000000000000000000222812 (ment: 21.03.2018 8.000 Confirmation: 26.07.2018 8.000

) 8.000 Confirmation: 26.07.2018 8.000

000000000000000000000000000000000005517175 (ent: 21.03.2018 8.000 Confirmation: 26.07.2018 8.000

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000000000000000000000000000000000005916812 (nt: 21.03.2018 8.000 Confirmation: 26.07.2018 8.000

Components - Second Step in MATP

Product Allocation Scenario

- **Challenge**
  - Current process requires a manual process where virtual allocation of stock to customers via plant (and warehouse) enterprise structure is maintained
  - Difficult to manage and requires monitoring and movement of virtual inventories

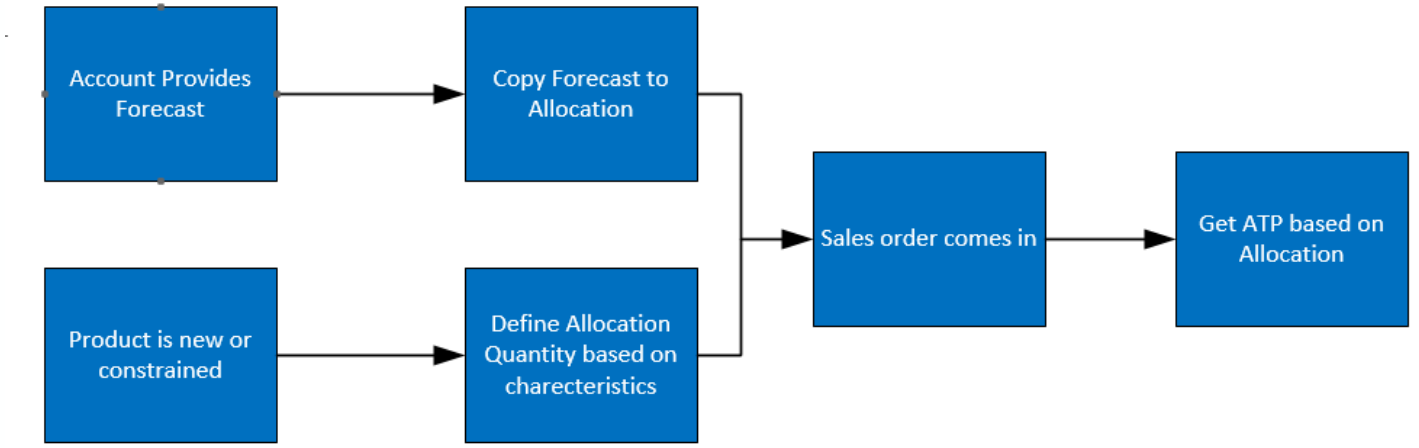
- **Business requirements**
  - In a constrained situation, we need to allocate stock to customers or groups based on decision points (e.g., with key accounts we need to allocate based on their forecast)
  - Reservation for custom stock
  - Ease of use for business users to monitor and maintain allocations
  - Product allocation is replacing a legacy SAP modeling process whereby separate virtual plants and storage locations are employed to segment supply → highly manual and requires high degree of inventory movements monitoring and execution (prone to error and delays!)

Product Allocation Scenario

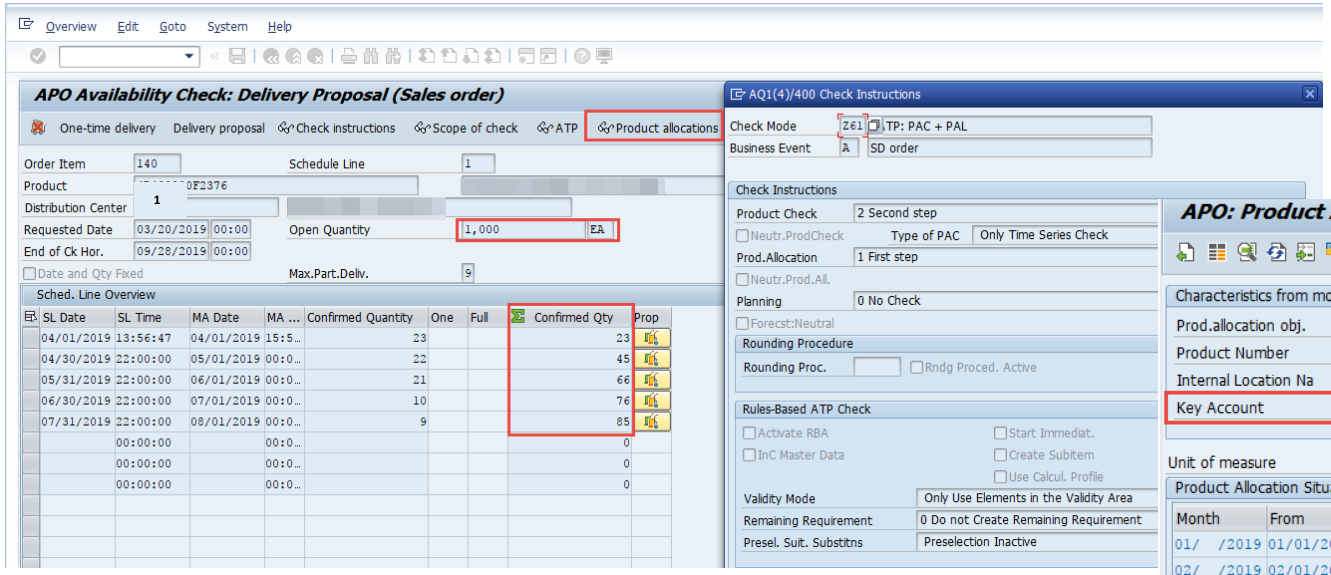
4. Product Allocation capability

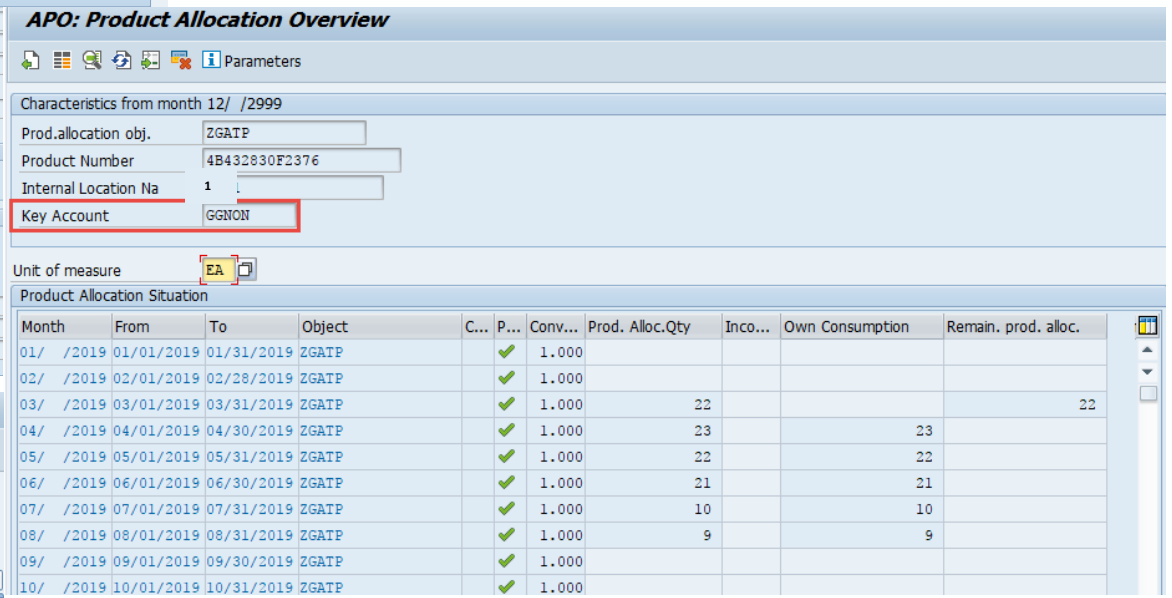
- **System Demonstration:**
  - Product allocation at a account level (or customer group) based on their forecast, and subsequent allocation management based on supply availability
  - Quantities can be adjusted via easy-to-use interface and available real-time for ATP processing

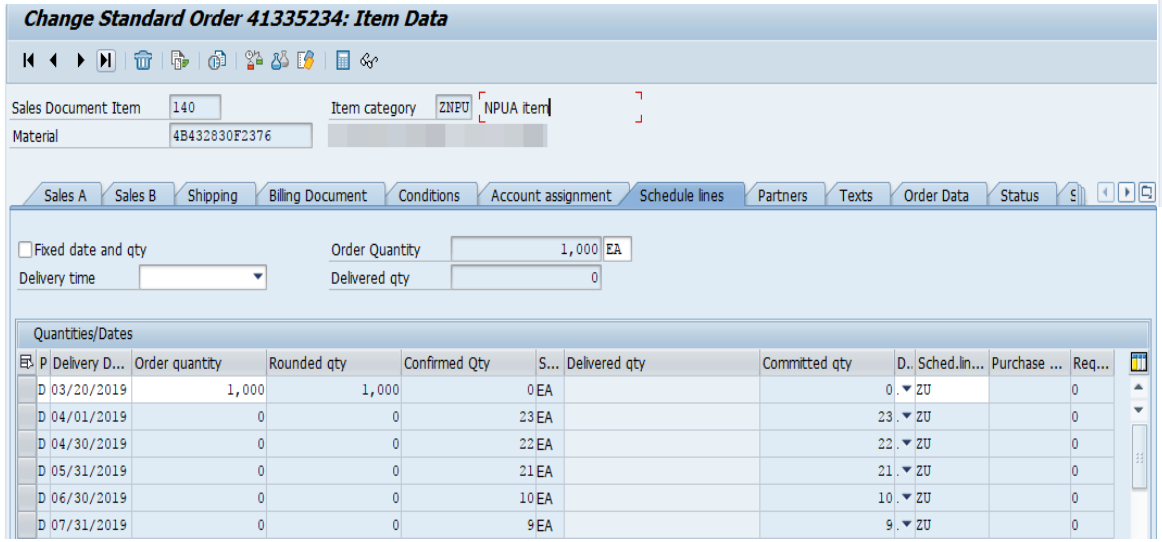
- **Flow:**



Product Allocation Check

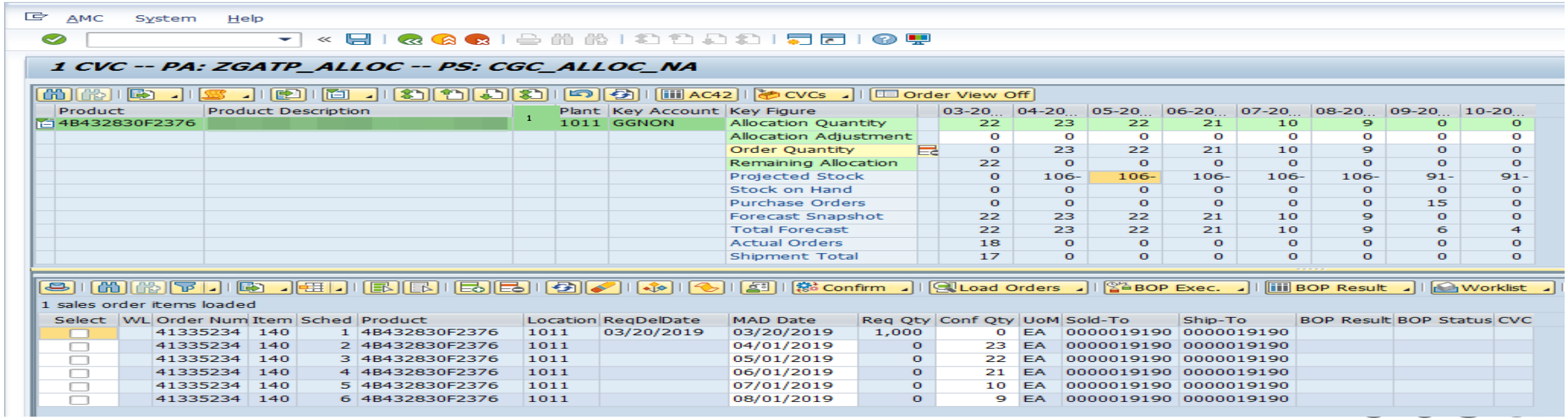






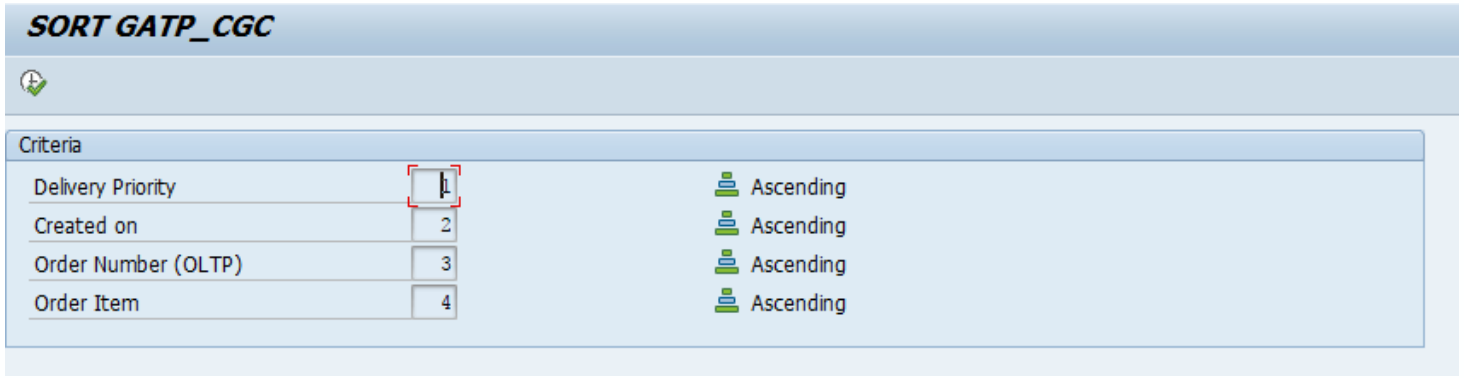
4. Allocation and Order Management Key Design Considerations

- Key business usability drivers for a for a stable, custom user-friendly planning grid:
  - Ability to centrally manage allocation and orders across all Categories (Clubs, Balls, Accessories) based on unique unit of measure conversion requirements
  - Ability to work offline and mass upload file
  - Ability for Allocation logging
  - Real-time data visibility:
    - Non Allocation planning area key figures (ie. DP planning area)
    - SNP order based calculations (ie. Stock On Hand Projected)



5. Backorder Processing

- **Backorder Processing (BOP) is used at Callaway to changes the confirmed quantities and dates in the framework of gATP checking availability logic**
  - Adjusts order confirmation based on new and changed supply situations
  - Redistributes confirmed or partly confirmed quantities according to given priorities and the given sequence



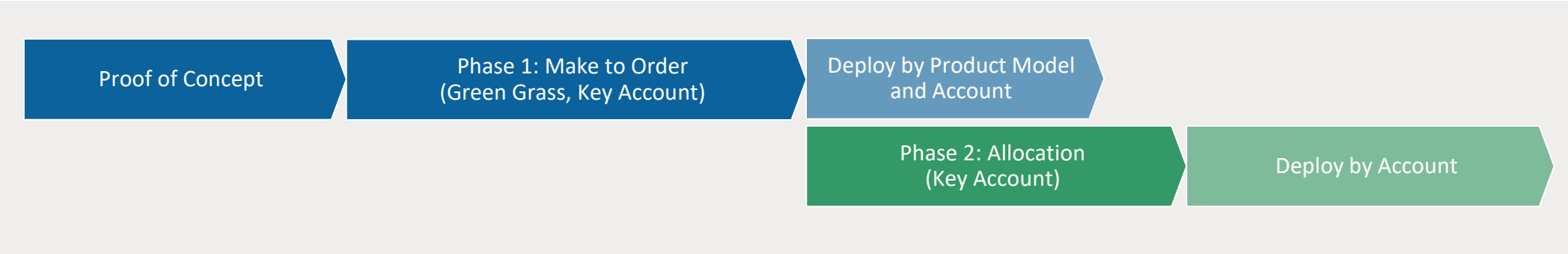
- **CTM Planning Integration with Backorder Processing (when using Multi-Level ATP)**
  - Sequencing of CTM planning jobs and BOP runs must be addressed when implementing with Multi-level ATP in APO global ATP → BOP can create new planned orders as a result of MATP for order confirmation
  - As a result, a BOP run was scheduled to run after CTM planning as part of our weekly refresh planning. Before BOP run all SNP planned orders are deleted and BOP recreated gATP planned orders as per components availability.
  - We have designed a BOP run to also be executed to rebuild pegging relationships between gATP sales orders and supply receipts.

Implementation Strategy

- With the support of our implementation partner, we elected to structure and implement the project via incremental phases:
  - Phase 1: Proof of Concept – *complete*
  - Phase 2: Make to Order – *go-live complete, phased deployment Sprints in-progress*
  - Phase 3: Allocation – *go-live complete, phased deployment Sprints in-progress*

- We elected to manage and primarily run the implementation with our in-house SAP team
  - With part-time project advisory and guidance from our implementation partner for expert help SAP and APO design, configuration, and development

Implementation Planning



Wave	Phase Objective
1. Proof Of Concept	• Demonstrate enablement of benefits to the Business in a controlled test environment • Allow the Business and IT organization to identify changes to ways of working for impact assessment specifically around master data, and integration with our existing SAP/APO landscape • Confirm fit for purpose of gATP functionality (Rules Based, Product Allocation, Multi-Level) and custom development • Reduce implementation issues and risks by demonstrating key elements of the functionality prior to a large implementation phase
2. Make to Order	• Configure core APO gATP solution capabilities: Rules Based, Multi-level, and Backorder Processing • Monitor and refine integration of gATP functionality with SNP/PPDS CTM and ECC touchpoints • Multi-deployment of gATP functionality by product segments (i.e., product model, account) in a business directed pace • Implement process changes
3. Allocation	• Layer in Product Allocation prioritization functionality by Key Account and Product in a business directed pace • Integrate APO DP key account forecasts with Product Allocation maintenance • Monitor and refine Allocation quantity determination and exception processing • Implement process changes

Key Points to Take Home

- APO gATP provides robust ATP capabilities that are not available in SAP ERP ATP (and in most cases, not ready yet in S4/HANA advanced ATP)
- Do not underestimate gATP technical considerations: APO liveCache sizing, RFC user security/administration, and SNP planning integration (000 active version)
- Develop a proof of concept and phased roadmap to implement incremental functionality for operational risk mitigation and change management
- Utilize a model that relies on inhouse SAP SD and APO resources with an expert gATP implementation partner for cost efficiency and knowledge transfer sustainment
- Leverage available (and widely used) enhancement points in gATP in order to improve the usability and functionality to fit your business needs

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Q&A

For questions after this session, contact us at:

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