SAP® Digital Supply Chain

SAP Integrated Business Planning for inventory

Meet the Experts

September 2020
Disclaimer

- The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. Except for your obligation to protect confidential information, this presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this presentation or any related document, or to develop or release any functionality mentioned therein.

- This presentation, or any related document and SAP's strategy and possible future developments, products and or platforms directions and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this presentation is not a commitment, promise or legal obligation to deliver any material, code or functionality. This presentation is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. This presentation is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this presentation, except if such damages were caused by SAP’s intentional or gross negligence.

- All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.
Agenda

Welcome

What is inventory and what are the strategic advantages to managing it?

How does SAP IBP for inventory enhance Inventory Planning?

How does SAP IBP for inventory fit into the end-to-end supply chain planning flow?

What benefits are SAP IBP for inventory customers achieving?

SAP IBP for inventory 2011 Demo

What’s happening in the lab today for future availability?

Q&A
What is inventory and what are the strategic advantages to managing it?

In the simplest form, supply chain is made of two things: pipes and stuff that flows through the pipes. *Pipes* are physical; like boats, trucks and warehouses. The *stuff* is inventory.

Everything around you right now is inventory.

Inventory is cash.

In the Circular Economy, think about your inventory through its life and the idea of giving it new life.

Every company does **some kind** of Inventory Planning

Inventory is often seen as a **necessary evil**.

It’s a **lubricant to keep the supply chain working smoothly** in times of uncertainty and risk, while making sure customers are served on time, but it’s costly and hard to tell how much is needed.

**Consequence:**

Too much inventory
Not enough inventory
Right inventory, wrong place or wrong time

Finance Dept ☹
Customer ☹
SC Planners ☹
How does SAP IBP for inventory enhance Inventory Planning?

Product Overview
What challenge are we addressing?
Effective Inventory Working Capital Management under Business Volatility

Supply chain risks
- Economic uncertainty
- Growing customer expectations
- Supply variability and disruptions
- Demand volatility

Supply chain risks
- Economic uncertainty
- Growing customer expectations
- Supply variability and disruptions
- Demand volatility

Inventory Challenge: How to deploy inventory across the multi-echelon supply chain while meeting service level objectives at the lowest cost?

High or uncontrolled inventory levels
Inadequate customer service levels or inventory availability
Multiple planning and inventory target setting processes
What makes the inventory challenge difficult to achieve?

- Customer Networks
- Distribution Networks
- Supplier/Manufacturing Networks
- Vendor Networks

Supply Chain Complexity
What makes the inventory challenge more difficult to achieve?

Multiple variables impacting inventory decisions

**Demand**
- Multiple customer service levels
- Forecast Error
- Consistently over/under forecasting (bias)
- Intermittent demand
- Outlier sales or forecasts
- Seasonality/promotions
- Internal and external demand

**Supply**
- Lead times and corresponding uncertainty
- Internal service levels
- Schedule attainment variability
- Production/distribution batch sizes
- Supply reliability
- Capacity restrictions
- Frozen production/planning periods
- Multiple sources of supply
- Varying bill of materials
What makes the inventory challenges further difficult to achieve?

Inventory planning process practices remain siloed, responding to partial needs of the end-to-end supply chain network resulting in:

- Over-buffers of inventory.
- Bull-whip effect.
- Limitation to determine any postponement strategy.
- Not handling BOM, lot sizes, other supply chain complexities.
So what?

What can help you overcome the inventory challenge?
SAP Integrated Business Planning for inventory

Multi-stage Inventory Optimization
Use less inventory to buffer more risk, with multi-stage optimization

Robust Statistical Models
Proven algorithms provide significant improvements over textbook calculations

Embedded Analytics
Visualize your Supply Chain Network and quickly gain insights into inventory drivers

Buffer Forecast Error and Demand Risk
Buffer against forecast error and other demand-side uncertainty, to support your demand-driven supply chain

Efficiently Master Supply Uncertainty
Buffer supply uncertainty most efficiently by considering late deliveries as well as other uncertainties in the supply chain

Manage Exceptions
Focus planners on problem materials and identify opportunities for improving the root causes of inventory

What are the benefits?

- Improve customer service levels
- Maximize the efficiency of inventory and working capital
- Standardize and simplify the inventory target-setting process at each tier within the supply chain
Multistage Inventory Optimization

SAP IBP for inventory simultaneously optimizes inventory across the end-to-end supply chain:

➢ Coordinated planning eliminates inventory over-buffering while meeting service level objectives.
➢ Demand variability propagation to upstream stages avoids bull whip effect.
➢ Internal service level optimization provides significant inventory reduction.
➢ Streamlines centralized inventory planning.

Multi-Stage Coordinated Inventory Planning
Multi-Stage Inventory Optimization Approach

Self-developed (confidential IP) stochastic non-linear optimization solver subjected to a hard constraint of meeting desired customer service levels while calculating internal service levels as decision variables

<table>
<thead>
<tr>
<th>Objective</th>
<th>Constraints</th>
<th>Decision Variables</th>
</tr>
</thead>
</table>
| • Find an inventory plan that minimizes $\sum$ (all product-locations) (all periods in planning horizon) Holding Cost Rate * Safety Stock in Units for each product location | • Subjected to the hard constraint of meeting desired customer service levels  
• The following planning parameters and replenishment constraints are factored into the calculation of inventory requirements:  
  - Uncertain, time-varying demands  
  - Lead time and lead time variability  
  - Periods between reviews  
  - Minimum and incremental lot size  
  - Stocking/non-stocking policy  
  - Sourcing  
  - Bill of Material Coefficient | • Internal service levels at each internal product location |

• Where holding cost rate can include: (1) Working capital opportunity cost (2) Storage costs (3) Obsolescence costs (4) Taxes
## Comprehensive data model for the end-to-end Supply Chain

<table>
<thead>
<tr>
<th>Master Data</th>
<th>Demand Inputs</th>
<th>Transportation Sourcing Inputs</th>
<th>Production Sourcing Inputs</th>
<th>Inventory Policy Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer and Customer Sourcing*</td>
<td>Target Service Level*</td>
<td>Transportation Lead Time*</td>
<td>Production Lead Time (Internal &amp; vendor)*</td>
<td>Order Cycle (PBR)*</td>
</tr>
<tr>
<td>Item-Location*</td>
<td>Historical Sales &amp; Historical Forecast</td>
<td>Transportation Lead Time Variability*</td>
<td>Production Lead Time Variability (Internal &amp; Vendor)*</td>
<td>Inventory Holding Cost Rate*</td>
</tr>
<tr>
<td>Transportation Sourcing*</td>
<td>Future Forecast*</td>
<td>Minimum batch/lot size</td>
<td>Minimum batch/lot size (Internal &amp; Vendor)</td>
<td>Minimum/Maximum Internal Service Level</td>
</tr>
<tr>
<td>Production &amp; Vendor Sourcing*</td>
<td>Forecast Error*</td>
<td>Incremental batch/lot size</td>
<td>Incremental batch/lot size (Internal &amp; Vendor)</td>
<td>Safety Stock Policy</td>
</tr>
<tr>
<td>Component (BOM)* (if there is)</td>
<td>Frozen Window</td>
<td>Sourcing Quotas*</td>
<td>Sourcing Quotas*</td>
<td>Service Level Type</td>
</tr>
<tr>
<td><strong>Currency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Unit of Measure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Currency</strong></td>
<td>Frozen Window</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Unit of Measure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Bold** = Time-varying input  
* Minimum Required
Inventory Planning Functions
Batch Running Sequence

- Manage Forecast Error Calculations - Inventory Optimization
- Global (multi-stage) inventory optimization
- Calculate Target Inventory Components
- Decomposed (single-stage) inventory optimization
# Inventory Planning Functions

## Manage Forecast Error Calculations - Inventory Optimization
- From historical demand forecast and historical actual demand, calculates forecast error coefficient of variation (CV) and other forecast error measures.
- Create forecast error profiles with flexible forecast error measure settings and attribute filter in batch jobs:
  - Time Horizons
  - Planning Levels
  - Key Figures
  - Adjustments for calculation method (MAD vs. MAPE), forecast bias, intermittency, outlier detection.

## Global (multi-stage) inventory optimization
- Optimizes safety stock globally and simultaneously across all products and locations of the supply chain, considering demand uncertainties, supply uncertainties, supply quantity, lead times, costs and service levels.
- Propagates forecast and forecast variability to stocking nodes with customer demand.
- Propagates forecast and forecast variability to internal/upstream nodes of the supply chain network.
- Optimizes internal service levels between internal/upstream nodes of the supply chain network.
- Runs MRP logic calculation as part of inventory optimization. Requires successful run of Global (Multistage) Inventory Optimization operator.
- Supports minimum stock requirements and cost per unit as inputs
- Calculates Re-Order Point.

## Calculate Target Inventory Components
- Requires successful run of Global (Multistage) Inventory Optimization operator.
- Optimizes recommended safety stock locally for any product-location combination.
- Ideal for running simulations to determine the impact on recommended safety stock for local changes to input key figures.
- Supports attribute filters in both batch mode and simulation.

## Decomposed (single-stage) inventory optimization
- Propagates forecast and forecast variability to internal/upstream nodes of the supply chain network.
- Optimizes internal service levels between internal/upstream nodes of the supply chain network.
- Supports minimum stock requirements and cost per unit as inputs
- Calculates Re-Order Point.
## Inventory Global Configuration Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Use Case</th>
<th>Settings</th>
</tr>
</thead>
</table>
| DECIMAL_LT_DEMAND_PROPAGATION | When fractional input values for transportation or production lead time exist, rounding options will calculate propagated demand mean for the appropriate period over the time-series horizon. | Parameters:  
- Round Up: Rounds up any fractional Lead Time value, e.g., Lead Time = 0.2 is rounded up to 1, Lead Time = 1.6 is rounded up to 2.  
- Round Down: Rounds down any fractional Lead Time value, e.g., Lead Time = 0.2 is rounded down to 0, Lead Time = 1.6 is rounded down to 1.  
- Round Nearest: Rounds to nearest week value, e.g., Lead Time = 0.2 is rounded near to 0, Lead Time = 1.6 is rounded near to 2, Lead Time = 1.49 is rounded near to 1. |
| LOOP_HANDLING | Process cyclical sourcing (loops) in master data inputs for transportation and production sourcing. | Parameters:  
- LOG: Cyclical sourcing data (loops) are logged in user business logs.  
- REMOVE: Transportation loops (up to six levels) are removed, then Inventory optimization algorithm detects any remaining transportation and production loops and logs them as warnings.  
- ENABLE: Inventory optimization algorithm detects transportation and production loops and logs them as warnings. |
## Inventory Global Configuration Parameters, continued

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Use Case</th>
<th>Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENABLE_DYNAMIC_LAG</td>
<td>Apply lagged forecast error inputs to calculate inventory target plans</td>
<td>Parameters:</td>
</tr>
<tr>
<td></td>
<td>considering the lagged effect of demand variability for upstream nodes in</td>
<td>• Yes</td>
</tr>
<tr>
<td></td>
<td>the multistage network.</td>
<td>• No</td>
</tr>
<tr>
<td>SAME_ISL ACROSS COMPONENTS</td>
<td>Relax the same internal service level constraint for components in a bill</td>
<td>Parameters:</td>
</tr>
<tr>
<td></td>
<td>of material</td>
<td>• Yes: Components have the same internal service level (component non-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>stockout probability)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No: Each component’s internal service level can be calculated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>individually (component non-stockout probability)</td>
</tr>
<tr>
<td>STORAGE_CAPACITY_CONSTRAINTS</td>
<td>Consume storage capacity constraints at the product location level</td>
<td>Parameters:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Ignore</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Consider</td>
</tr>
<tr>
<td>STORAGE_PENALTY_OPTION</td>
<td></td>
<td>Parameters:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Fixed: minimizes the number of stocking points when a storage constraint</td>
</tr>
<tr>
<td></td>
<td></td>
<td>is violated, assuming a large fix cost to resolve the storage problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Variable: minimizes the total cost of storage, assuming a variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cost for additional required storage</td>
</tr>
</tbody>
</table>
## Inventory Planning Fundamentals in SAP IBP for inventory

<table>
<thead>
<tr>
<th>Planning Output</th>
<th>Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Stock</td>
<td>Demand and supply uncertainty through exposure period (order cycle plus lead time)</td>
</tr>
<tr>
<td>Demand Variability Safety Stock</td>
<td>Forecast demand variability</td>
</tr>
<tr>
<td>Supply Variability Safety Stock</td>
<td>Supply lead time variability</td>
</tr>
<tr>
<td>Service Variability Safety Stock</td>
<td>Upstream service variability through the exposure period (order cycle plus lead time)</td>
</tr>
<tr>
<td>Cycle Stock</td>
<td>Propagated Demand Mean or Lot Size over length of Replenishment Frequency (PBR)</td>
</tr>
<tr>
<td>On Hand Stock</td>
<td>Safety Stock plus Cycle Stock</td>
</tr>
<tr>
<td>Pipeline Stock</td>
<td>Propagated Demand Mean or Lot Size over Length of Internal Transportation Sourcing Lead Time</td>
</tr>
<tr>
<td>In Process Stock</td>
<td>Propagated Demand Mean or Lot Size over length of Processing/Manufacturing Lead Time</td>
</tr>
<tr>
<td>Vendor In-Transit Stock</td>
<td>Propagated Demand Mean or Lot Size over length of Lead Time sourced from a Vendor</td>
</tr>
<tr>
<td>Re-Order Point</td>
<td>Propagated Demand Mean over length of Lead Time and Lead Time Variability</td>
</tr>
<tr>
<td>Target Inventory Position</td>
<td>Propagated Demand Mean and Safety Stock over length of Lead Time and length of Replenishment Frequency (PBR)</td>
</tr>
</tbody>
</table>
Inputs for Inventory Scenarios and Simulations

- **Demand**
  - Demand Forecast
  - Demand Forecast Error Coefficient of Variation
  - Target Service Level
  - Customer Frozen Window

- **Transportation**
  - Sourcing Quota
  - Lead Time
  - Lead Time Error
  - Minimum Lot Size
  - Incremental Lot Size
  - Frozen Window
  - Lot Size Periods of Coverage

- **Manufacturing, Co-Packaging, Processing, Vendor**
  - Output Coefficient
  - Sourcing Quota
  - Lead Time
  - Lead Time Error
  - Minimum Lot Size
  - Incremental Lot Size
  - Frozen Window
  - Lot Size Periods of Coverage

- **Inventory Policy**
  - Periods Between Replenishment
  - Minimum Internal Service Level
  - Maximum Internal Service Level
  - Inventory Holding Cost Rate
  - Minimum Stock Requirement
  - Maximum On Hand Inventory
  - Maximum Inventory Violation Cost Rate
Modeling Versions of Master Data and Key Figures
How does SAP IBP for inventory support scalability?

Planning Units (Subnetworks)

• Planning operators support filter for planning units (subnetworks).
• Networks separated into planning units either by region and/or product family benefit from the planning unit filter.

Planning Horizons per Planning Operator

• Define planning horizons (weeks) for planning operators, different from planning area time profile configuration.
• Supports use cases where: (1) planning horizons different than the standard Planning Area planning horizons and, (2) apply different planning horizons at the planning unit level.
End-to-End Inventory Optimization

Fix the Mix of Inventory

Achieve the Right Balance Between Inventory and Service Levels

• Provides visibility into the tradeoff between inventory investment and service objectives
• Customer service becomes a corporate objective, as opposed to an outcome of the planning process
• Scenario Simulation allows exploration of root-cause questions and potential improvements

The Right Amount at the Right Place at the Right Time

• Inventory is not reduced across-the-board
• Most often, the net impact is a significant reduction in inventory working capital requirements, while maintaining or even improving customer service levels
How does SAP IBP for inventory fit into the end-to-end supply chain planning flow?
Where does SAP IBP for inventory fit in the planning process?
End to End Process Modelling Example

Strategic & Tactical
- Long-term
- Frequency: Monthly
- Horizon: 1-3 years
- Buckets: Months, Weeks

Tactical & Operational
- Mid-Term
- Frequency: Weekly
- Horizon: 1-12 months
- Buckets: Weeks, Days

Operational
- Short-Term
- Frequency: Daily
- Horizon: 1-12 weeks
- Buckets: Days

S&OP Process
- Financial Plan
- Marketing Plan
- Sales History
- Sales Plan
- Execution Orders
- Sales Orders
- Sales and Shipment History

Real Time Analytics & Exception Handling

Operational Planning & Execution Processes
- Supplier Forecast Commit (Integration with SAP Ariba)
- Supply Proposals & Product Allocations
- Supply Proposal & Sales Order Confirmation
- Deployment Stock Transfers
- ATP Check
- Sensed Demand Plan
- Consensus Demand Plan
- Inventory Targets
- Create & Review Supply Plan
- Balance Demand & Supply
- Management Review
- Review Consensus Demand Plan

Financial Plan
Marketing Plan
Sales History
Sales Plan
Execution Orders
Sales Orders
Sales and Shipment History

© 2020 SAP SE or an SAP affiliate company. All rights reserved. | PUBLIC
Where does SAP IBP for inventory fit in the planning process?
What benefits are SAP IBP for inventory customers achieving?
Inventory Optimization shows effects in different areas of your company

<table>
<thead>
<tr>
<th>Impact</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Statement</td>
<td>▪ Increases revenue by improved customer service levels (e.g. reduced lost sales and service level penalty cost)</td>
</tr>
<tr>
<td>Balance Sheet</td>
<td>▪ Free up cash from one time reduction in inventory and more efficient deployment of inventory across the entire supply chain</td>
</tr>
<tr>
<td>Cash Flow Statement</td>
<td>▪ Better replenishment enables faster collection of accounts receivable</td>
</tr>
</tbody>
</table>

1-5% Service Levels
Improved inventory availability and service to your end customers

Source: SAP Performance Benchmarking

10-30% Inventory Investment
Less inventory absorbs more risk, when deployed correctly. Planner productivity also improves!

Source: SAP Performance Benchmarking
# Consider a Design for Best-In-Class Inventory Planning Process

<table>
<thead>
<tr>
<th>Planning ownership</th>
<th>Frequency of planning cycle</th>
<th>Review process</th>
<th>Performance review</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Center of Excellence over Siloed inventory planning team</td>
<td>• Agile over Infrequent</td>
<td>• Validate data inputs</td>
<td>• Formal ownership of inventory health metrics over reactionary metrics</td>
</tr>
<tr>
<td>• Standardized work and online templates over Ad-hoc offline spreadsheets</td>
<td>• Monthly vs. Quarterly (Agile)</td>
<td>• Review inventory plan</td>
<td>• Review historical inventory performance key performance indicators</td>
</tr>
<tr>
<td>• Support end users over Black Box tools</td>
<td>• Weekly vs. Monthly (Very Agile)</td>
<td>• Assess drivers of inventory</td>
<td>• Review projected inventory KPIs</td>
</tr>
<tr>
<td>• Report planning decisions to end users and engage regional teams with planning questions</td>
<td></td>
<td>• Analyze running/ad-hoc scenarios</td>
<td></td>
</tr>
<tr>
<td>• Engage regional teams with planning questions</td>
<td></td>
<td>• Update inventory plan</td>
<td></td>
</tr>
<tr>
<td>• Respond to scenario analysis requests from end users</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Frequency of planning cycle**

- Agile over Infrequent
- Monthly vs. Quarterly (Agile)
- Weekly vs. Monthly (Very Agile)

**Review process**

- Validate data inputs
- Review inventory plan
- Assess drivers of inventory
- Analyze running/ad-hoc scenarios
- Update inventory plan

**Performance review**

- Formal ownership of inventory health metrics over reactionary metrics
- Review historical inventory performance key performance indicators
- Review projected inventory KPIs
Planning with SAP IBP for inventory

Demo
SAP Integrated Business Planning for Inventory
Sample Use Case: Forecast Error Analysis
SAP Integrated Business Planning for Inventory
Sample Use Case: Inventory Input Review

### Forecast by Finished Product (Eaches)

![Line chart showing forecast by finished product.]

### Demand Variability: Forecast Error Coefficient of Variation

<table>
<thead>
<tr>
<th>Product ID</th>
<th>LOCAM1</th>
<th>LOCAM2</th>
<th>LOCAM3</th>
<th>LOCAP1</th>
<th>LOCAP2</th>
<th>LOCAP3</th>
<th>LOCEU1</th>
<th>LOCEU2</th>
<th>LOCEU3</th>
</tr>
</thead>
<tbody>
<tr>
<td>FG1</td>
<td>0.34</td>
<td>0.31</td>
<td>0.34</td>
<td>0.33</td>
<td>0.33</td>
<td>0.28</td>
<td>0.34</td>
<td>0.31</td>
<td>0.35</td>
</tr>
<tr>
<td>FG2</td>
<td>0.25</td>
<td>0.29</td>
<td>0.28</td>
<td>0.34</td>
<td>0.37</td>
<td>0.30</td>
<td>0.27</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>FG3</td>
<td>0.38</td>
<td>0.41</td>
<td>0.29</td>
<td>0.28</td>
<td>0.37</td>
<td>0.31</td>
<td>0.34</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>FG4</td>
<td>0.38</td>
<td>0.33</td>
<td>0.39</td>
<td>0.32</td>
<td>0.30</td>
<td>0.37</td>
<td>0.23</td>
<td>0.43</td>
<td>0.35</td>
</tr>
<tr>
<td>FG5</td>
<td>0.39</td>
<td>0.28</td>
<td>0.34</td>
<td>0.32</td>
<td>0.33</td>
<td>0.34</td>
<td>0.31</td>
<td>0.39</td>
<td></td>
</tr>
</tbody>
</table>
SAP Integrated Business Planning for Inventory
Sample Use Case: Inventory Input Review
SAP Integrated Business Planning for Inventory
Sample Use Case: Inventory Plan Review
SAP Integrated Business Planning for Inventory
Sample Use Case: Drivers of Safety Stock Inventory
SAP Integrated Business Planning for Inventory
Sample Use Case: Inventory Scenario Planning
What’s happening in the lab today for future availability?

Product Roadmap
SAP Integrated Business Planning for inventory
Product road map overview – Key innovations

V2008 – Recent innovations
Inventory optimization
- SAP Fiori app Inventory Profiles
- Support of Time Zone: Global Configuration

V2011 – Planned Q4/2020
Inventory optimization
- SAP Fiori app for Inventory Analysis
- Integrated Inventory Planning and Financial Planning: Integration to SAP Analytics Cloud
- Dynamic lag for propagation of forecast error
- Incorporate Non-Stocking Push Logic for Inventory Components Operator
- Spare Parts Planning Integration with S/4 HANA Extended Service Parts Planning (eSPP).
- Adaptive master data: Consume lead time and lead time variability (prod, trans, vendor) from SAP S/4HANA
- Support of Time Zone: Application Job Runs

V2102 – Planned Q1/2021
Inventory optimization
- SAP Fiori app for Inventory Analysis: Multiple Selection of Planning Functions and Versions
- SAP Fiori app Inventory Profiles: Attribute Settings and Excel UI Simulate
- Management of Forecast Error Calculation app calculating forecast error over lead time

V2105 – Planned Q2/2021
Inventory optimization
- SAP Fiori app for Inventory Analysis: Comparative selection of multiple analyses
- SAP Fiori app Inventory Profiles: Key Figure Settings
- Non-stocking push of upstream lead time and lead time variability handling multiple sources of supply.
- Schedule horizon for Inventory Optimization

1. This is the current state of planning and may be changed by SAP at any time without notice.
SAP Integrated Business Planning for inventory, V2008

Recent innovations

- SAP Fiori app for Inventory Profiles
  - Create planning profiles with choices for planning horizons using the SAP Fiori app Inventory Profiles.
  - For new profiles, define profile name, planning area, description and planning horizon (supports week inputs only and defaults to 52 weeks).
  - Excel UI Support: “Inventory Planning (Advanced)” in Applications Jobs to support batch runs for baseline and scenarios. Note: Requires upgrade to 2008 IBP Excel Add-On.
  - Simulate will not be supported in Excel UI.

- Support of Time Zone: Global Configuration
SAP Integrated Business Planning for inventory, V2011

Upcoming midterm innovations

- SAP Fiori app for Inventory Analysis:
  - Create scenarios by analysis type: demand, transportation, production, vendor, inventory policy.
  - Save and edit scenarios.
  - Compare scenarios to baseline plan.

- Integrated Inventory Planning and Financial Planning: Integration to SAP Analytics Cloud
  - Collaboration between CFO and CSCO planning teams.
  - Continuous Inventory Financial Planning Cycle.
  - SAP System Integration Supports Continuous Inventory Planning.

- Dynamic lag for propagation of forecast error.
- Incorporate Non-Stocking Push Logic for Inventory Components Operator.
- Adaptive master data: Consume lead time and lead time variability (prod, trans, vendor) from SAP S/4HANA.
- Support of Time Zone: Application Job Runs
SAP Integrated Business Planning for inventory, V2102 and V2105

Upcoming long-term innovations

- SAP Fiori app for Inventory Analysis: Multiple Selection of Planning Functions and Versions
- SAP Fiori app Inventory Profiles: Attribute Settings and Excel UI Simulate
- Management of Forecast Error Calculation app calculating forecast error over lead time
- SAP Fiori app for Inventory Analysis: Comparative selection of multiple analyses
- SAP Fiori app Inventory Profiles: Key Figure Settings
- Non-stock push of upstream lead time and lead time variability handling multiple sources of supply.
- Schedule horizon for Inventory Optimization
SAP Integrated Business Planning for inventory

Direction update

- Multi-Stage Inventory Optimization consumes daily Forecast Error Coefficient of Variation
- Support no safety stock option for stocking node
- Safety Stock Policy for excluding internal demand streams for distribution or production
- End of Fiscal Year planning (budget based planning)
- Budget/inventory impact on service (SLO)
- Consume minimum and maximum safety stock as input (as days of supply or quantity)
- Phase In Settings for Demand Ramp Up
- Consume PIPO outputs of IBP for demand Manage Product Lifecycle and Settings for Product Lifecycle apps
- Max service time quoted to customer
- Better handling of co-products
- Master Data Management for codifying a segmented inventory strategy
- Process management for inventory review and target publication
- Target “smoothening”: Calculate an average on a rolling horizon
- Handle complex BoMs
- Promotional weeks: Make it easy to calculate SS on base, uplift, or both
- Optionally pass current inv position into IC operator as input to total inventory target calculation
- IP #230749: Offset parameters to exclude current period in calculations of inventory targets
- Forecast error calculation: Weigh recent buckets for CV and bias more heavily than earlier weeks
Thank you

Gerry Perham
SAP Digital Supply Chain Product Management
SAP Labs
E Gerry.Perham@sap.com

Alexis Lozada
SAP Digital Supply Chain Product Management
SAP Labs
E Alexis.Lozada@sap.com
Debrief and Q&A