How to gain value and increase supply chain efficiency with SAP Integrated Business Planning for inventory

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Executive Summary

Most companies have already decided to go on the **Digital Transformation Journey**, and many of them are aware that the **Digital Supply Chain is a Key Driver for success**.

Improving Supply Chain Planning is often a first step on that journey. Better Forecast, better Visibility and better Integration of the whole process are on tops of Executive's minds. Improving Inventory Planning is often an afterthought that should come with the above initiatives.

But starting with Inventory Planning as an integral part to Supply Chain Planning and leveraging Inventory Optimization to realize benefits from the beginning on can actually improve your Business results in many ways and, finally, not lead to more effort, but really be the (financial) engine of your Digital Transformation Journey.
Agenda

- What is the difference between Inventory Planning and Inventory Optimization?
- What effects does Inventory Optimization have on your Finance?
- Benefits of SAP IBP for inventory
- Roadmap & Where to find more information
The difference between Inventory Planning and Inventory Optimization
Every company does *some kind of* Inventory Planning

Inventory is often seen as **necessary evil**: it’s a **lubricant to keep the supply chain working smoothly** in times of uncertainty and risk, while making sure customers are being served in time, but it’s costly and hard to tell how much is needed.

![Inventory Planning Diagram](image)

**Consequence**
- Too much inventory \(\rightarrow\) Finance 😞
- Not enough inventory \(\rightarrow\) Customer 😞
- Right inventory, wrong place \(\rightarrow\) SC planners 😞

→ Inventory is often an afterthought because no one wants to deal with it!
## What makes this difficult to do

### SUPPLY CHAIN
- How much inventory do I need at my Manufacturing location?
- How much inventory do I need at my Distribution Center?

### DEMAND
- Service level targets
- Forecast
- Forecast error
- Consistently over/under forecasting (bias)
- Intermittent demand
- Outlier sales or forecasts
- Multiple service levels and inventory thresholds
- Seasonality/promotions
- Internal and external demand

### SUPPLY
- Lead times
- Lead-time uncertainty
- Internal service levels
- Schedule attainment variability
- Production/distribution batch sizes
- Supply reliability
- Capacity restrictions
- Frozen production/planning periods
- Multiple supply sources
### Traditional vs. State of the Art Inventory Target Calculation

<table>
<thead>
<tr>
<th>The real world is…</th>
<th>It is not…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stochastic (variable, unpredictable)</td>
<td>Deterministic (if → then)</td>
</tr>
<tr>
<td>Multistage</td>
<td>Isolated Single Stage</td>
</tr>
<tr>
<td>Time Varying</td>
<td>Stationary</td>
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<tr>
<td>Comprehensive Data Model</td>
<td>Multiple, Limited Data Models</td>
</tr>
<tr>
<td>Enterprise Scale</td>
<td>Desktop Scale</td>
</tr>
<tr>
<td>Dynamic &amp; Integrated (Online)</td>
<td>Static &amp; Offline Analysis</td>
</tr>
</tbody>
</table>
What does IBP for inventory accomplish for the end-to-end supply chain?

1. Step: Visualize the curve for your business
2. Step: Choose which point you are targeting

3. Step: Fix the Mix of Inventory!
Where are you at?

- What is your current inventory investment (compared to your peers)?
- What are your inventory turns (compared to your peers)?
- Where and how do you set your targets?
- What would it mean to reduce your inventory by one day?
- … and where do you want to be?
What effects does **Inventory Optimization** have on your Finance?
Inventory Optimization shows effects in different areas of your company

<table>
<thead>
<tr>
<th>Impact</th>
<th>Summary</th>
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</thead>
<tbody>
<tr>
<td><strong>Income Statement</strong></td>
<td>▪ Increases revenue by improved customer service levels (e.g. reduced lost sales and service level penalty cost)</td>
</tr>
<tr>
<td><strong>Balance Sheet</strong></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><strong>Cash Flow Statement</strong></td>
<td>▪ Better replenishment enables faster collection of accounts receivable</td>
</tr>
<tr>
<td><strong>Sustainability</strong></td>
<td>▪ More accurate inventory planning reduces waste, emissions and leads to more efficient usage of resources and material</td>
</tr>
</tbody>
</table>

**Service Levels**

-1-5%

Improved inventory availability and service to your end customers*

Source: SAP Performance Benchmarking

**Inventory Investment**

-10-30%

Less inventory absorbs more risk, when deployed correctly. Planner productivity also improves!*

Source: SAP Performance Benchmarking
Benefits of SAP IBP for inventory
What are the key differentiators for SAP Integrated Business Planning for inventory?

- One tool, One model
- Multi Stage Inventory Optimization
- Inventory targets for every level
- Real-Time What-if Scenario Planning

- True SIOP process
- Lower total cost to meet SL targets
- More insights and better results
- Tactical and strategic planning to improve SC performance
Key Enabler #1: End to End Supply Chain Planning in one tool
Location-centric inventory planning oversimplifies the situation and leads to

- Over-buffers of inventory
- Bull-whip effect
- Limitation to determine any postponement strategy
- Not being able to handle BOM, lot sizes, other supply chain complexities

Key Enabler # 2: Multistage Inventory Optimization (1/2)
Key Enabler #2: Multistage Inventory Optimization (2/2)

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.
- Internal service level optimization provides significant inventory reduction.
- Demand variability propagation to upstream stages avoids bull whip effect.
- Streamlines centralized inventory planning.

Multi-Stage Coordinated Inventory Planning
Key Enabler # 3: Comprehensive insights into different types of stock and their drivers

Safety Stock Drivers:
- Demand
- Demand uncertainty
- Lead times
- Lead time uncertainty
- Review frequency
- Service level targets
- Service times

Cycle Stock Drivers:
- Demand
- Review Frequency
- Batch Sizes
- Production Rules

Pipeline Stock Drivers:
- Order Processing lead times
- Transit times
- Demand

Pre-Build Stock Drivers*:
- Time-varying capacity
- Time-varying demand
- Sourcing ratios
- Changes in safety stock

* Requires SAP IBP for R+S
Key Enabler # 4: Real-Time „What-If“ Simulation and Comparison

Fast and scalable version and scenario planning leads to faster decision processes that are based on profound knowledge.

![Graph showing inventory value comparison between different scenarios](image)

Real-time what-if scenario planning

Real-time scenarios and simulation on entire model
SAP Integrated Business Planning for Inventory
Sample Use Cases

Inventory positioning in network

Inventory optimization

Drivers of inventory

‘What-If’ analysis on inventory
A sample Inventory Planning Process (additional licensing may apply)

Review data model input assumptions and target outputs through Analytics & Dashboards

Inventory Optimization

Multi Stage Inventory Optimization

Target Inventory Components

Single Stage Simulation

Management by Exception

Inventory Targets

for S&OP

for Operational Planning

Segmentation

Service Level Targets

Forecast Error

BOM

Supply / Vendor Sourcing Lead Time and Variability
Demo
Excursion: How does Inventory Planning help right now?
Buffer uncertainty in times of Covid 19

Inventory positioning in network
Where is stock available?

Drivers of inventory
See changes caused by Demand Spikes and Supply drops

Inventory optimization
Updated based on changes

‘What-If’ analysis on inventory
What is changing? What options do I have?
What are customers saying: Lamb Weston BTS

Lamb Weston pursues supply chain excellence, enhancing decision-making and increasing its capacity for growth.

With the SAP® Integrated Business Planning solution and the assistance of Capgemini and McCoy, Lamb Weston/Meijer was able to:
- Reduce safety stock by 18% using automatic calculation and advanced planning models
- Free up planners to focus on analysis thanks to precise, automated calculation
- Gain a better understanding of the levers that influence safety stock with scenario planning and simulation
- Improve decision-making based not only on sales volumes but also on the financial impact of the decision
- Better coordinate sales forecast, inventory, and operations planning

“SAP Integrated Business Planning helps us analyze future demand and increase profitability. The payback time of introducing the SAP Integrated Business Planning application for inventory was six months.”
Walco Verbist, Customer Supply Manager, Lamb Weston/Meijer V.O.F.

Lamb Weston/Meijer V.O.F.
Knokkeheide, Netherlands
www.lambweston.eu

Industry: Consumer products
Employees: 1,400
Turnover: €700 million

Featured Solutions and Services:
SAP Integrated Business Planning for inventory, and SAP Integrated Business Planning application for sales and operations

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Roadmap for SAP IBP for inventory
### SAP Integrated Business Planning for inventory

#### Product road map overview – Key innovations

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Innovations</th>
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<tbody>
<tr>
<td>V2002</td>
<td>Recent</td>
<td>- Coverage of long production and transportation sourcing cycles: Lot size in periods</td>
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<tr>
<td></td>
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<td>- Validity dates for sources of supply</td>
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<tr>
<td>V2005</td>
<td>Planned Q2/2020¹</td>
<td>- SAP Fiori app “Manage Inventory Profiles” for planning profile configuration of all IO operators</td>
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<td></td>
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<td>- Frozen window</td>
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<td></td>
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<td>- Improve intermittent demand classification for forecast error calculation</td>
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<tr>
<td></td>
<td></td>
<td>- Echelon number available in Microsoft Excel planning view</td>
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<td></td>
<td></td>
<td>- Calculate fair-share lot sizes in nonstocking push logic through a defined allocation horizon</td>
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<tr>
<td></td>
<td></td>
<td>- Handling of cyclical sourcing for single stage inventory optimization</td>
</tr>
<tr>
<td>V2008</td>
<td>Planned Q3/2020¹</td>
<td>- SAP Fiori app for inventory analysis: Demand type</td>
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<tr>
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<td></td>
<td>- Planning unit filter for SAP Fiori app “Manage Inventory Profiles”</td>
</tr>
<tr>
<td>V2011</td>
<td>Planned Q4/2020¹</td>
<td>- Integrated supply chain and financial planning: Integration to SAP Analytics Cloud</td>
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<tr>
<td></td>
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<td>- SAP Fiori app for inventory analysis: Production and transportation types</td>
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<tr>
<td></td>
<td></td>
<td>- Adaptive master data: Consume lead time and lead time variability (prod and trans) from SAP S/4HANA</td>
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<td></td>
<td></td>
<td>- Dynamic lag for propagation of forecast error</td>
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<tr>
<td></td>
<td></td>
<td>- Incorporate nonstocking push logic for inventory components operator</td>
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</table>

¹ This is the current state of planning and may be changed by SAP at any time without notice.
Where to find more information
Additional Links to get more information

- SAP IBP for inventory [Solution Brief](#)
- SAP IBP for inventory overview [YouTube Video](#)
- SAP IBP for inventory – Inventory Challenges & Opportunities [YouTube Video](#)
- SAP IBP [Landing Page](#)
- SAP [help page](#) with technical information like integration & configuration
- [Roadmap](#) for SAP IBP
- SAP IBP for inventory webinar (Dec 2018) [Presentation](#)  [Recording](#)
- Meet the Expert – SAP IBP for Inventory Results Validation webinar  [PDF](#) | [Recording](#)
- SAP IBP for inventory [demo on YouTube](#)
Benefits of Inventory Optimization

- Achieve the targeted Service Level at the least total cost
- Fix the Mix of inventory for every location in your network
- Calculate inventory levels not only for Finished Goods, but all along the Supply Chain
- Improve customer service levels 1-5%, with better order lead time variability
- Reduce working capital 10-30%, with corresponding reductions in obsolescence and inventory carrying cost
- Improve planner productivity with 20-40% less time spend expediting, and more effective supply plans
How will SAP IBP for inventory help you fund your Digital Transformation?

SAP Integrated Business Planning (as a platform) enables:

1-2% top line revenue growth

5-15% better inventory turns with improved service levels by using inventory more efficiently

5-10% better order fulfillment metrics, better service

With the ROI of your investments into SAP IBP for inventory, you can justify the implementation of SAP IBP and speed up your Journey towards an Intelligent, Digital Enterprise!
Thank you

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