



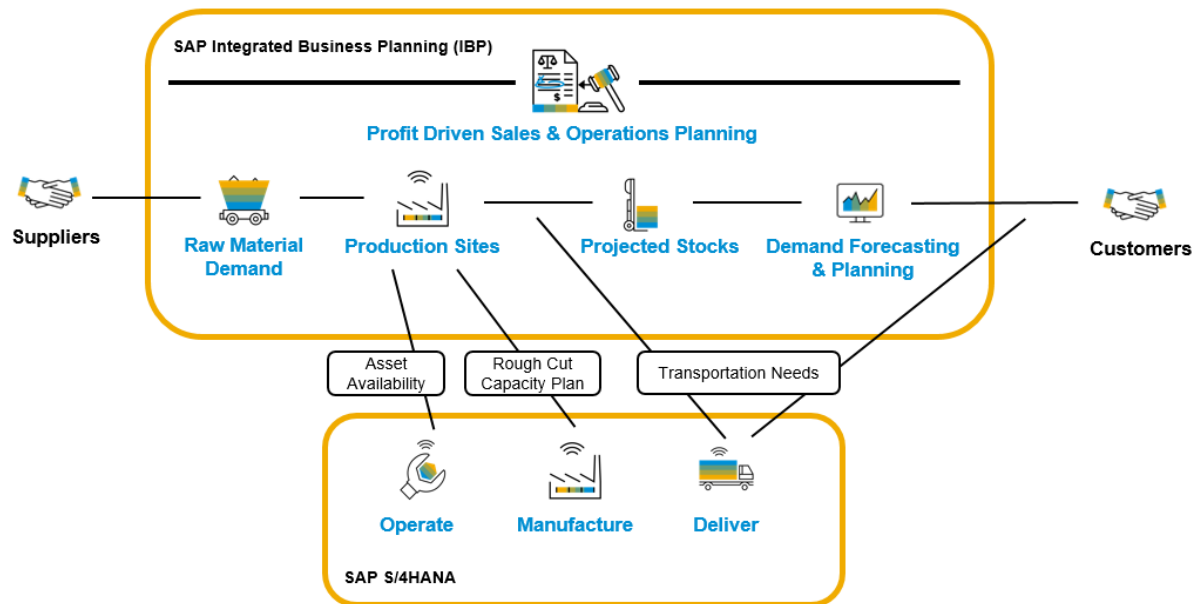
Profit Driven S&OP with SAP IBP

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PUBLIC

Agenda

8:45 - **SAP IBP Overview**, 10 min

Demo – Profit Driven sales and operations planning with SAP IBP, 25 min



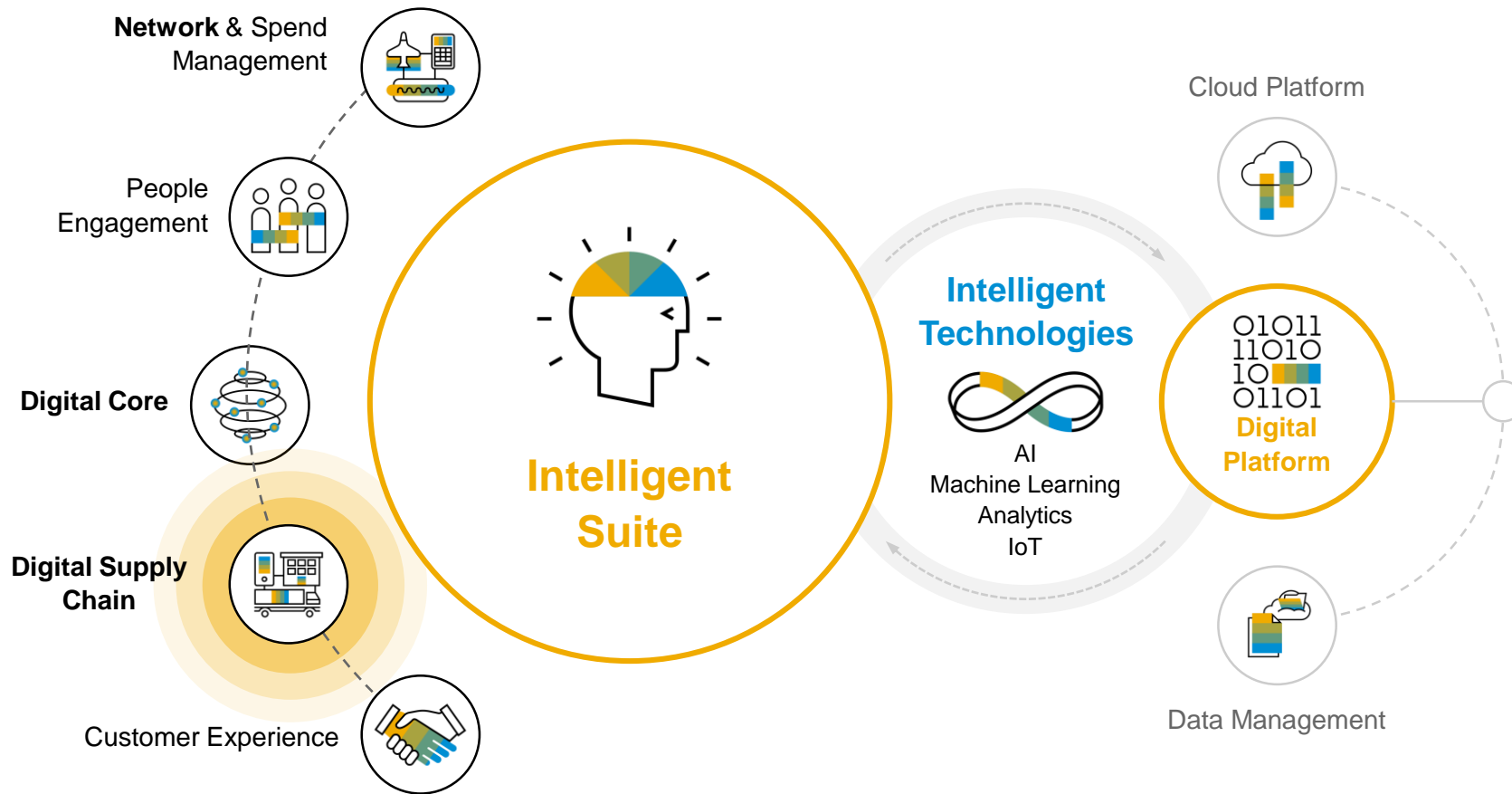
– 9:25 **Summary and Questions**, 5 min

SAP IBP Overview



The Intelligent Enterprise

The foundation of a Digital Supply Chain and Collaboration



The Intelligent Enterprise features **3 key components**:

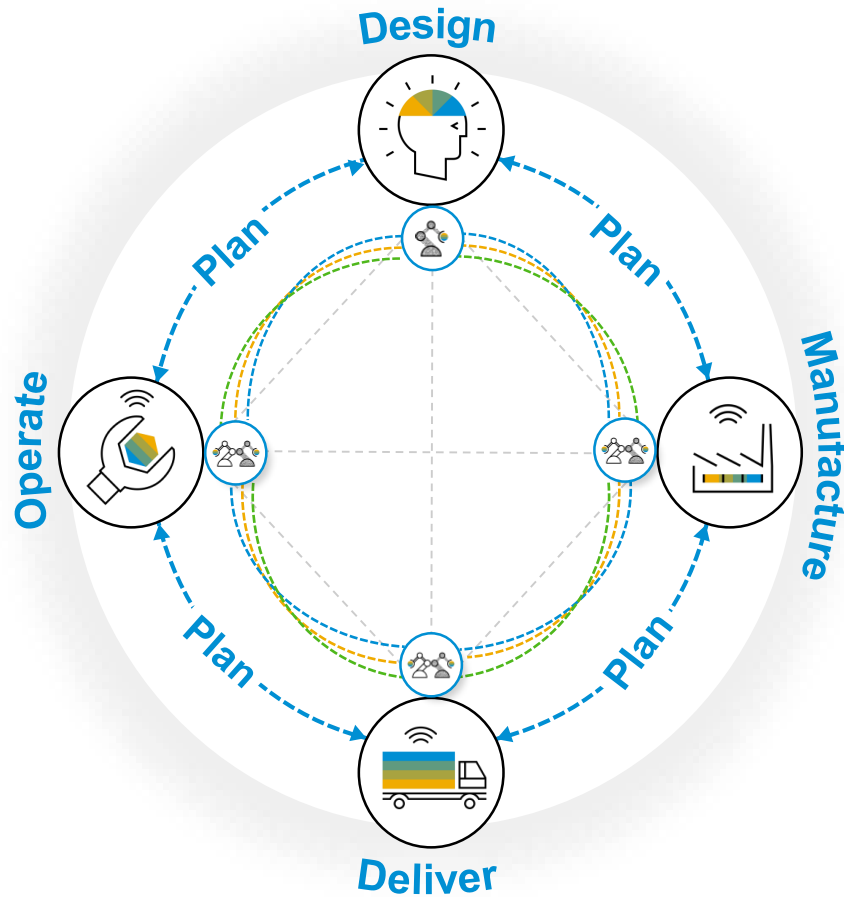
1 **Intelligent Suite**

2 **Intelligent Technologies**

3 **Digital Platform**

Digital Supply Chain

From Design to Operate



Design

- Reduce time to market
- Continuously and sustainably innovate
- Deliver on customer demand



Plan

- Holistic view of demand
- Balance inventory and service levels
- Improve forecast accuracy



Manufacture

- Optimize manufacturing processes and minimize waste
- Improve collaboration with contractors
- Increase agility and responsiveness



Deliver

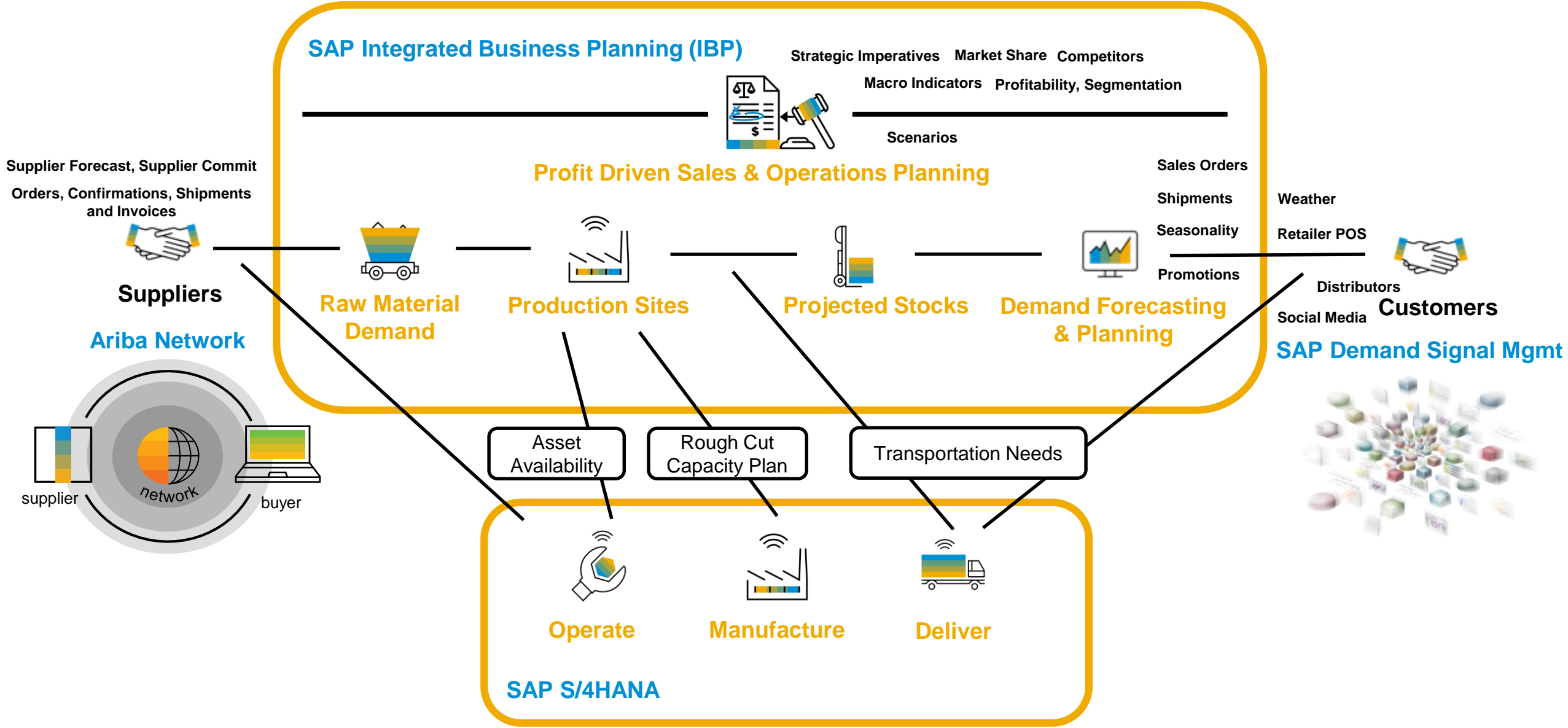
- Improve speed, efficiency and sustainability
- Deliver perfect orders consistently and profitably
- Increase utilization of warehouse and transportation



Operate

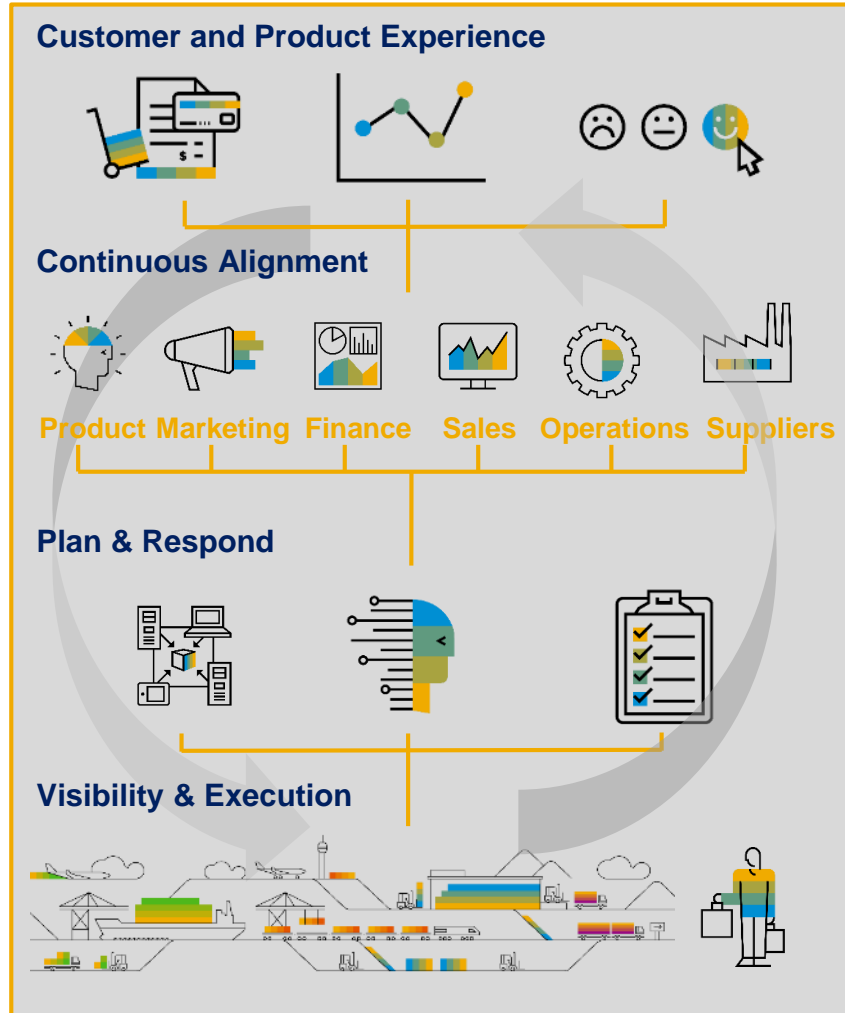
- Manage lifecycle of physical assets efficiently and sustainably
- Predict and simulate asset behavior
- Avoid unplanned downtime

Profit Driven Planning, Collaboration and Execution



Digital Business Planning

Connect strategic and operational planning with real-time visibility and execution



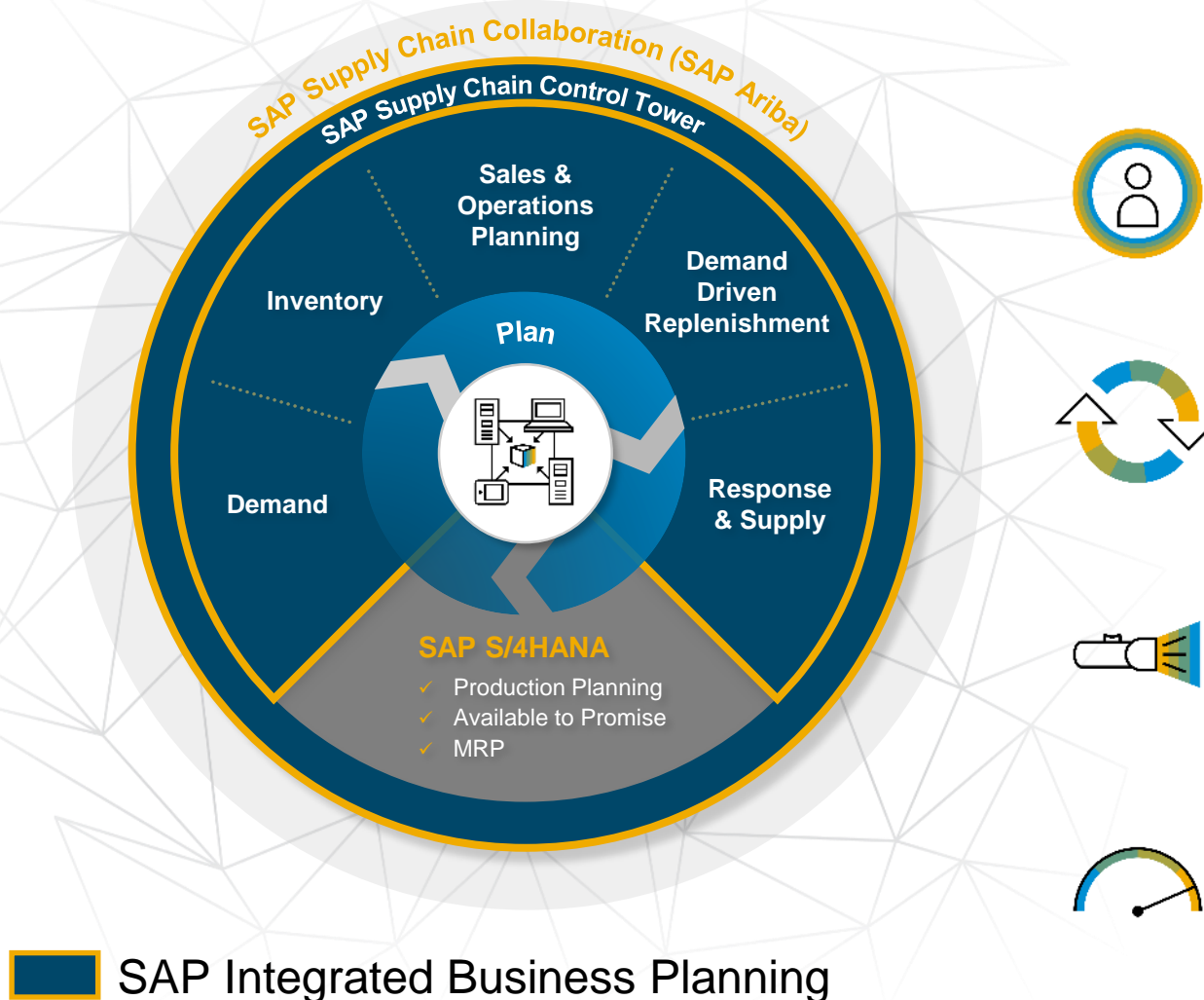
Leverage downstream data around customer and product experience

Continuously align across business areas on a forward looking plan

Rapidly evaluate scenarios and respond to changes that affect your Supply Chain

Real-time, digital representation of the physical supply chain and connect to execution

Digital Business Planning in the Intelligent Enterprise



State-of-the-art business processes

Leverage SAP solutions to enable new end-to-end business processes, new business models and new revenue streams

Synchronized planning processes

Break down planning silos through connected and integrated planning processes

Leverage end-to-end visibility

End-to-end visibility on strategic, tactical and operational level and across siloed or external data

Faster planning cycles

React faster to changes in the business through complete integration

SAP Integrated Business Planning (SAP IBP)

Continuously Aligned, Real-time connected

Unified User Experience



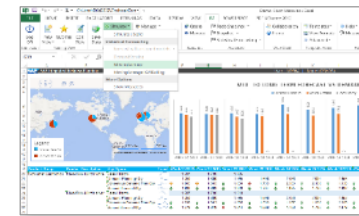
Real-time insight and monitoring on aggregated and detailed level



Flexible and extensible data model and pre-built business model templates



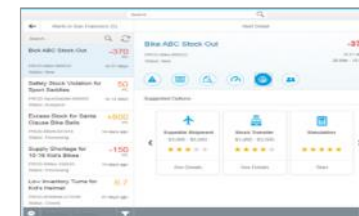
Integrated business alignment for entire value chain



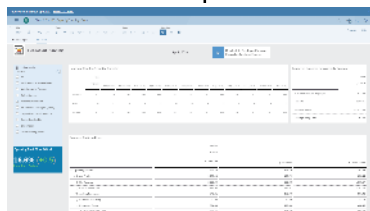
Real-time planning and simulation capabilities



Embedded social collaboration for transparent communication



Role-based user experience with consumer grade interface



Interoperability with Financial Planning in SAP Analytics Cloud

Interoperability with Business Network in SAP Ariba



Real Time Scenario Analysis

SAP Supply Chain Control Tower



Increase end-to-end visibility across your extended network



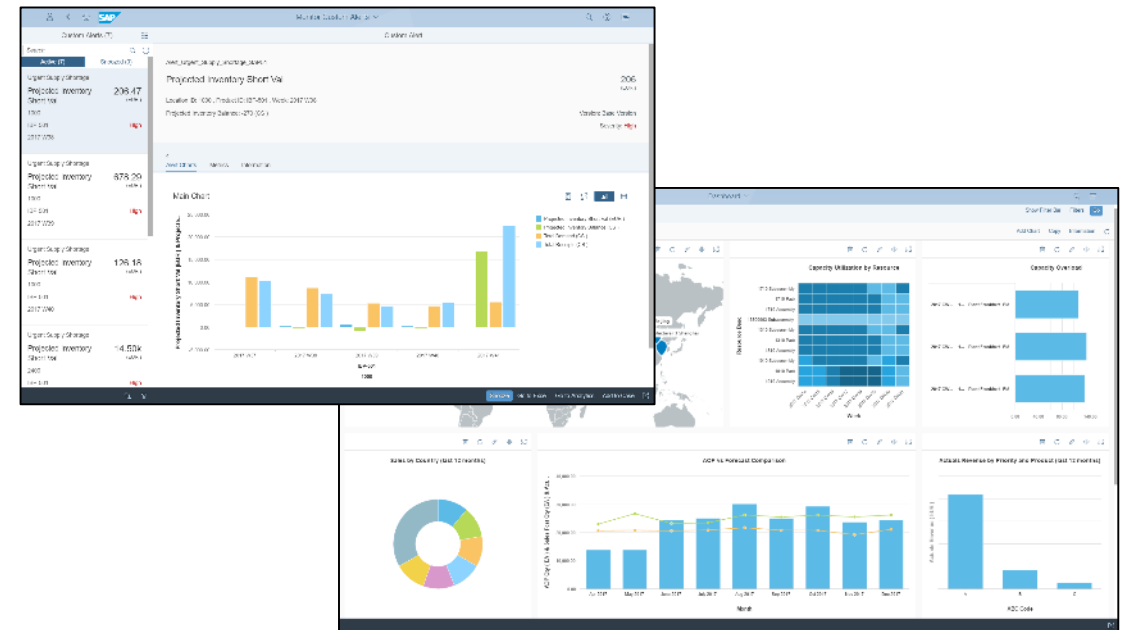
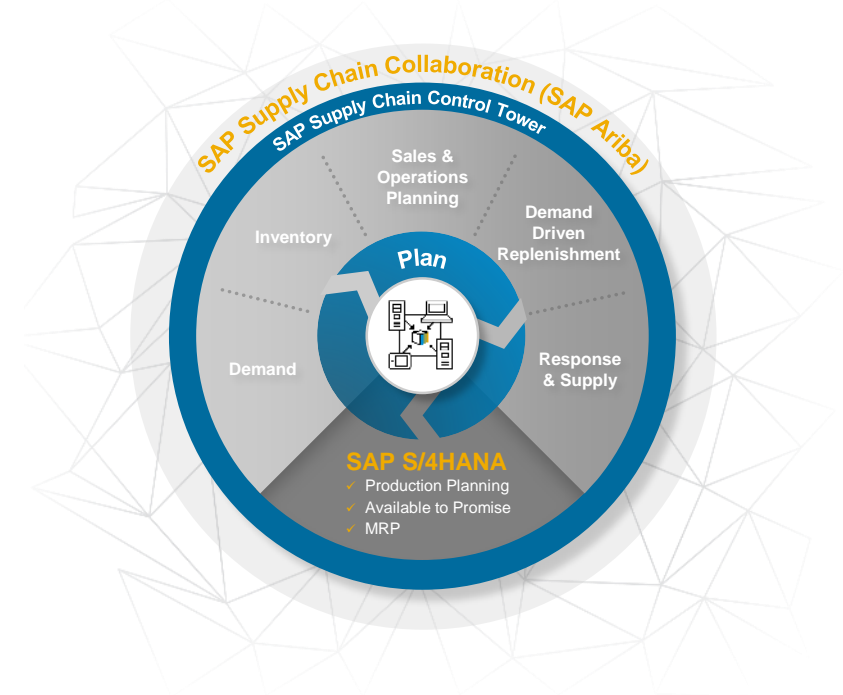
Improve supply chain performance by managing Key Performance Indicators



Manage exceptions with automated alerts, root cause analysis and resolution



Increase supply chain agility and reduce supply chain cost



SAP Integrated Business Planning

Sales and Operations Planning



Create the optimal business plan to drive revenue growth and increase market share



Effectively balance demand and supply and attain financial targets



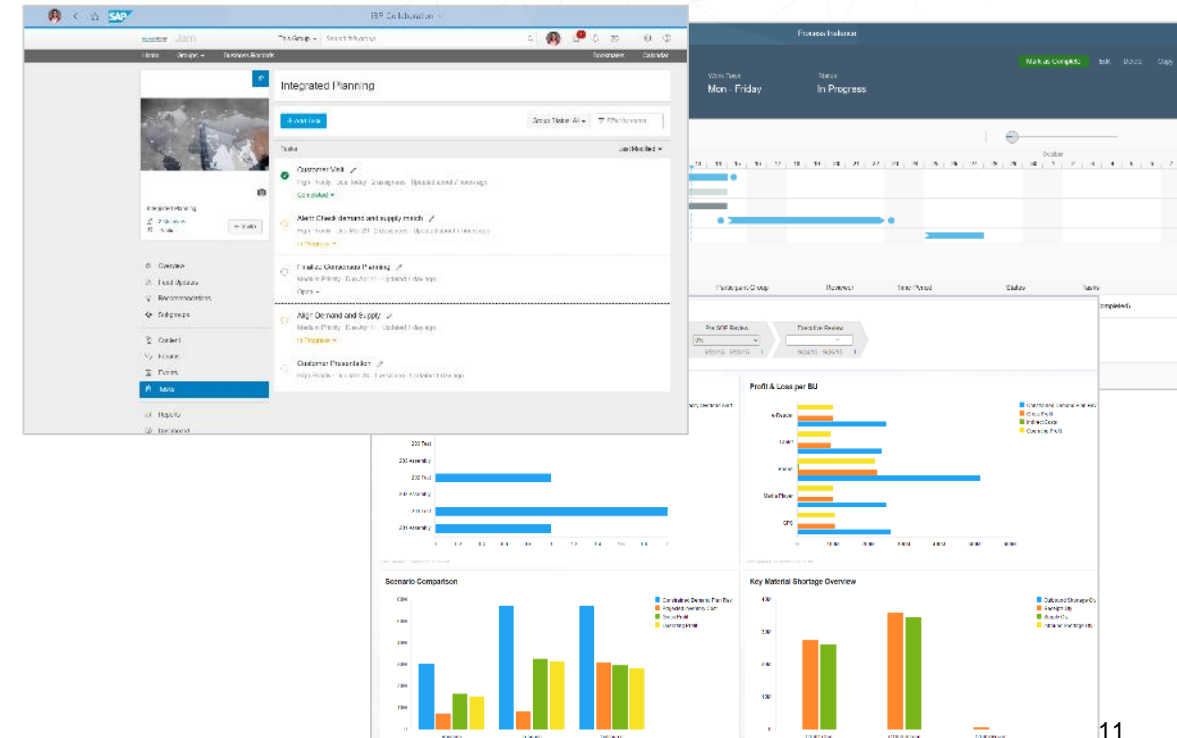
Increase speed and agility of planning and drive most profitable responses



Enable cross-functional process orchestration and collaboration



Manage risks, assumptions and opportunities



SAP Integrated Business Planning

Demand Planning



Automate the statistical forecasting process for more accurate mid-term forecasts



Collaborate to ensure the most accurate forecast



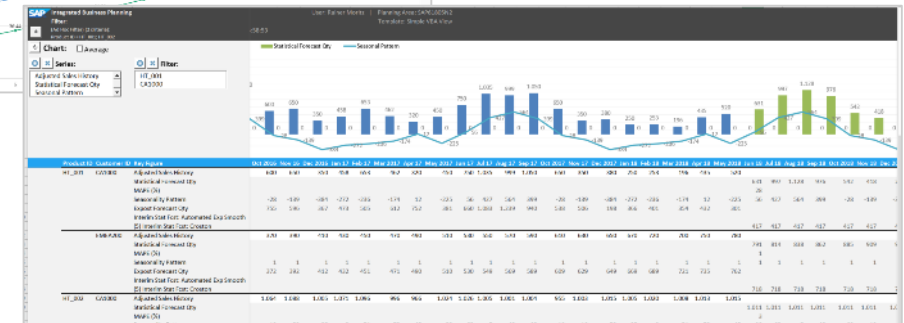
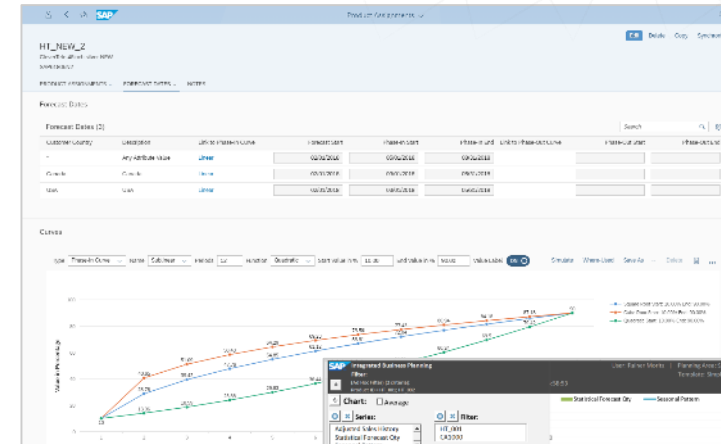
Enable planning flexibility and accuracy through segmentation



React faster to short term demand changes with pattern recognition based algorithms



Drive more precise deployment of product based on short term demand



SAP Integrated Business Planning

Inventory Optimization



Improve customer service levels



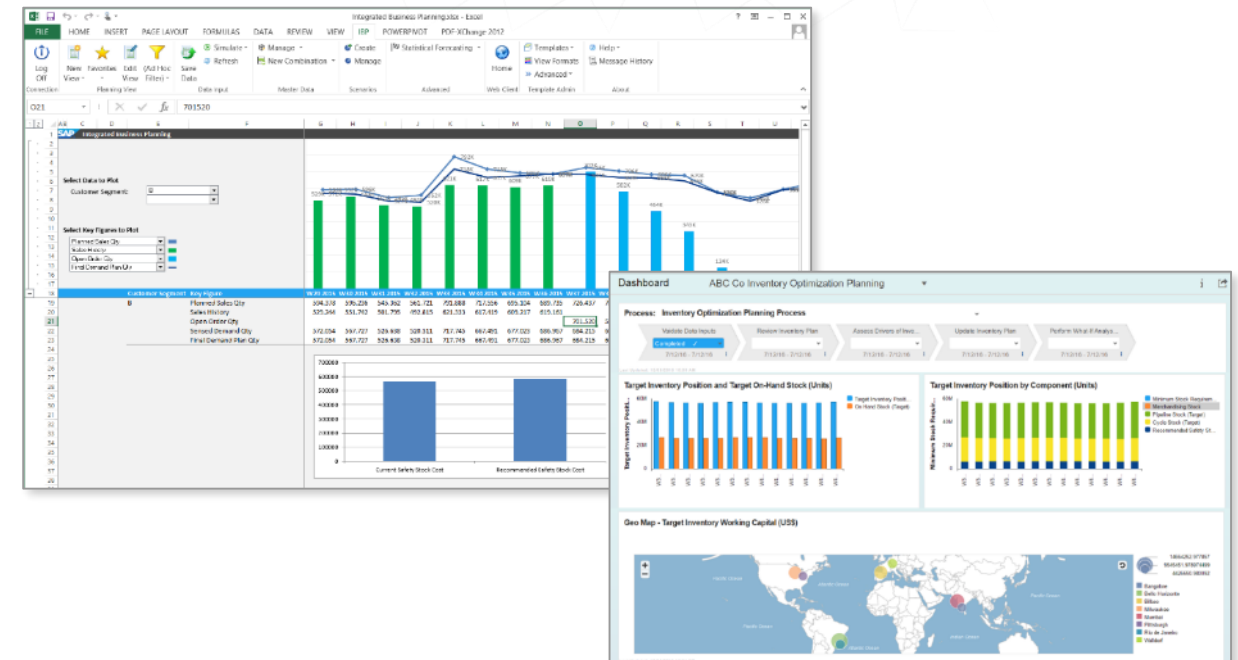
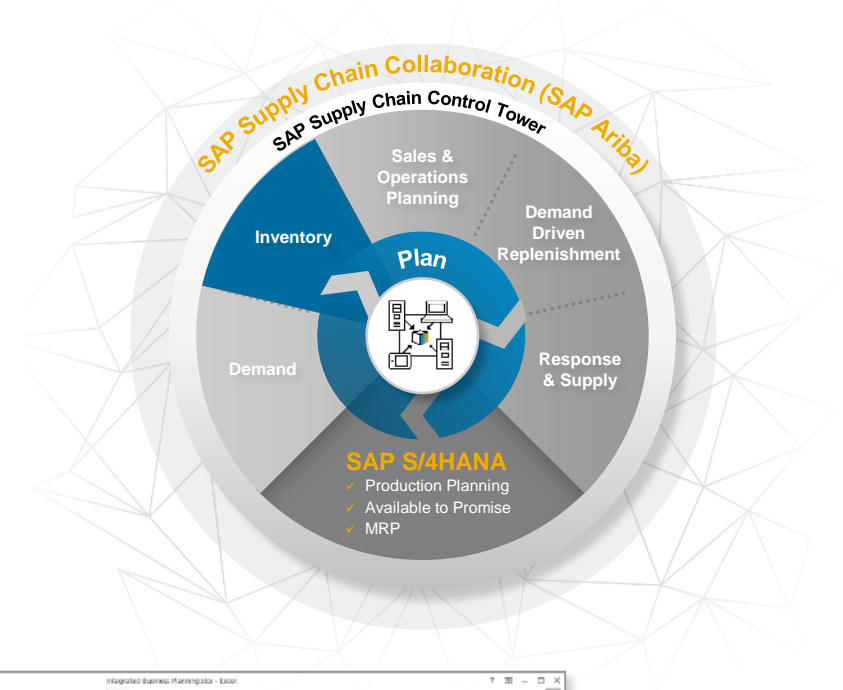
Maximize the efficiency of inventory and working capital



Reduce production and distribution costs



Standardize the inventory target-setting process at each tier within the supply chain to feed operational plans



SAP Integrated Business Planning

Demand-Driven Replenishment



Support all steps of Demand Driven Material Requirements Planning (DDMRP)



Smooth material flow through the supply chain and reduce supply chain (MRP) nervousness



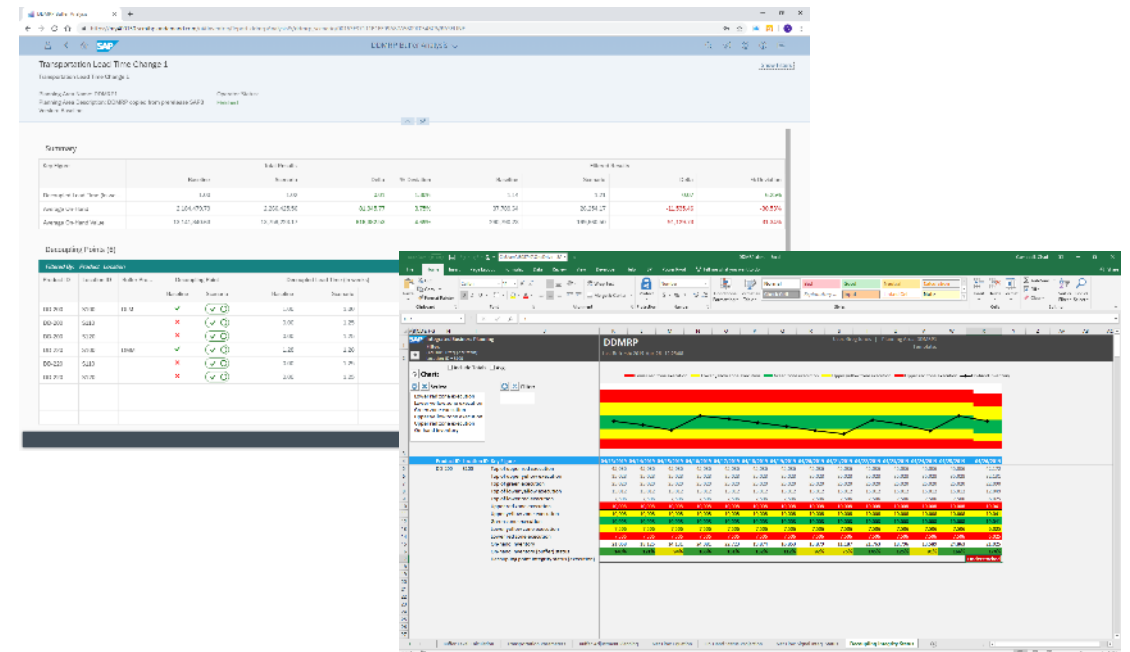
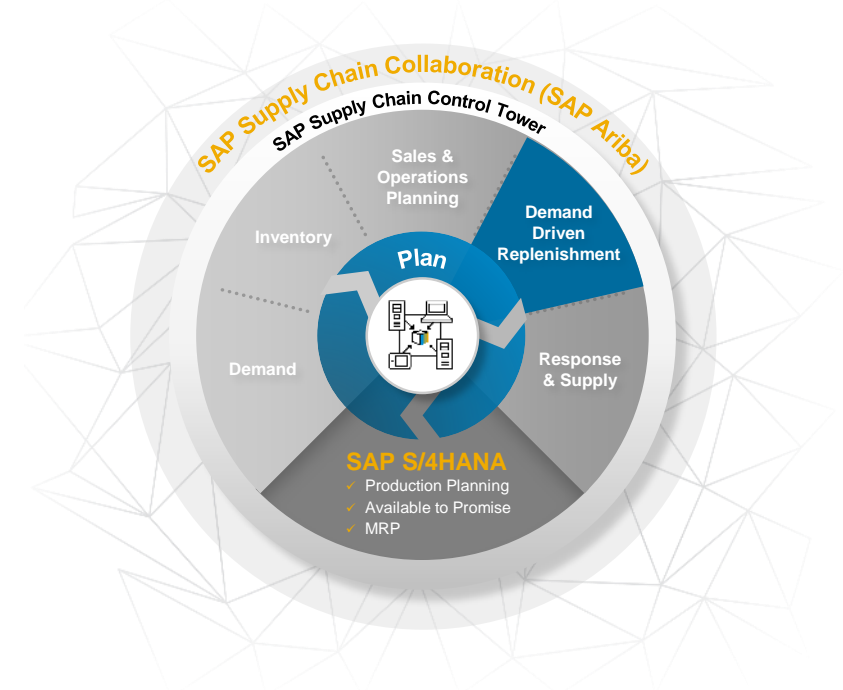
Compress customer-facing lead times and improve customer service levels



Reduce inventory levels across the supply chain with strategic de-coupling point and buffer zone calculations

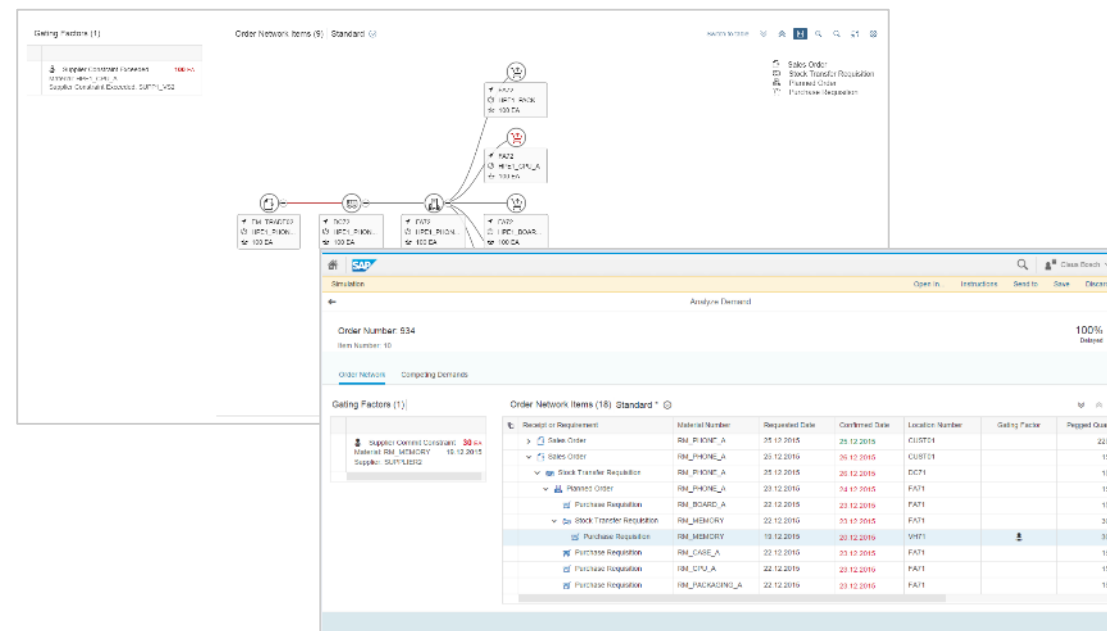
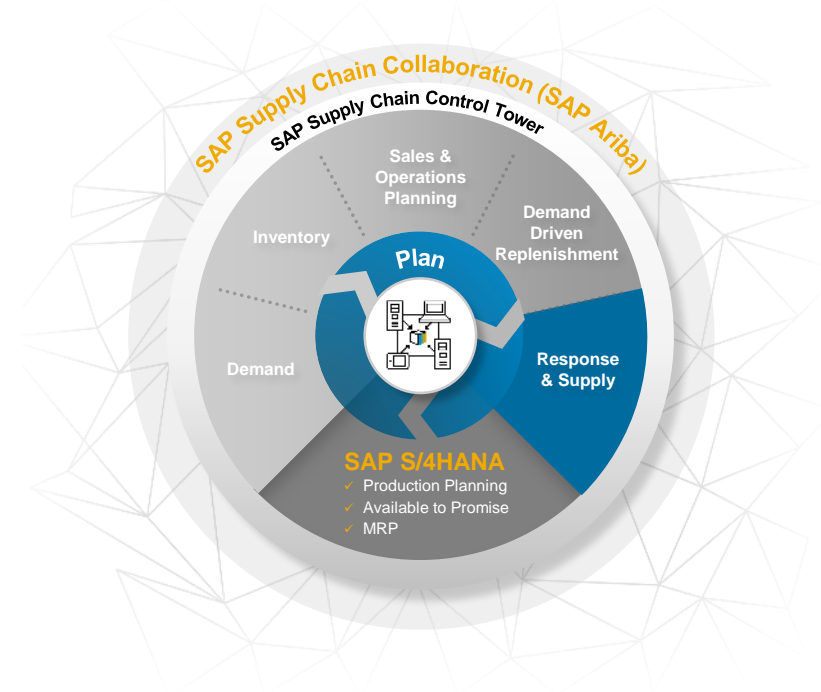
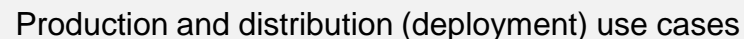
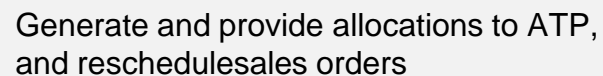
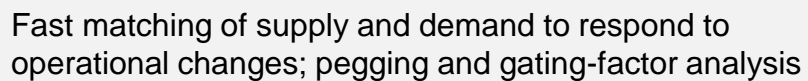
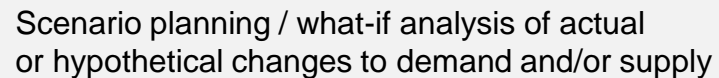
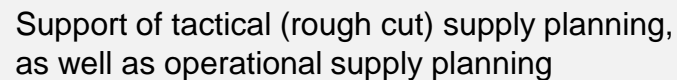


Simplify planning with directed replenishment activities, simplified supply prioritization and active buffer zone monitoring



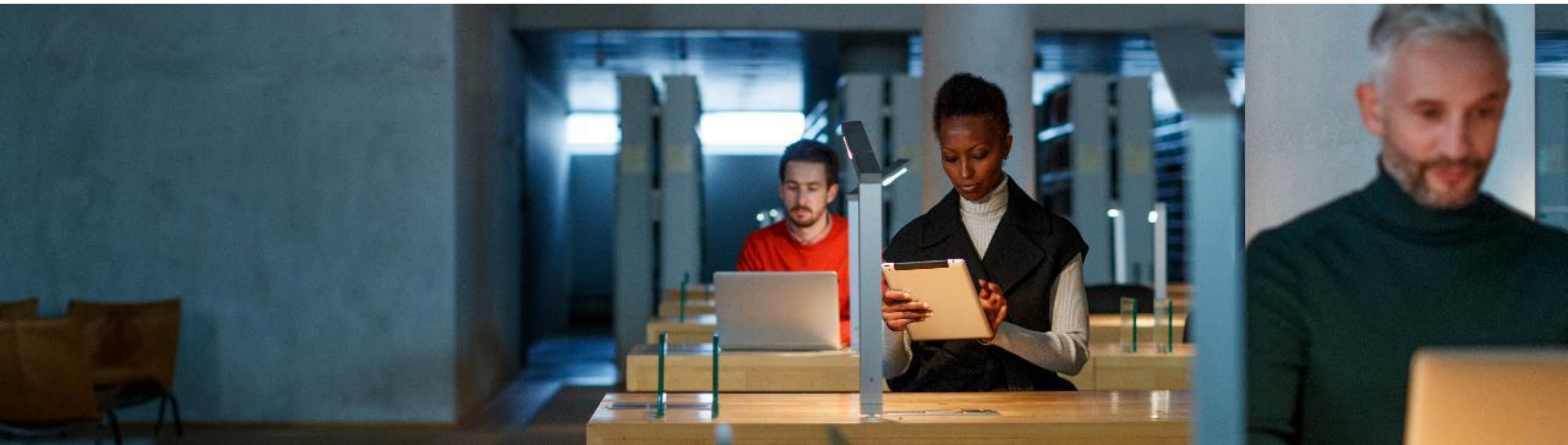
SAP Integrated Business Planning

Response and Supply Planning

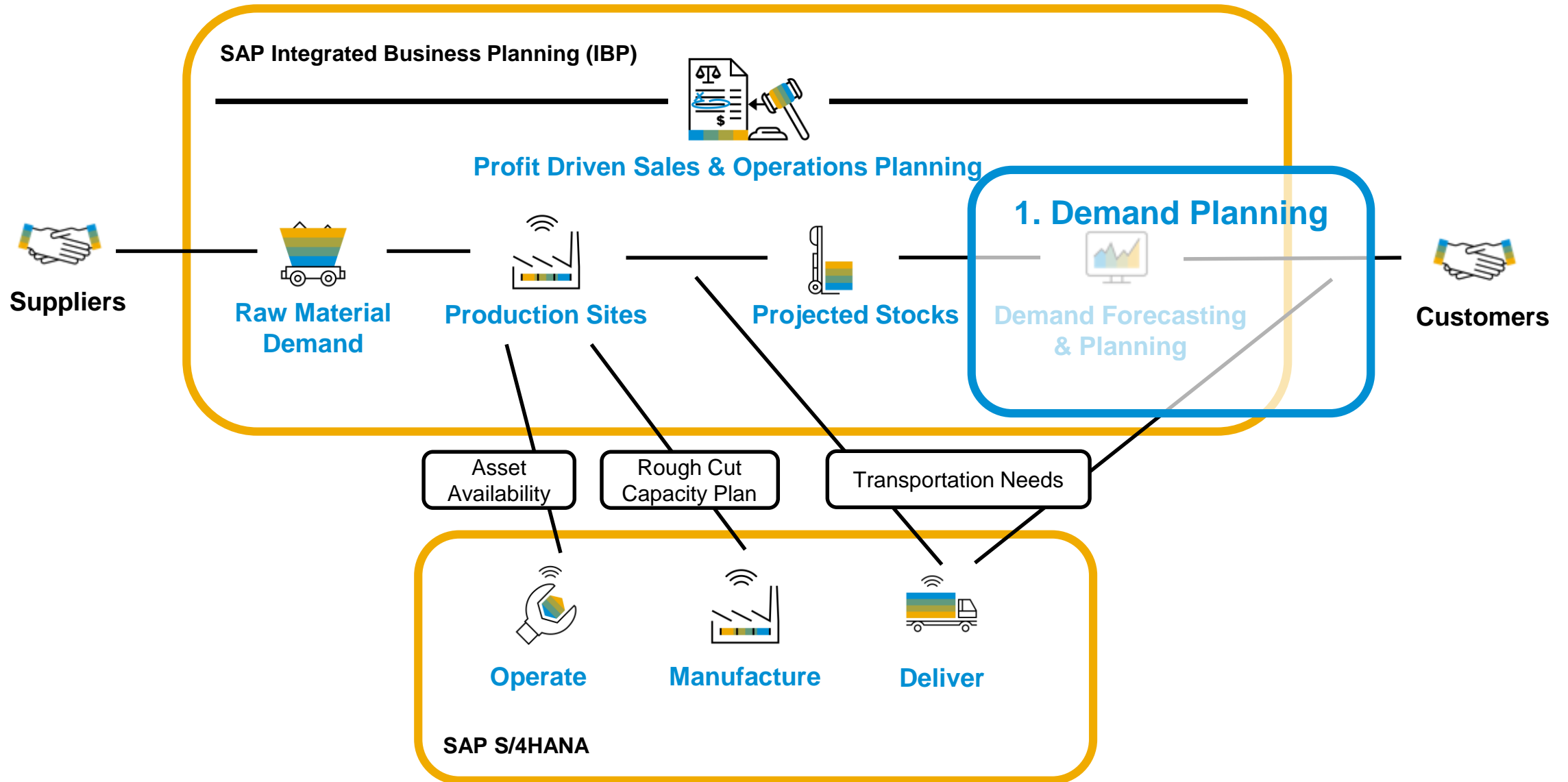


SAP IBP Demo

SAP IBP = SAP Integrated Business Planning

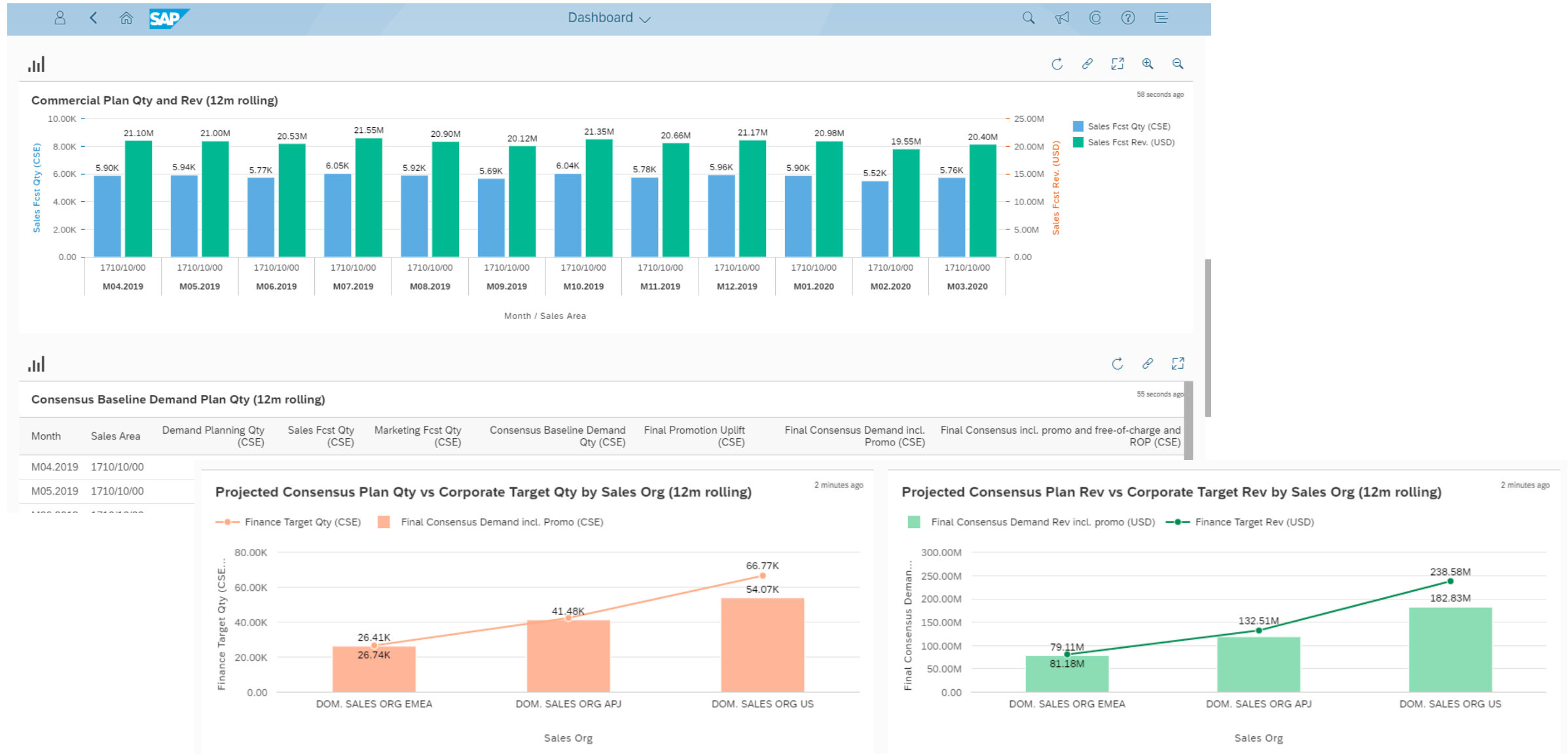


Planning with SAP IBP



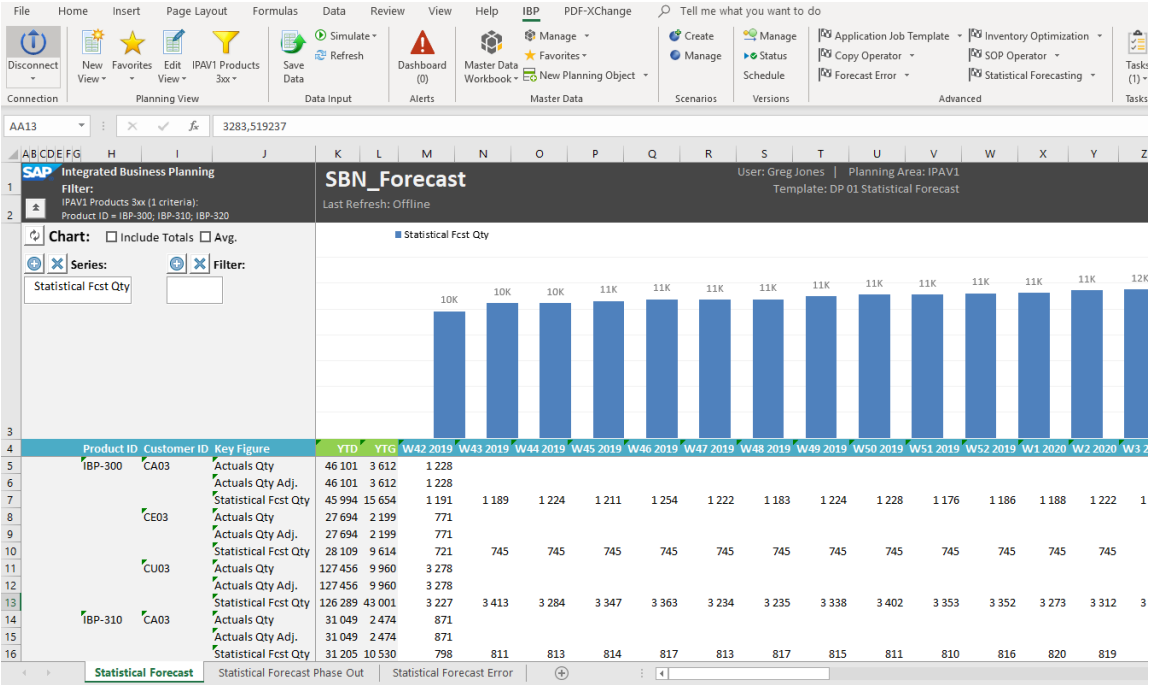
Demand Planning with SAP IBP

Examples of SAP IBP web dashboards

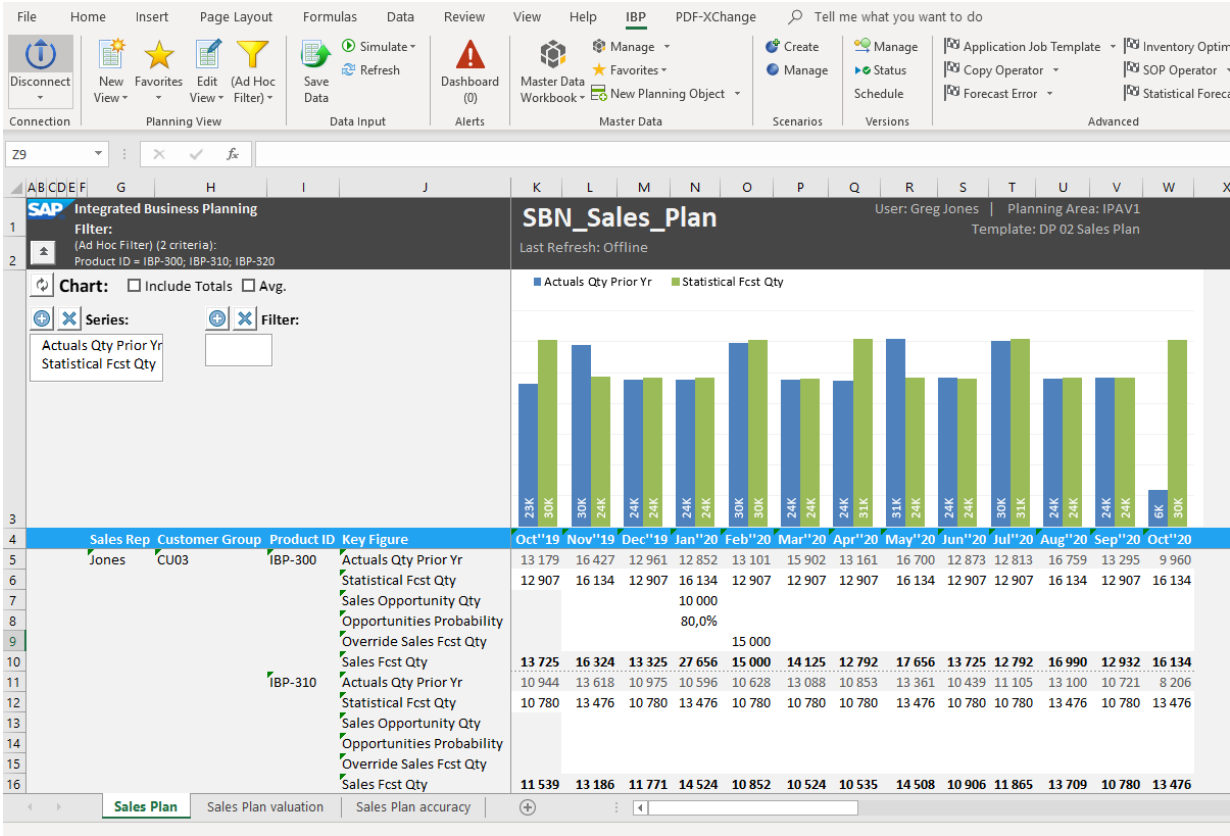


Demand Planning with SAP IBP

Statistical Forecasting



Sales / Demand Planning



Demand Planning with SAP IBP

IBP-320
IBP-320
Planning Area: IPAV1
Settings Profile: No settings profile is assigned.

New Product Introduction
(Product Lifecycle)

Define reference
product(s) for new
product (IBP-320)

PRODUCT ASSIGNMENTS

FORECAST DATES

NOTES


Product Assignments

Standard

Product Assignments (1)

Search

Show Re

Reference Product	Reference Product Description	Reference Product Hierarchy	Weight in %	Valid From	Valid To	Offset of Days in the Past
IBP-300	IBP-300		40	10/01/2019	12/31/2019	0

History of Reference Products

Key Figure

Actuals Qty






Historical Periods

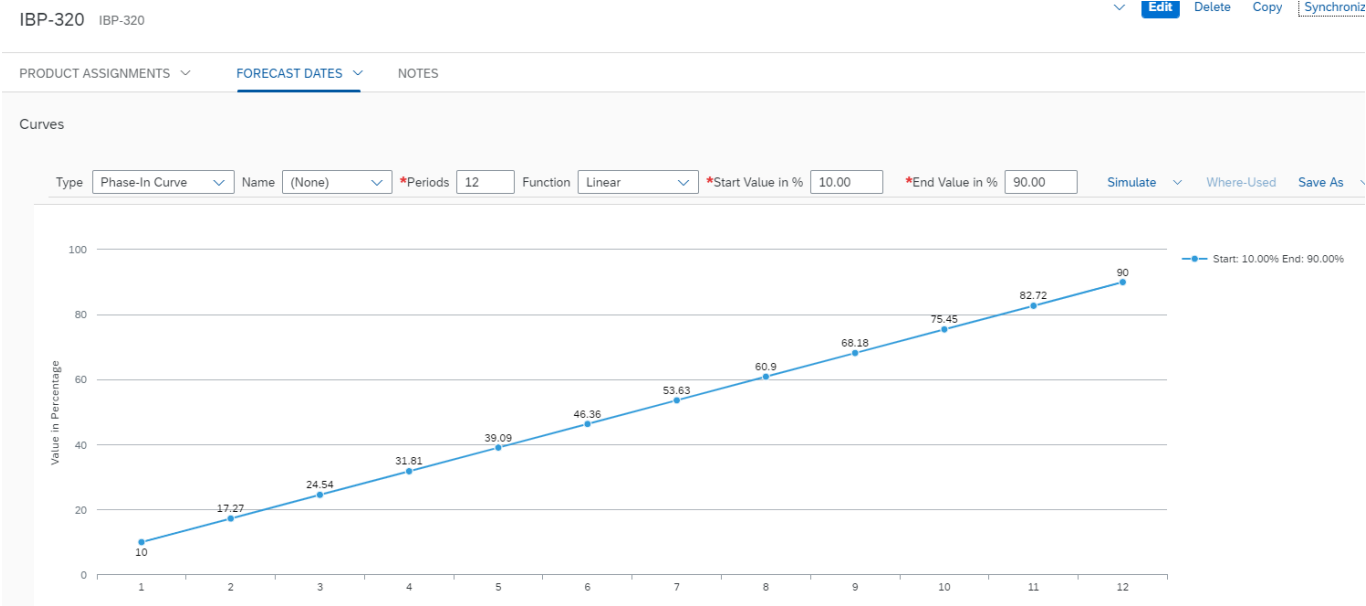
26

Periodicity

Week

Simulate





Demand Planning with SAP IBP

New Product Introduction (Product Lifecycle)

Statistical Forecasting calculated with reference to other products

Product ID	Customer ID	Key Figure	YTD	YTG	W42 2019	W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	V
IBP-320	CU03	Actuals Qty	103 891	8 206	2 808										
		Actuals Qty Adj.	103 891	8 206	2 808										
		Statistical Fcst Qty	105 265	34 972	2 695	2 669	2 680	2 684	2 686	2 687	2 694	2 681	2 697	2 708	
	CA03	Actuals Qty													
		Actuals Qty Adj.													
		Statistical Fcst Qty		1 784		90	109	128	148	170	189	209	228	247	
	CE03	Actuals Qty													
		Actuals Qty Adj.													
		Statistical Fcst Qty		1 094		55	67	79	90	104	116	128	140	151	
	CU03	Actuals Qty													
		Actuals Qty Adj.													
		Statistical Fcst Qty		4 851		244	297	349	401	462	515	567	619	672	
Statistical Forecast		Statistical Forecast Phase Out		Statistical Forecast Error		<div><div>⊕</div><div>:</div><div><div>◀</div><div></div></div></div>									

Statistical Forecasting - Segmentation, Classification



Statistical model / forecasting

- SAP IBP has capability to segment demand based on importance (value, ABC) and variance (XYZ)
- Based on segmentation products can be selected to statistical forecasting, or manual planning

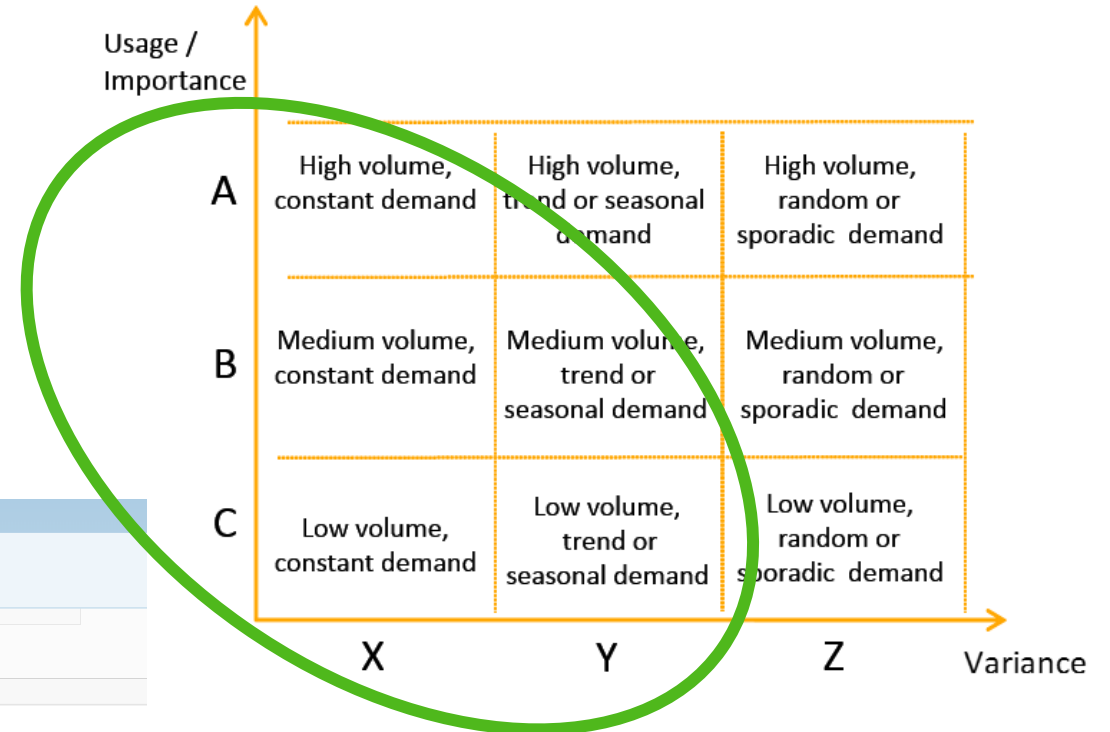
The screenshot shows the SAP configuration interface for 'Product_Segmentation_ABC_XYZ'. It includes tabs for 'General', 'ABC Segmentation', and 'XYZ Segmentation'. The 'ABC Segmentation' tab is active, showing a table for 'ABC Segments (3)' with columns for 'Name' and 'Thresholds'. The segments are A (threshold 3), B (threshold 4), and C. Below this, there are options for 'Use Locking' (checked) and 'Attribute for Locking' (set to 'ABC Locked - Prd (ABLOCKED)'). The 'XYZ Segmentation' tab is also visible, showing 'XYZ Segmentation' set to 'ON' and 'Target Attribute for Segmentation Results' set to 'XYZ Code (XYZCODE)'. The 'Key Attributes of the Target Master Data Type' is listed as 'Product ID'.

Name	Thresholds
A	3
B	4
C	

Use Locking: ☒
Attribute for Locking: ABC Locked - Prd (ABLOCKED)

XYZ Segmentation: ON

Target Attribute for Segmentation Results: XYZ Code (XYZCODE)
Key Attributes of the Target Master Data Type: Product ID



Statistical Forecasting



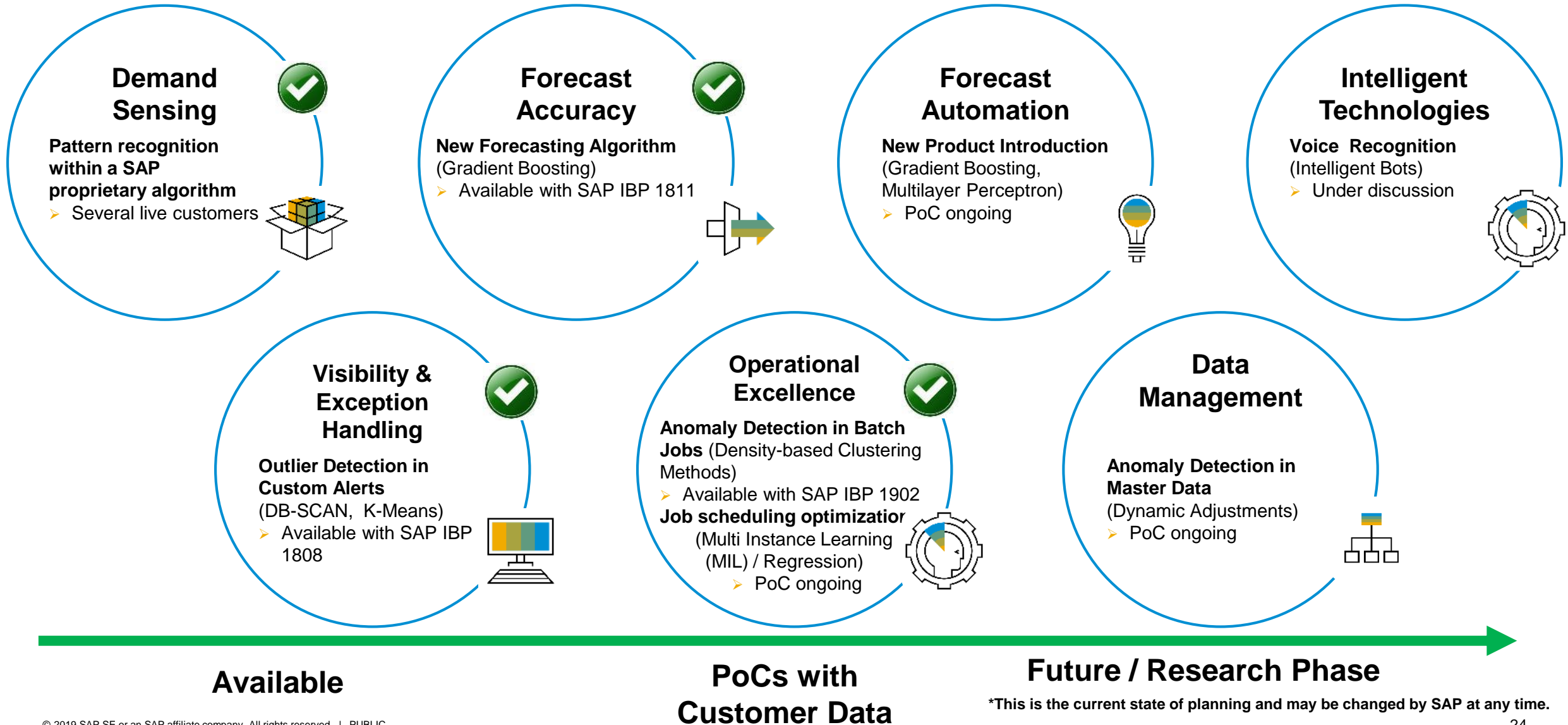
Statistical model / forecasting

SAP IBP has following statistical forecasting algorithms:

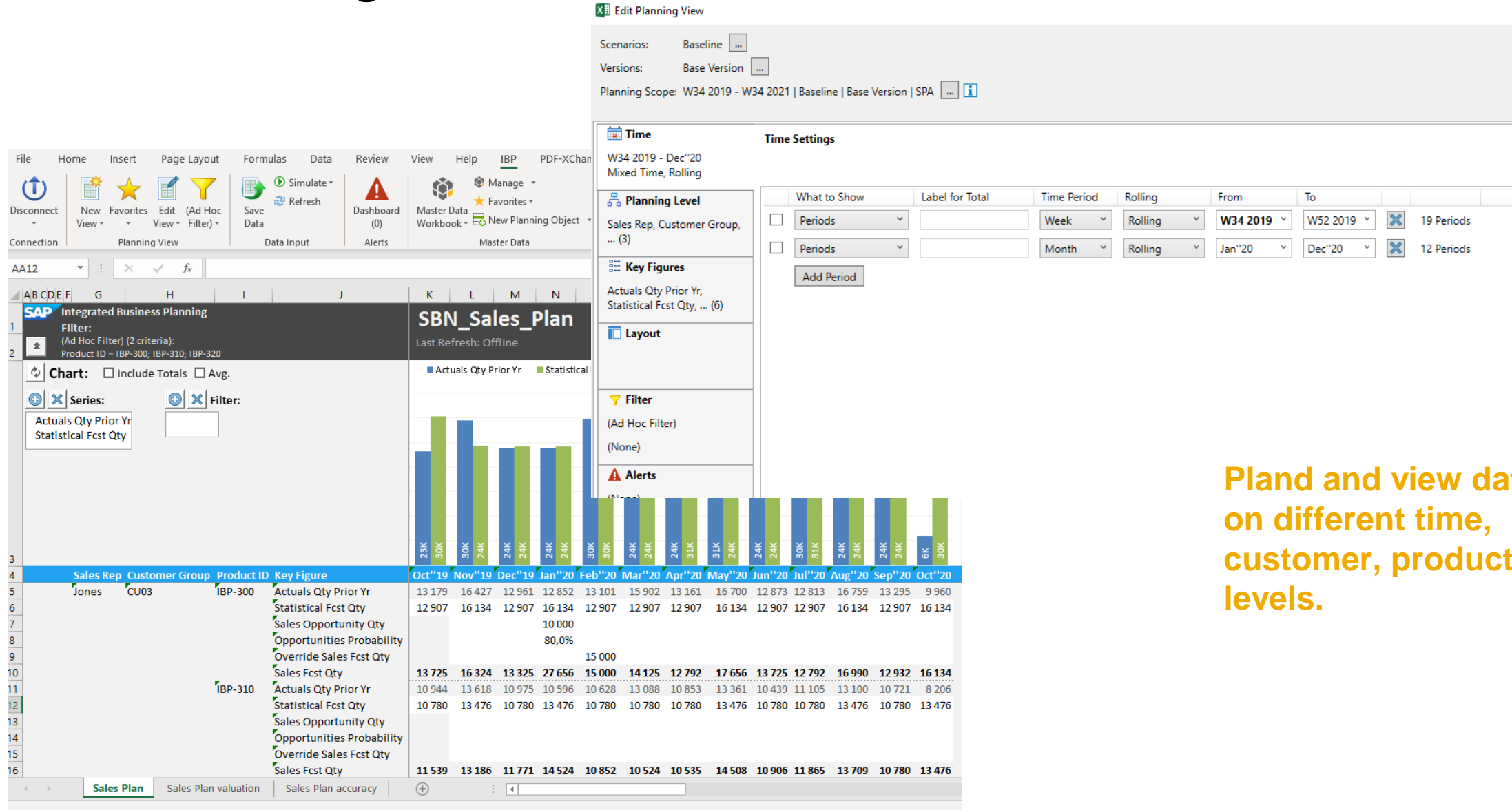
- Simple Exponential Smoothing
- Double Exponential Smoothing
- Triple Exponential Smoothing
- Automated Exponential Smoothing
- Adaptive-Response-Rate Single Exponential Smoothing
- Brown's Linear Exponential Smoothing
- Simple Average
- Simple Moving Average
- Weighted Average
- Weighted Moving Average
- Demand Sensing (Full)
- Demand Sensing (Update)
- Croston Method
- Multiple Linear Regression
- Auto-ARIMA/SARIMA
- Gradient Boosting

Machine Learning embedded in SAP IBP

The self-driving Supply Chain

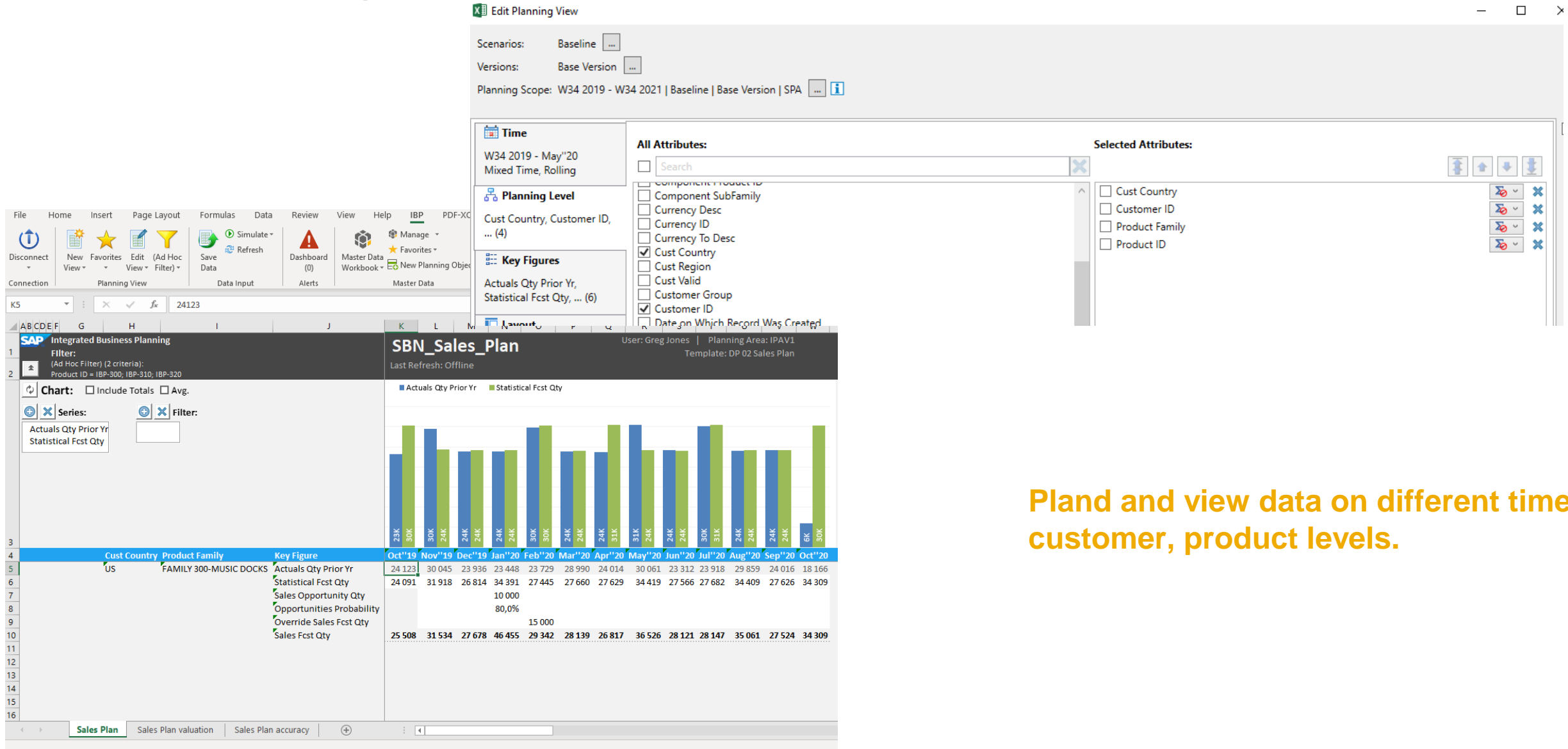


Demand Planning with SAP IBP



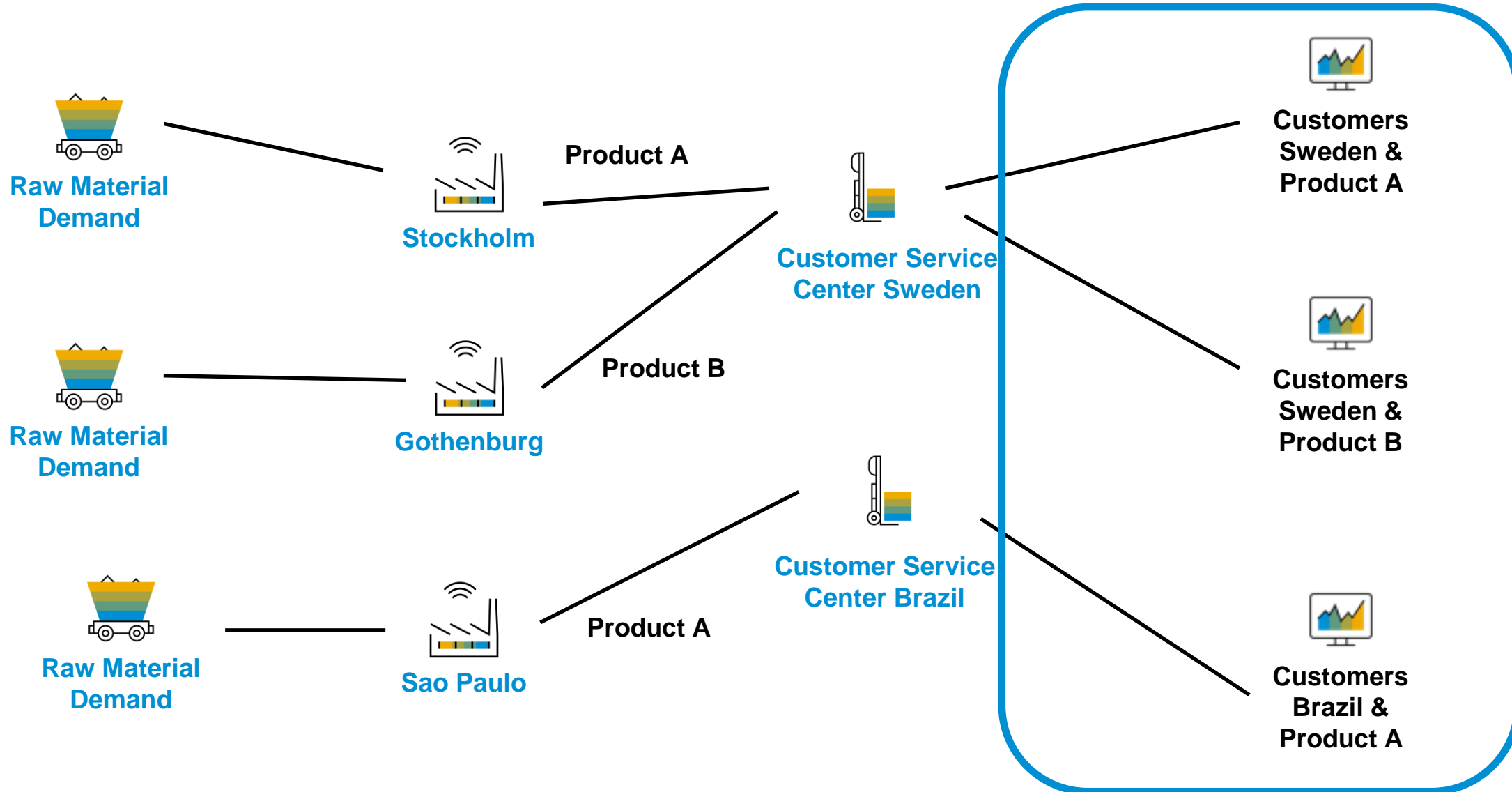
Plan and view data on different time, customer, product levels.

Demand Planning with SAP IBP

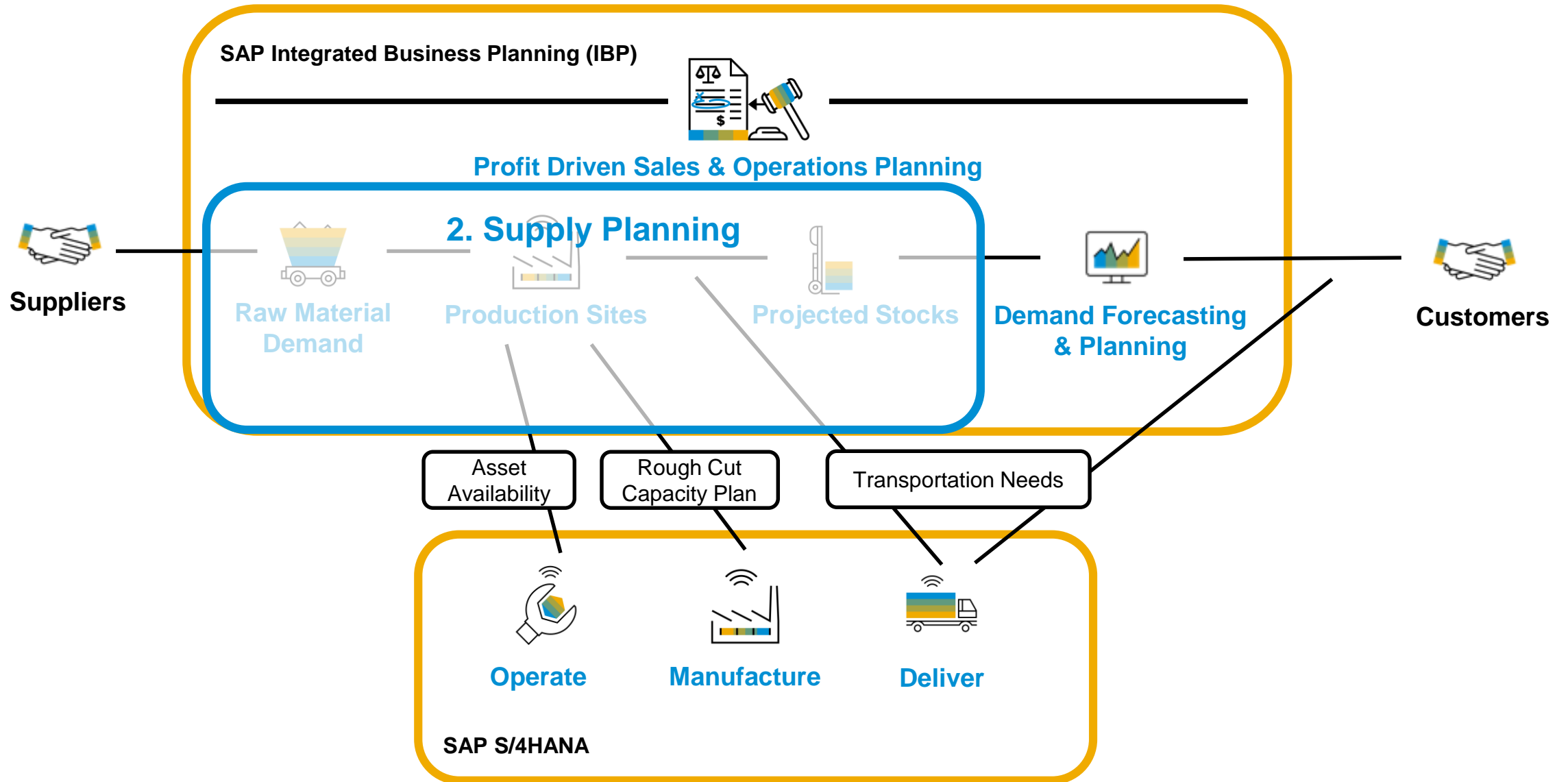


Plan and view data on different time, customer, product levels.

Demand Planning with SAP IBP



Planning with SAP IBP



Supply Planning with SAP IBP

Unconstraint and
constraint demand
(after running constraint
supply optimizing)

File

Home

Insert

Page Layout

Formulas

Data

Review

View

Help

IBP

PDF-XChange

Tell me what you want to do

Disconnect

New View

Favorites

Edit View

IPAV1 Products 3xx ...

Save Data

Simulate

Refresh

Dashboard (0)

Master Data Workbook

Manage

Favorites

New Planning Object

Create

Manage

Schedule

Application Job Template

Copy Operator

Forecast Error

Inventory Optimization

SOP Operator

Statistical Forecasting

Connection

Planning View

Data Input

Alerts

Master Data

Scenarios

Versions

Advanced

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1211,45597

AB

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SAP

Integrated Business Planning

Filter:

IPAV1 Products 3xx - Customers (2 criteria):

Product ID = IBP-300; IBP-310; IBP-320

SBN_Supply

User: Greg Jones | Planning Area: IPAV1

Template: S 01 E2E Supply RCCP

Last Refresh: Offline

Product ID

Customer ID

Key Figure

IBP-300

CA03

Consensus Demand

Total Customer Receipts

Customer Demand Shortage

CE03

Consensus Demand

Total Customer Receipts

Customer Demand Shortage

CU03

Consensus Demand

Total Customer Receipts

Customer Demand Shortage

IBP-310

CA03

Consensus Demand

Total Customer Receipts

Customer Demand Shortage

CE03

Consensus Demand

Total Customer Receipts

Customer Demand Shortage

CU03

Consensus Demand

Total Customer Receipts

Customer Demand Shortage

IBP-320

CA03

Consensus Demand

Total Customer Receipts

Customer Demand Shortage

CE03

Consensus Demand

Total Customer Receipts

Customer Demand Shortage

CU03

Consensus Demand

W45 2019

W46 2019

W47 2019

W48 2019

W49 2019

W50 2019

W51 2019

W52 2019

W1 2020

W2 2020

Feb'20

Mar'20

Apr'20

May'20

Jun'

1 211

1 254

1 222

1 183

1 224

1 228

1 176

1 186

1 188

1 222

4 883

4 778

4 846

6 111

4 778

-1 211

-191

1 254

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2 931

3 042

3 666

3 006

-753

-13

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3 250

3 335

3 367

3 342

3 342

4 402

4 421

14 085

13 752

13 073

17 114

13 500

3 298

3 250

3 323

3 250

3 335

3 367

3 342

3 342

4 402

4 421

14 085

13 752

13 073

17 114

13 500

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3 262

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2 807

2 803

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10 658

10 660

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10 818

2 659

2 669

2 422

2 835

2 883

2 820

2 826

2 821

2 807

2 803

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462

515

567

619

672

724

785

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3 490

3 490

3 490

4 362

3 490

Customer Demand

Transportation Lanes

Inventory projection

Production

Capacity by Resource

Capacity by Product

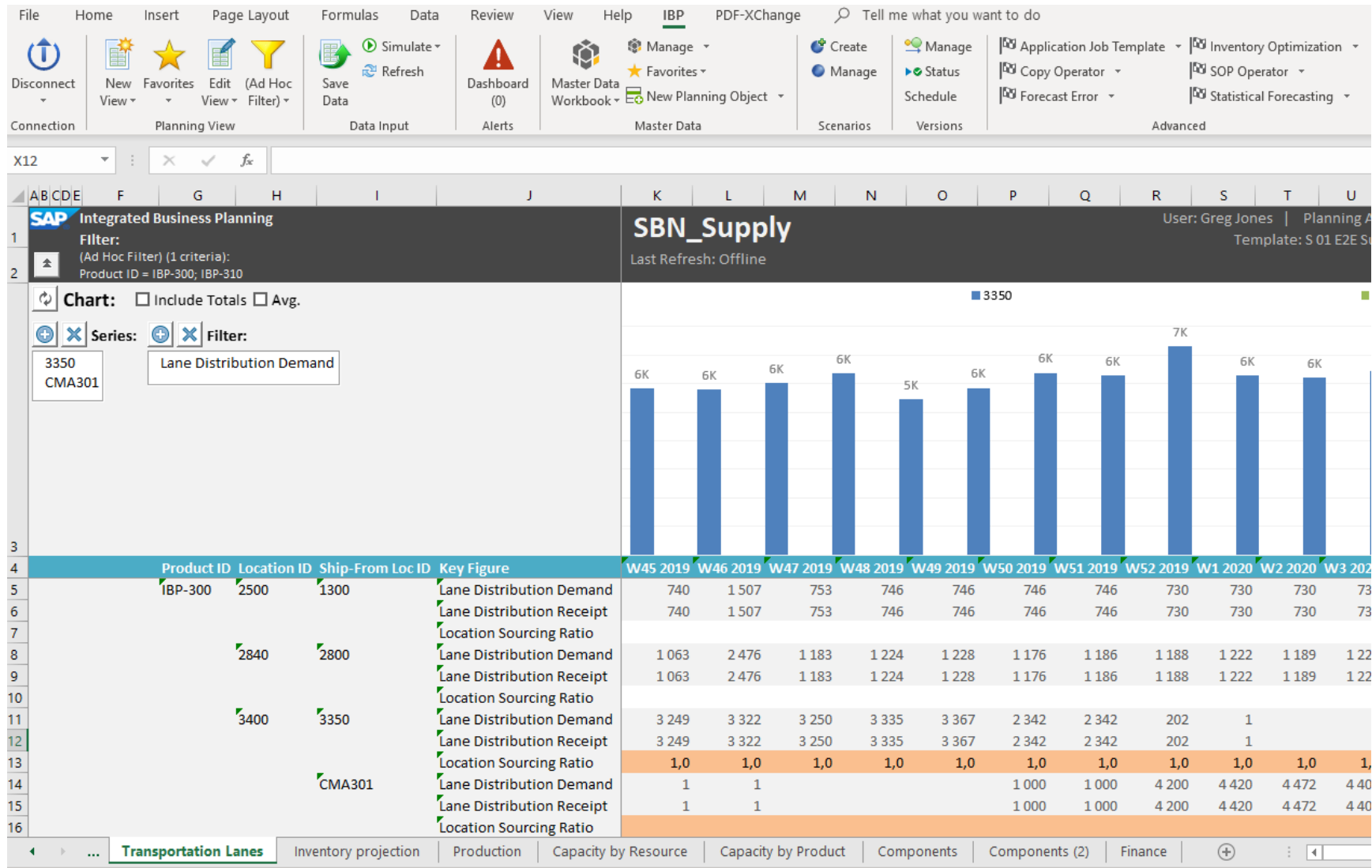
Components

Finance

+

◀

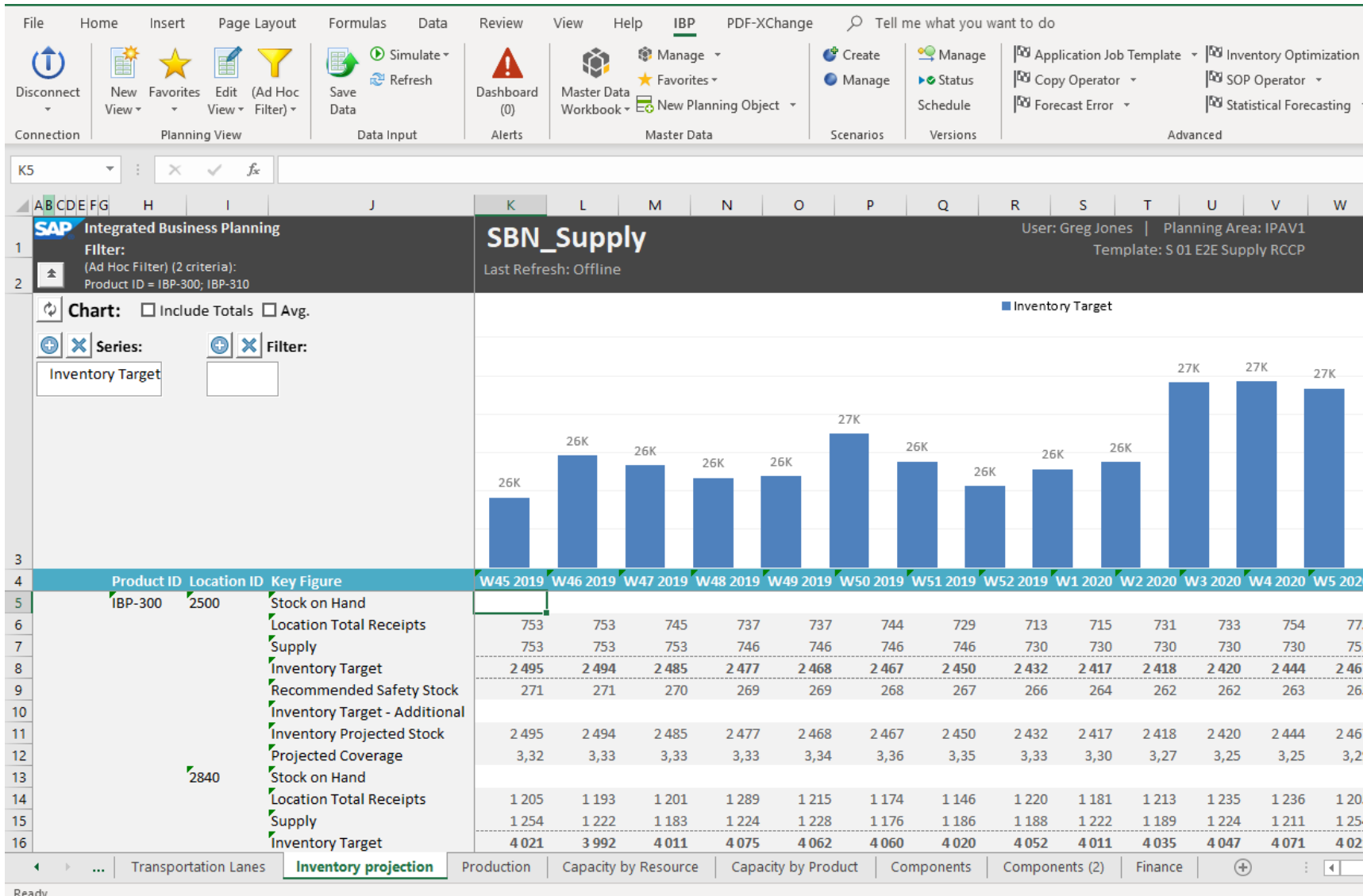
Supply Planning with SAP IBP



Transportation Lanes – long / mid term transportation needs between locations.

Also to balance production between own sites vs. 3rd party sites (CMA301 = contract manufacturer)

Supply Planning with SAP IBP



Projected inventories (+ e.g. Target inventories) cross whole supply chain.

Supply Planning with SAP IBP

File

Home

Insert

Page Layout

Formulas

Data

Review

View

Help

IBP

PDF-XChange

Tell me what you want to do

Disconnect

New View

Favorites

Edit View

(Ad Hoc Filter)

Save Data

Simulate

Refresh

Dashboard (0)

Master Data Workbook

New Planning Object

Create

Manage

Application Job Template

Copy Operator

Forecast Error

Inventory Optimization

SOP Operator

Statistical Forecasting

Tasks (1)

Tasks

Connection

Planning View

Data Input

Alerts

Master Data

Scenarios

Versions

Advanced

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SAP

Integrated Business Planning

Filter:

(Ad Hoc Filter) (2 criteria):

Product ID = IBP-300; IBP-310; IBP-320

Product ID

Location ID

Location

Key Figure

IBP-300

1300

EU Mfg

Production Receipts

1 507

753

746

746

746

746

730

730

730

730

3 736

Production Receipt Override

1 507

753

746

746

746

746

730

730

730

730

730

3 006

Inventory Target

741

740

733

733

733

732

717

717

718

719

720

742

Inventory Projected Stock

3 006

Production Receipts

2 476

1 183

1 224

1 228

1 176

1 186

1 188

1 222

1 189

1 224

4 870

Production Receipt Override

2 476

1 183

1 224

1 228

1 176

1 186

1 188

1 222

1 189

1 224

1 211

3 658

Inventory Target

1 147

1 171

1 196

1 215

1 155

1 190

1 174

1 188

1 153

1 196

1 203

1 173

Inventory Projected Stock

3 658

Production Receipts

3 322

3 250

3 335

3 367

2 342

2 342

203

3 219

Production Receipt Override

3 322

3 250

3 335

3 367

2 342

2 342

202

1

6 600

Inventory Target

3 244

3 249

3 267

3 282

3 284

3 290

3 342

3 389

3 386

3 378

3 365

3 284

Inventory Projected Stock

1

3 219

9 819

Production Receipts

2 612

1 310

1 254

1 254

1 255

1 257

1 236

1 235

1 233

1 234

5 182

Production Receipt Override

2 612

1 310

1 254

1 254

1 255

1 257

1 236

1 235

1 233

1 234

2 550

1 3

Inventory Target

1 271

1 260

1 203

1 209

1 217

1 214

1 195

1 196

1 200

1 206

1 222

1 303

Inventory Projected Stock

2 632

1 3

Production Receipts

1 630

817

815

811

810

816

820

819

815

815

3 260

Production Receipt Override

1 630

817

815

811

810

816

820

819

815

815

3 260

Inventory Target

797

798

798

798

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798

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797

Inventory Projected Stock

Transportation Lanes

Inventory projection

Production

Capacity by Resource

Capacity by Product

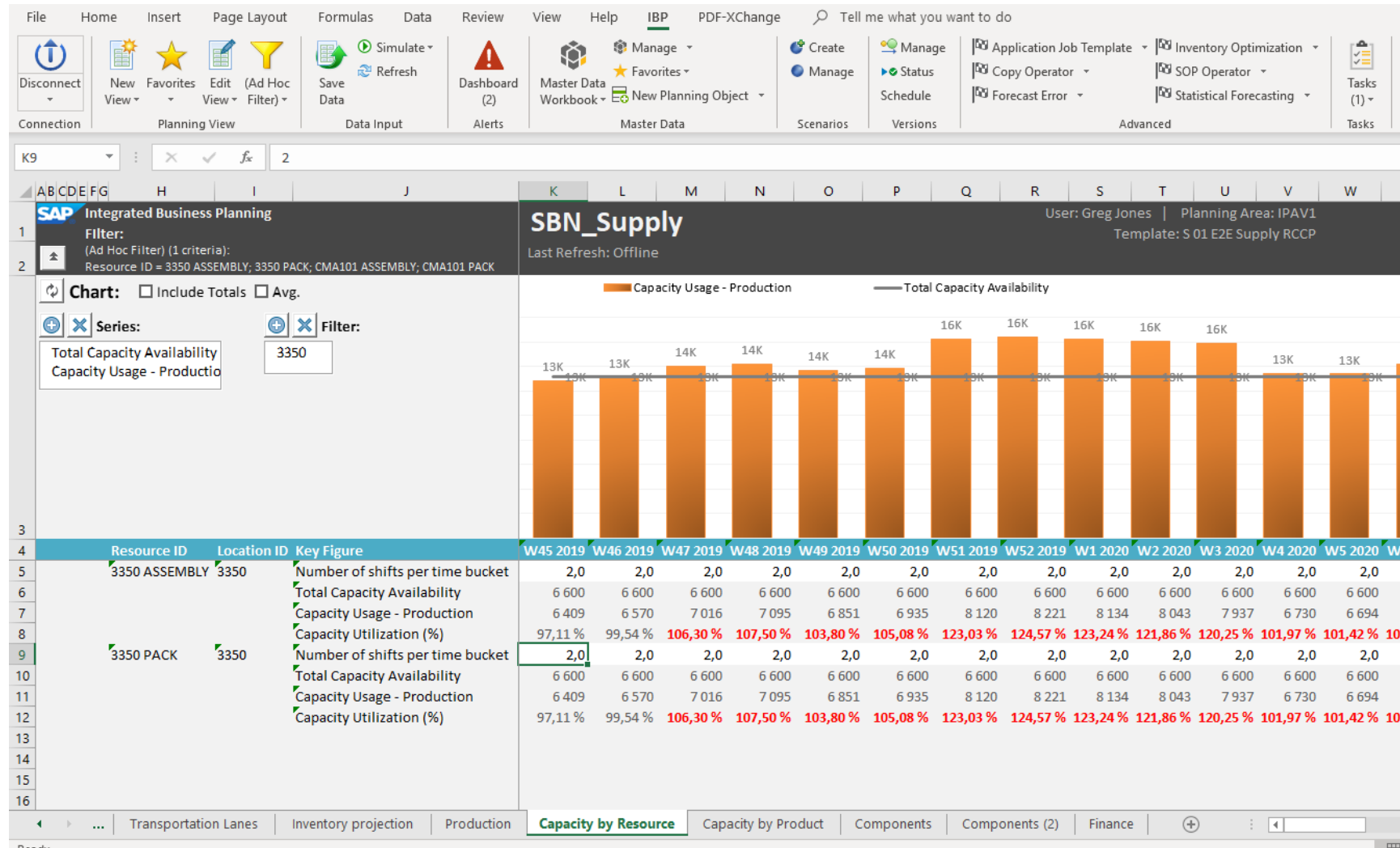
Components

Components (2)

Finance

Rough cut production plan.

Supply Planning with SAP IBP



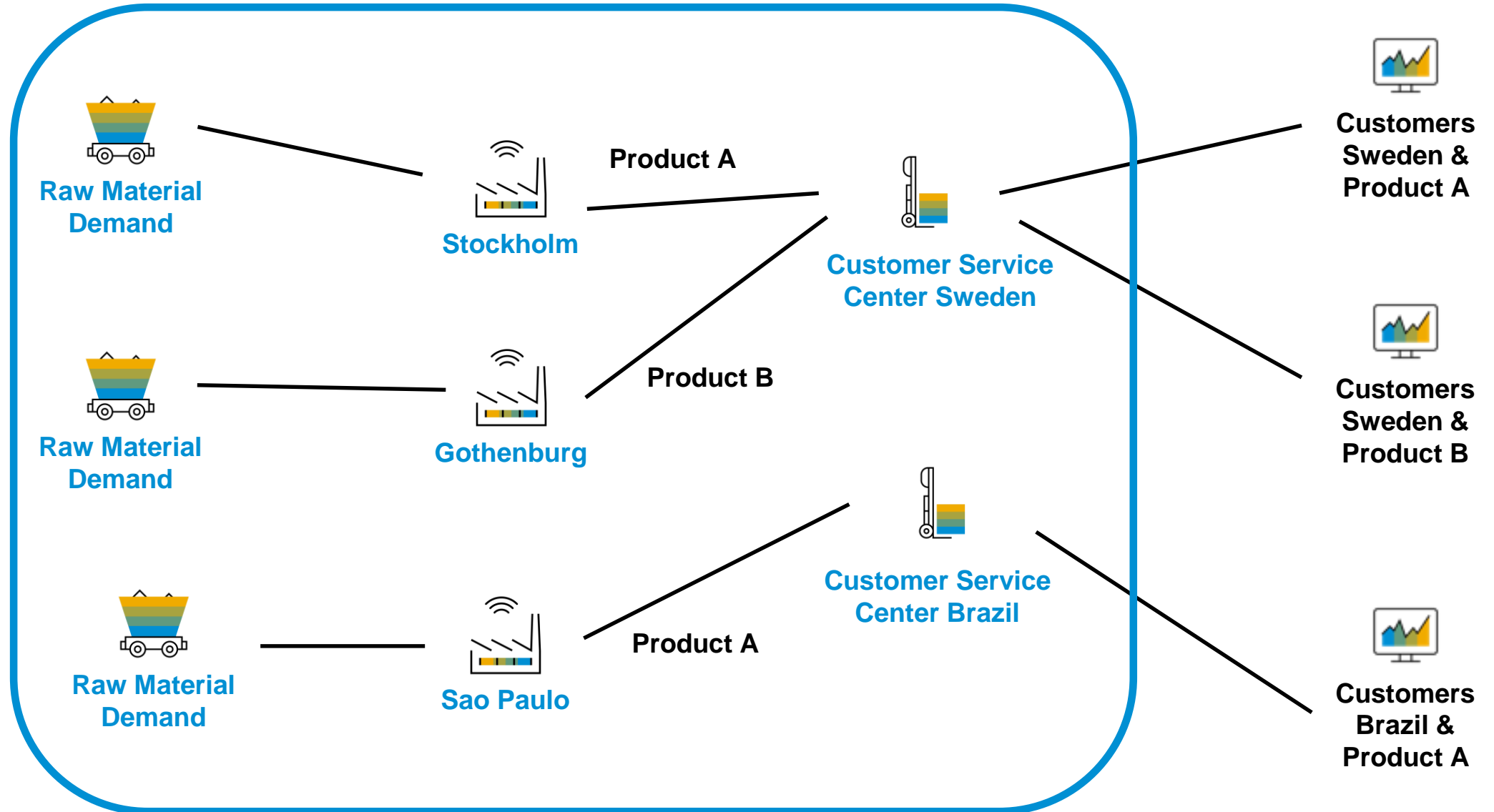
Capacity utilization.

Supply Planning with SAP IBP

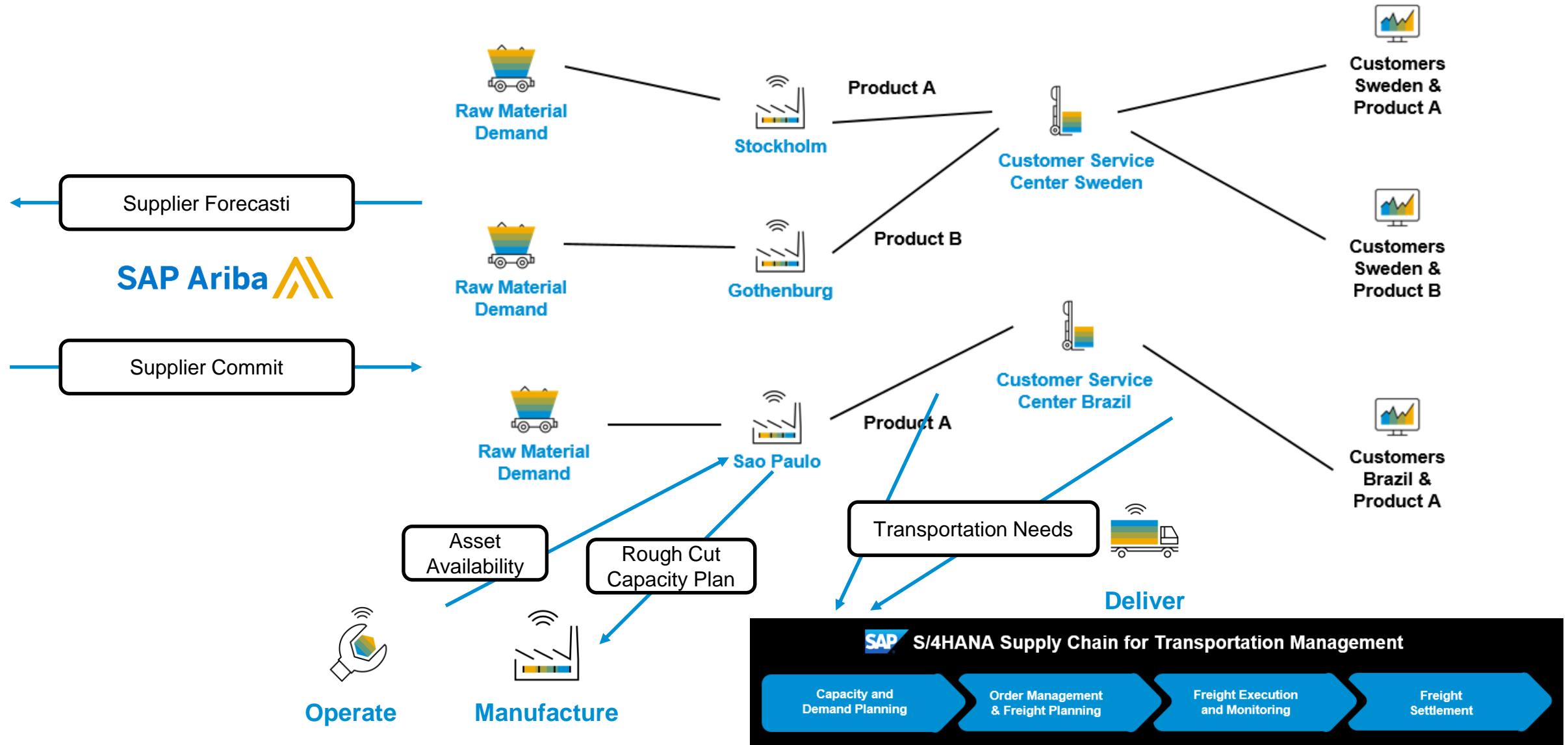
SAP Integrated Business Planning															
SBN_Supply															
User: Greg Jones Planning Area: S01 E2E Supply															
Last Refresh: Offline															
Product Desc	Location	Component Desc	Key Figure	W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020	
IBP-300	AME Mfg 2	IBP-301-R	Component Usage	6 552	3 257	3 276	3 389	3 421	3 355	3 410	4 564	4 576	4 468	4 388	
		IBP-302-R	Component Usage	6 552	3 257	3 276	3 389	3 421	3 355	3 410	4 564	4 576	4 468	4 388	
	APJ MFG	IBP-301-R	Component Usage	2 379	1 166	1 225	1 314	1 234	1 114	1 181	1 204	1 195	1 178	1 278	
		IBP-302-R	Component Usage	2 379	1 166	1 225	1 314	1 234	1 114	1 181	1 204	1 195	1 178	1 278	
IBP-310	EU Mfg	IBP-301-R	Component Usage	1 495	752	744	730	737	744	728	698	715	732	738	
		IBP-302-R	Component Usage	1 495	752	744	730	737	744	728	698	715	732	738	
	AME Mfg 2	IBP-311-R	Component Usage	5 321	2 690	2 779	3 060	3 055	2 824	2 801	2 771	2 773	2 794	2 788	
		IBP-312-R	Component Usage	5 321	2 690	2 779	3 060	3 055	2 824	2 801	2 771	2 773	2 794	2 788	
IBP-320	APJ MFG	IBP-311-R	Component Usage	1 615	812	818	815	811	810	816	819	820	815	818	
		IBP-312-R	Component Usage	1 615	812	818	815	811	810	816	819	820	815	818	
	EU Mfg	IBP-311-R	Component Usage	2 577	1 288	1 227	1 131	1 202	1 258	1 230	1 195	1 217	1 243	1 268	
		IBP-312-R	Component Usage	2 577	1 288	1 227	1 131	1 202	1 258	1 230	1 195	1 217	1 243	1 268	
IBP-320	AME Mfg 2	IBP-321-R	Component Usage	401	462	515	567	619	672	724	785	872	872	878	
		IBP-322-R	Component Usage	401	462	515	567	619	672	724	785	872	872	878	
	APJ MFG	IBP-321-R	Component Usage	148	170	189	209	228	247	266	289	321	321	328	
		IBP-322-R	Component Usage	148	170	189	209	228	247	266	289	321	321	328	
IBP-320	EU Mfg	IBP-321-R	Component Usage	90	104	116	128	140	151	163	177	197	197	198	
		IBP-322-R	Component Usage	90	104	116	128	140	151	163	177	197	197	198	

Raw material demand in each manufacturing location.

Supply Planning with SAP IBP



Supply Planning with SAP IBP



Tactical Supply Planning Heuristic (1 of 2)

Algorithm Type	Mode	Planning Capabilities with Support for the following
Heuristic	<p>Modes:</p> <ul style="list-style-type: none">• Unconstrained Supply Planning: “Infinite Without Shortage”• Supply Propagation• Shelf-Life Planning	<ul style="list-style-type: none">▪ Supports Supply Chain Network with customer-products and location-products as nodes and sourcing links between these, plus production sources▪ Lead times for sourcing between nodes and also Production Sources▪ Mixed Sourcing - combination of Production \ Transportation \ External via quotas▪ Can model Production, Storage and Handling Resources▪ Resource capacities are not taken into account, considered as infinite▪ Multi-Level BOM with components and co-products. Number of levels can be arbitrarily deep▪ Minimum and Incremental lot-size on transportation lanes and production sources.▪ Multiple-modes of Transport on customer and location transportation lanes▪ Periodic lot-size with granular sub-periods. Relevant only for production▪ Target Inventory can be modeled. Target Periods of Coverage as input and Projected Coverage as output▪ Sub-Networks can be planned. Manual Adjustments from user can overwrite and fix the plan, this acts as a constraint.▪ Computes a complete plan (Demand and Supply Propagation) with no shortage.▪ The generated plan is infeasible without manual adjustments (e.g. Negative Projected Stocks, capacity over-utilization, etc.)▪ End-user simulation on time dependent master data input key figures (e.g. consensus demand, sourcing ratio, component coefficient, capacity supply)

Tactical Supply Planning Heuristic (2 of 2)

Algorithm Type	Mode	Planning Capabilities with Support for the following
Heuristic	<ul style="list-style-type: none"> Unconstrained Supply Planning: “Infinite Without Shortage” Supply Propagation Shelf-Life Planning 	<p><u>Supply Propagation</u></p> <ul style="list-style-type: none"> ▪ Propagates or ships only the available supply downstream through the supply chain which are available and does not fulfill all demands. ▪ In case of insufficient or constrained supply situation the various demand types are fulfilled according to their priorities ▪ Fair share propagation of supply within demand types of same priority ▪ The planner can see the impact of the supply problem, that is, which customer demands and net demands of which customer products and location products will not be met. <p><u>Shelf-Life Planning</u></p> <ul style="list-style-type: none"> ▪ Generates supply plan considering minimum shelf life of customer demand and remaining shelf life of existing batches ▪ Performs Demand/Supply match of batches at each stocking node considering the transportation lead-times. ▪ Considers minimum shelf-life for each component specified at the production sources. The production receipts inherit the remaining shelf life from production source ▪ Provides tactical Visibility for the purpose of Business Planning/S&OP to understand how much inventory will expire that needs to be written off and re-planned

Tactical Heuristic – Supply Propagation by Demand Priorities

❑ In case of insufficient supply, the various demand types are fulfilled according to their priorities:

1. Demand caused by Adjusted and Minimum key figures
 - Adjusted / Minimum will always be fulfilled, even with no supply available
 - Might cause negative projected inventory
2. Demand caused by inventory correction
3. Independent Demand
4. Dependent Customer Demand
5. Dependent Location Demand & Dependent Production Component

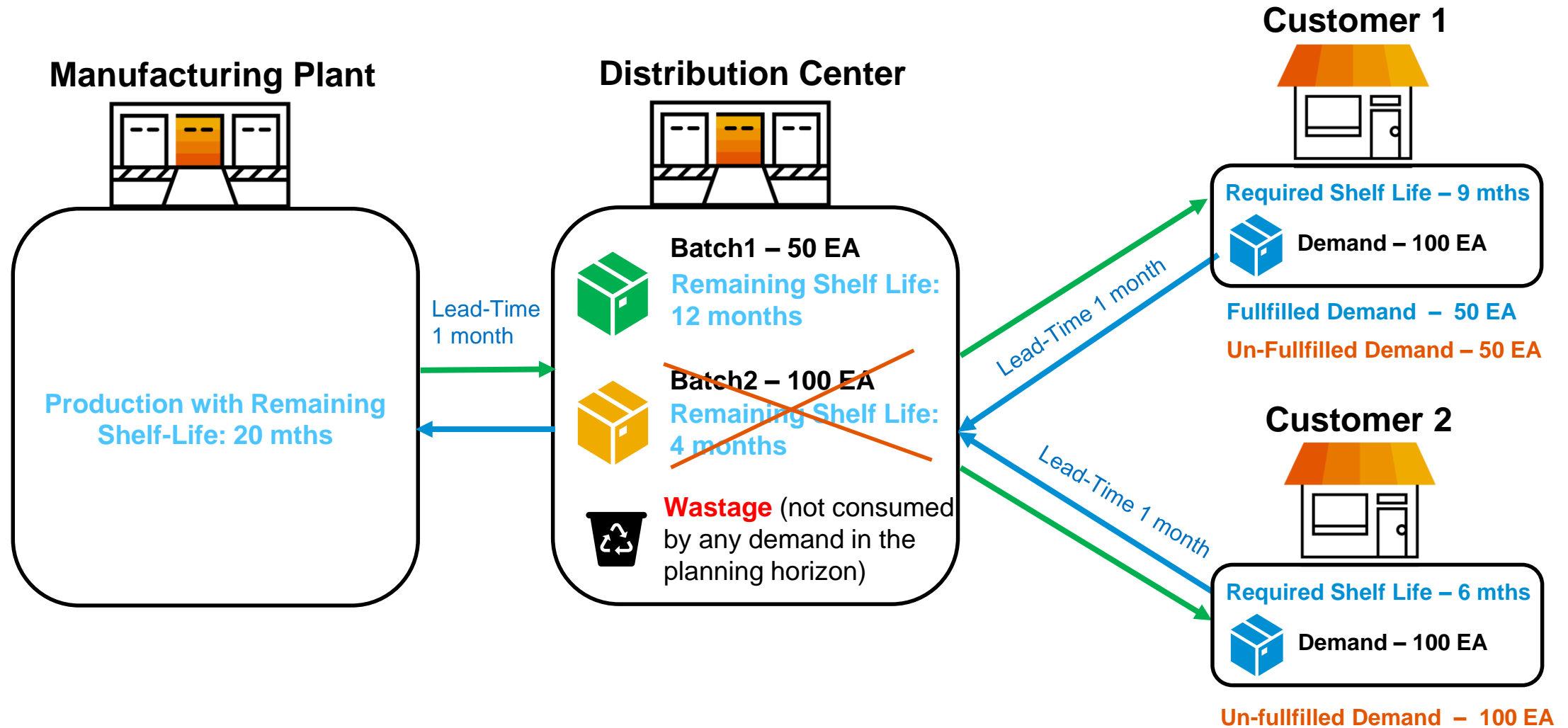
❑ Fair Share propagation of supply **only** within demand types 4 & 5 (above)

- ❑ Fair Share can not be guaranteed
- ❑ Fair Share not possible in all cases (e.g. in conjunction with lot sizes)

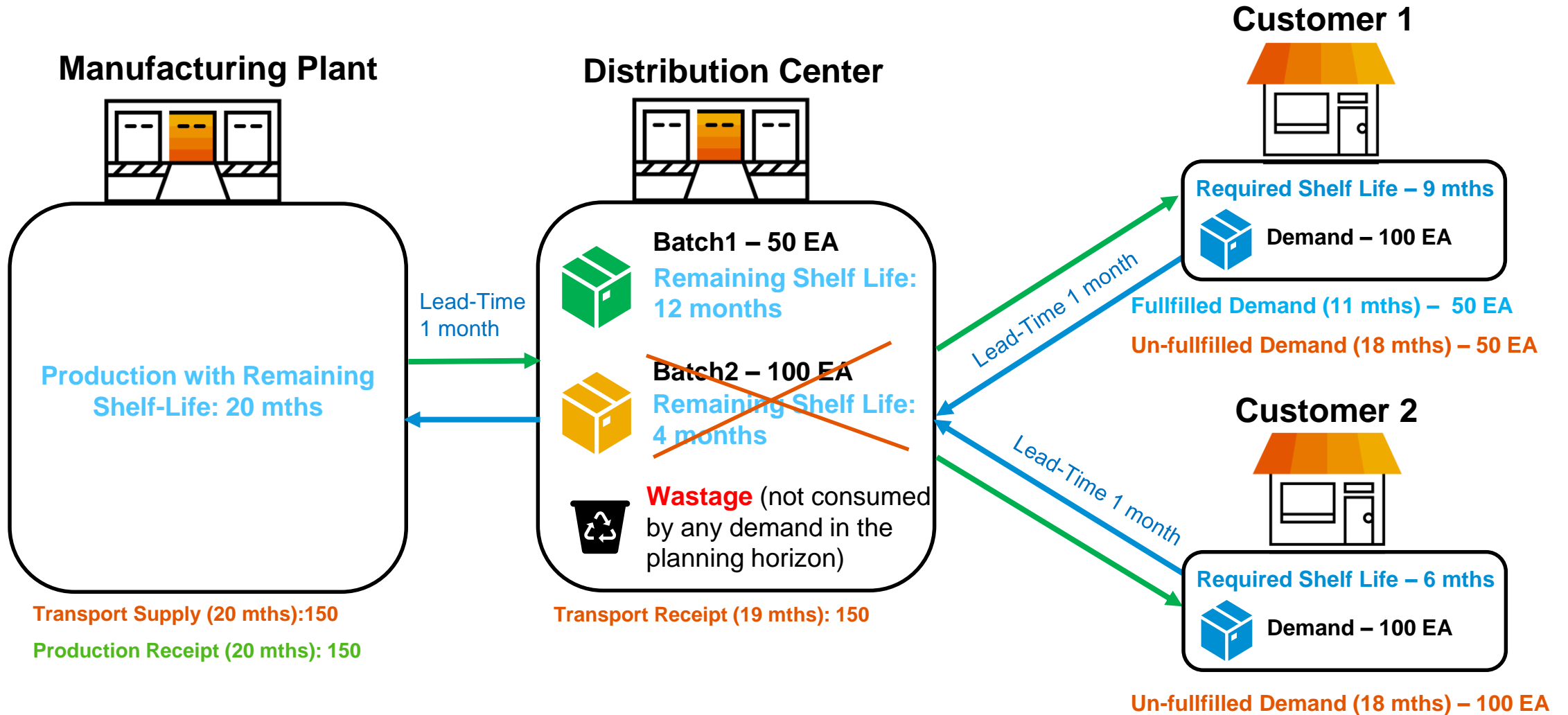
❑ Supply quantities are computed based on demand quantities, not based on quotas

❑ Priorities of demand types are pre-defined, not configurable

New Algorithm Type for Shelf-Life Heuristic



New Algorithm Type for Shelf-Life Heuristic

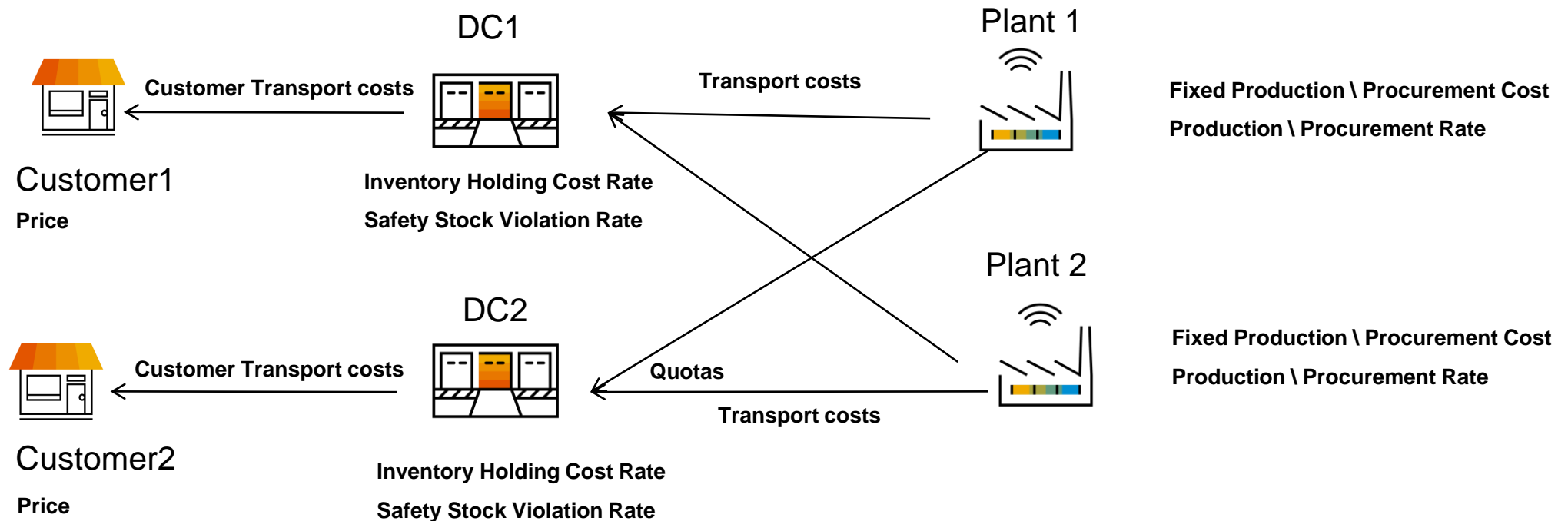


Tactical Supply Planning Optimizer

Algorithm Type	Mode	Planning Capabilities with Support for the following
Optimizer	Two Modes: Profit Maximization Delivery Maximization (Cost Minimization)	<ul style="list-style-type: none">• Supports Supply Chain Network with Customer-Products and Location-Products as nodes and sourcing links between these, plus production sources• Lead times for Customer, Location and Production Sourcing• Mixed Sourcing (Combination of Production and/or Transportation and/or External).• Production and Storage Resources can be modeled. Can be modeled as Finite or Infinite• Multi-Level BOM with Components and Co-Products.• Multiple-modes of Transport on customer and location transportation lanes• Min-Max and Incremental Lot-Sizes on Transportation lane and Production Sources• Periodic Lot-Sizes with granular sub-periods. Relevant only for Production• Computes a feasible plan• Manual Adjustments from end-user can overwrite and fix the plan. This acts as a pseudo-hard constraint• End-user simulation on time dependent master data input key figures (e.g. consensus demand, sourcing ratio, component coefficient, capacity supply) <p><u>Advanced Optimizer Features:</u></p> <ul style="list-style-type: none">• Telescopic Planning• Fair-Share Distribution• Late-Demand Fulfillment• Aggregated Constraints• Minimum Resource Utilization• Multiple Demand Categories• Optimizer Results Explanation• Product Substitution at customer level• Quota Adherence

Tactical Planning – Optimization Example

- The objective of the Optimizer is to minimize the total costs or maximize total profit of the supply plan, with many cost factors.
- Optimization is performed via a mathematical model using Mixed Integer Linear Programming (MILP).
- The output is an optimal and feasible **Times Series** plan that takes into consideration modeling, material, and capacity constraints. Sourcing quotas can be either generated or used as an input to planning run.



Tactical Planning – Optimization Constraint Types

Hard Constraints

- Must be satisfied, no solution if not possible
- Examples:
 - Max stock
 - Minimum and Maximum lot-sizes (unless overwritten by adjusted values)
 - Resource Capacities
 - Stock Balance

Soft Constraints

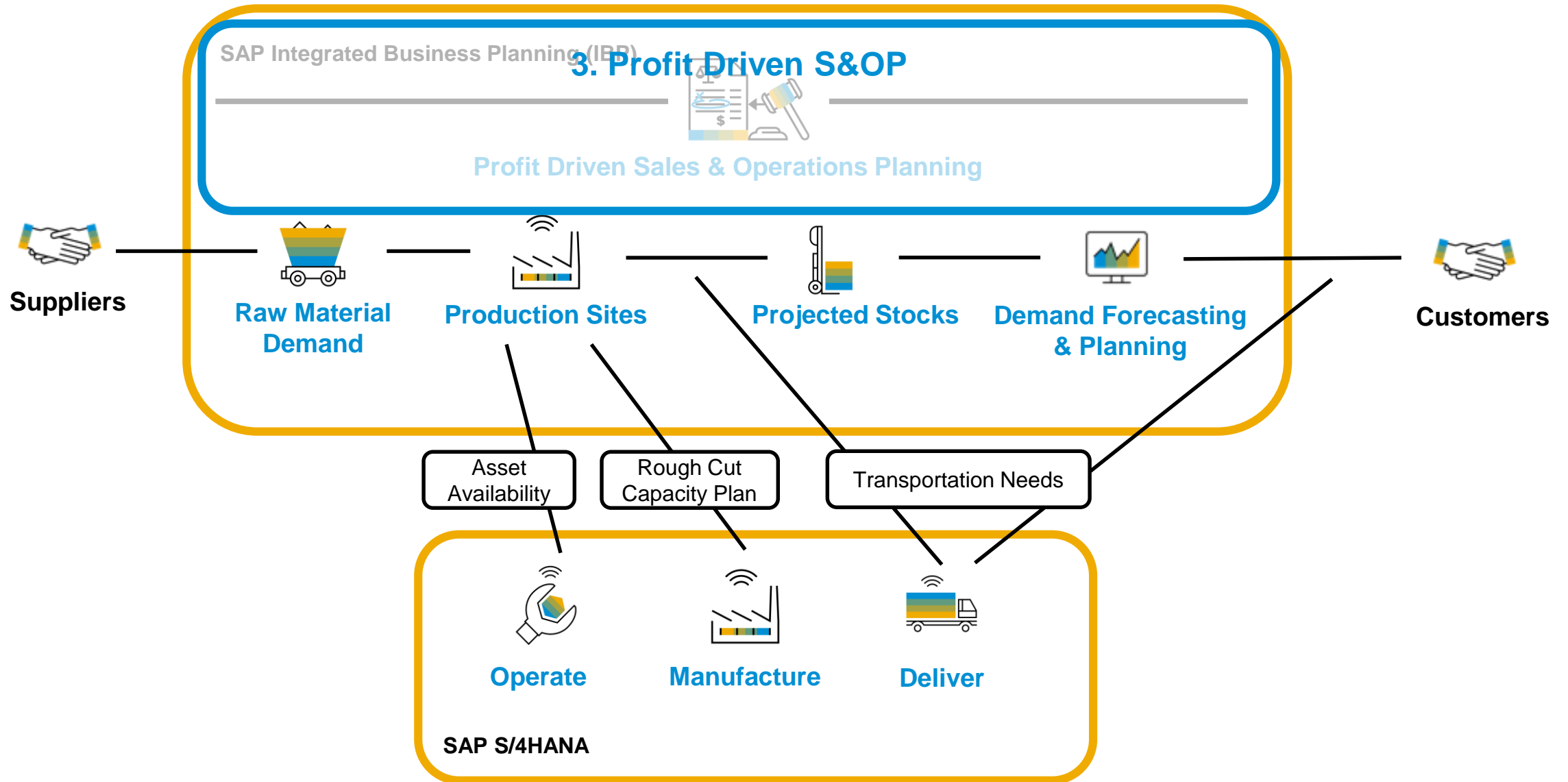
- Should be satisfied, violations are penalized in the objective function
- Examples:
 - Variable/rate costs for transports, production, external receipts
 - Non-delivery costs for customer demands (rate)
 - Fix costs for transports, production and external receipts
 - Inventory holding costs (rate) and safety stock violation costs (rate)

Pseudo-hard constraints

- Soft constraints with a very high penalty cost (usually higher than the sum of all other costs)
- Gets satisfied if possible, but still allows for a solution if not possible
- Examples:
 - Manual adjusted values (internal to the optimizer, very high cost if violated)

The screenshot displays the SAP Optimization Configuration interface, which is organized into several tabs: General Information, Optimizer Parameters, Time Aggregation Profile, Primary Parameters, Limits for Messages, and Additional Parameters. The 'Optimizer Parameters' tab is currently selected and expanded, showing a 'General' section with various settings. Under 'Processing Mode', the 'Interactive and Batch' option is selected. The 'Maximum Solving Runtime for Optimizer' is set to 60. The 'Profit Maximization Mode' is selected, with 'Delivery Maximization Mode' as an alternative. A checkbox for 'Explain Optimization Results' is present. The 'Non-Delivery Cost Rate for Delivery Maximization' is also visible. Below the 'General' section, there are expandable sections for 'Discretization', 'Fair-Share Distribution', 'Time-Independent Penalty Costs', 'Global Cost Factors', and 'Other'. The 'Time Profile Level' and 'Include Full Planning Periods' options are visible in the top right of the 'Optimizer Parameters' section.

Planning with SAP IBP



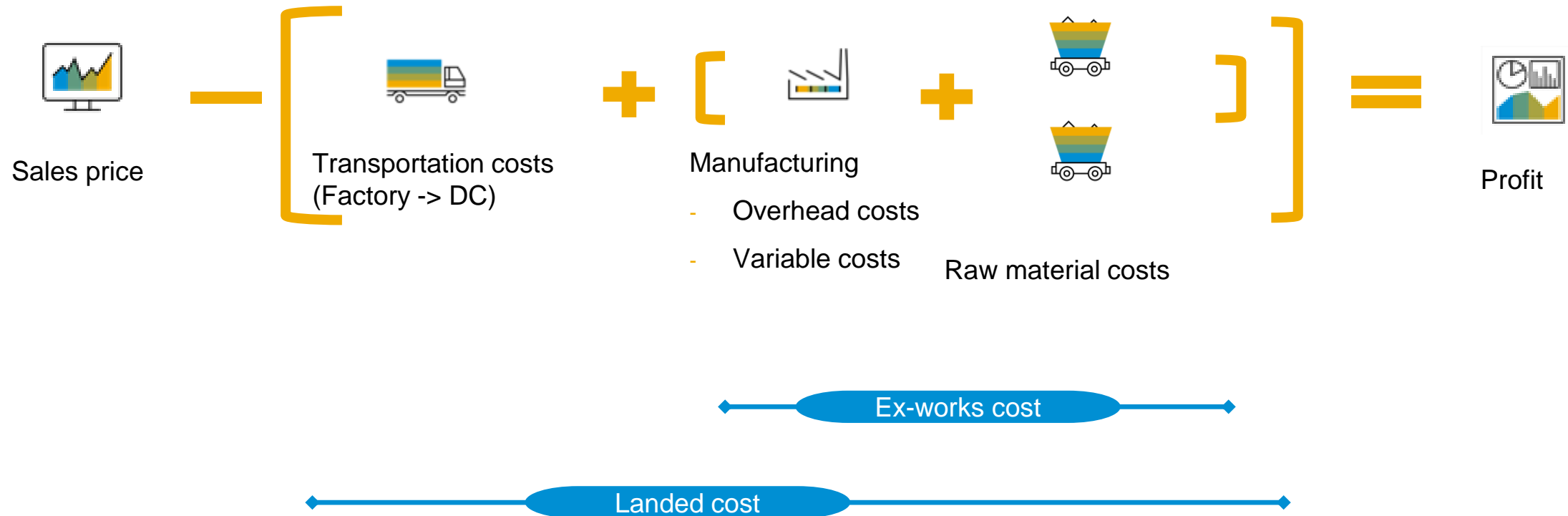
Gartner S&OP Stage 4 Maturity: “Collaborate”

- In this stage, the **S&OP system creates a demand-driven, profitable supply response across the increasingly extended supply chain**, taking into account internal resources and trading partner capabilities. Potential benefits are outside-in oriented and include **improvements in gross margin, working capital and market share**.
- The focus is on **profitably meeting revenue projections**, while taking into account trade-offs required across the internal and external supply chains. Profitability is based on a **more accurate understanding of distinct supply chain segments**, the inherent performance window of each distinct supply chain and the corresponding cost to serve.

Source: Magic Quadrant for Sales and Operations Planning Systems of Differentiation
Published 7 May 2019 - ID G00332362

Profit Driven S&OP with SAP IBP

Simple example:



Profit Driven S&OP with SAP IBP

FileHomeInsertPage LayoutFormulasDataViewHelpIBPPDF-XChangeTell me what you want to do

Disconnect

New View

Favorites

Edit View

(Ad Hoc Filter)

Save Data

Simulate

Refresh

Dashboard (2)

Master Data Workbook

Manage

Favorites

New Planning Object

Create

Manage

Application Job Template

Copy Operator

Forecast Error

Inventory Optimization

SOP Operator

Statistical Forecasting

Schedule

Scenarios

Versions

Advanced

X192554,329831

SAP Integrated Business Planning					SBN_Supply										User: Greg Jones Plan Template: S 03	
Filter: (Ad Hoc Filter) (2 criteria): Product ID = IBP-300; IBP-310; IBP-320					Last Refresh: Offline											
	Product Desc	Location	Component Desc	Key Figure	W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019		
5	IBP-300	AME Mfg 2	IBP-301-R	Component Usage	6 552	3 257	3 276	3 389	3 421	3 355	3 410	4 564	4 576	4 468		
6			IBP-302-R	Component Unit Cost	20	20	20	20	20	20	300	300	20	20		
7			IBP-301-R	Component Usage	6 552	3 257	3 276	3 389	3 421	3 355	3 410	4 564	4 576	4 468		
8			IBP-302-R	Component Unit Cost	20	20	20	20	20	20	300	300	20	20		
9		APJ MFG	IBP-301-R	Component Usage	2 379	1 166	1 225	1 314	1 234	1 114	1 181	1 204	1 195	1 178		
10			IBP-302-R	Component Unit Cost	20	20	20	20	20	20	300	300	20	20		
11			IBP-301-R	Component Usage	2 379	1 166	1 225	1 314	1 234	1 114	1 181	1 204	1 195	1 178		
12			IBP-302-R	Component Unit Cost	20	20	20	20	20	20	300	300	20	20		
13		EU Mfg	IBP-301-R	Component Usage	1 495	752	744	730	737	744	728	698	715	732		
14			IBP-302-R	Component Unit Cost	20	20	20	20	20	20	300	300	20	20		
15			IBP-301-R	Component Usage	1 495	752	744	730	737	744	728	698	715	732		
16			IBP-302-R	Component Unit Cost	20	20	20	20	20	20	300	300	20	20		
17	IBP-310	AME Mfg 2	IBP-311-R	Component Usage	5 321	2 690	2 779	3 060	3 055	2 824	2 801	2 771	2 773	2 794		
18			IBP-312-R	Component Unit Cost	20	20	20	20	20	20	300	300	20	20		
19			IBP-311-R	Component Usage	5 321	2 690	2 779	3 060	3 055	2 824	2 801	2 771	2 773	2 794		
20			IBP-312-R	Component Unit Cost	20	20	20	20	20	20	20	20	20	20		
21		APJ MFG	IBP-311-R	Component Usage	1 615	812	818	815	811	810	816	819	820	815		
22			IBP-312-R	Component Unit Cost	20	20	20	20	20	20	20	20	20	20		
23			IBP-311-R	Component Usage	1 615	812	818	815	811	810	816	819	820	815		
24			IBP-312-R	Component Unit Cost	20	20	20	20	20	20	20	20	20	20		
25		EU Mfg	IBP-311-R	Component Usage	2 577	1 288	1 227	1 131	1 202	1 258	1 230	1 195	1 217	1 243		
26			IBP-312-R	Component Unit Cost	20	20	20	20	20	20	20	20	20	20		
27			IBP-311-R	Component Usage	2 577	1 288	1 227	1 131	1 202	1 258	1 230	1 195	1 217	1 243		
28			IBP-312-R	Component Unit Cost	20	20	20	20	20	20	20	20	20	20		
29	IBP-320	AME Mfg 2	IBP-321-R	Component Usage	401	462	515	567	619	672	724	785	872	872		

Transportation Lanes

Inventory projection

Production

Capacity by Resource

Capacity by Product

Components

Components (2)

Finance

Major increase to raw material price.

Profit Driven S&OP with SAP IBP

Financial plan before raw material price increase.

File

Home

Insert

Page Layout

Formulas

Data

Review

View

Help

PDF-XChange

Tell me what you want to do

Disconnect

New View

Favorites

Edit View

(Ad Hoc Filter)

Save Data

Simulate

Refresh

Dashboard (2)

Master Data Workbook

Manage

Favorites

New Planning Object

Create

Manage

Application Job Template

Copy Operator

Forecast Error

Inventory Optimization

SOP Operator

Statistical Forecasting

Tasks (1)

Collaboration

Home

Promotions

Connection

Planning View

Data Input

Alerts

Master Data

Scenarios

Versions

Advanced

Tasks

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SAP

Integrated Business Planning

Filter:

(Ad Hoc Filter) (2 criteria):

Resource ID = 3350 ASSEMBLY; 3350 PACK

SBN_Supply

User: Greg Jones | Planning Area: IPAV1

Template: S 01 E2E Supply RCCP

Last Refresh: Offline

Product ID

Location ID

Customer ID

Key Figure

IBP-300

2500

CE03

Est. Avg. Unit Cost of Sales

Selling Price

Est. Gross Margin (Unit)

Customer Distribution Receipt

Est. Gross Margin (Total)

Est. Overhead Cost (Total)

Est. Operating Margin (Total)

2840

CA03

Est. Avg. Unit Cost of Sales

Selling Price

Est. Gross Margin (Unit)

Customer Distribution Receipt

Est. Gross Margin (Total)

Est. Overhead Cost (Total)

Est. Operating Margin (Total)

3400

CU03

Est. Avg. Unit Cost of Sales

Selling Price

Est. Gross Margin (Unit)

Customer Distribution Receipt

Est. Gross Margin (Total)

Est. Overhead Cost (Total)

Est. Operating Margin (Total)

IBP-310

2500

CE03

Est. Avg. Unit Cost of Sales

Selling Price

Est. Gross Margin (Unit)

Customer Distribution Receipt

W43 2019

W44 2019

W45 2019

W46 2019

W47 2019

W48 2019

W49 2019

W50 2019

W51 2019

W52 2019

W1 2020

W2 2020

W3 2020

€50

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1 233

Transportation Lanes

Inventory projection

Production

Capacity by Resource

Capacity by Product

Components

Components (2)

Finance

+

:

1

High raw material price makes our plan to show loss.

help

IBP

PDF-XChange

Tell me what you want to do

Management

Favorites

New Planning Object

Master Data

Scenarios

Versions

Create

Management

Status

Schedule

Application Job Template

Copy Operator

Forecast Error

Inventory Optimization

SOP Operator

Statistical Forecasting

Tasks (1)

Tasks

User: Greg Jones | Planning Area: IPAV1

Template: S 01 E2E Supply RCCP

W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020	W2 2020	W3 2020
€190	€190	€190	€190	€190	€190	€190	€190	€190
€300	€300	€300	€300	€300	€300	€300	€300	€300
€110	€110	€110	€110	€110	€110	€110	€110	€110
753	753	746	746	746	746	730	730	730
€82 877	€82 877	€82 022	€82 022	€82 022	€82 022	€80 336	€80 336	€80 336

€82 877

€82 877

€82 022

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€80 336

€80 336

€80 336

W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020
€50	€190	€190	€190	€190	€190	€750	€750	€190	€190	€190
€300	€300	€300	€300	€300	€300	€300	€300	€300	€300	€300
€250	€110	€110	€110	€110	€110	- €450	- €450	€110	€110	€110
	753	753	753	753	753	746	746	746	746	730
€82 877	€82 877	€82 877	€82 877	€82 877	€82 877	- €335 543	- €335 543	€82 022	€82 022	€80 336

€82 877

€82 877

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- €335 543

- €335 543

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€82 022

€80 336

W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020
€50	€190	€190	€190	€190	€190	€750	€750	€190	€190	€190
€300	€300	€300	€300	€300	€300	€300	€300	€300	€300	€300
€250	€110	€110	€110	€110	€110	- €450	- €450	€110	€110	€110
	1 224	1 211	1 254	1 222	1 183	1 224	1 228	1 176	1 186	1 188
€134 589	€133 260	€137 966	€134 386	€130 079	- €550 949	- €552 661	€129 385	€130 415	€130 670	

€134 589

€133 260

€137 966

€134 386

€130 079

- €550 949

- €552 661

€129 385

€130 415

€130 670

W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020
€50	€190	€190	€190	€190	€190	€750	€750	€190	€190	€190
€300	€300	€300	€300	€300	€300	€300	€300	€300	€300	€300
€250	€110	€110	€110	€110	€110	- €450	- €450	€110	€110	€110
	3 274	3 306	3 314	3 250	3 250	3 335	3 367	3 342	3 342	4 402
€360 158	€363 638	€364 510	€357 461	€357 512	- €1 500 607	- €1 514 949	€367 618	€367 586	€484 220	

€360 158

€363 638

€364 510

€357 461

€357 512

- €1 500 607

- €1 514 949

€367 618

€367 586

€484 220

W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020
€50	€190	€190	€190	€190	€190	€352	€352	€190	€190	€190
€310	€310	€310	€310	€310	€310	€310	€310	€310	€310	€310
€260	€120	€120	€120	€120	€120	- €42	- €42	€120	€120	€120
	1 305	1 305	1 305	1 307	1 310	1 254	1 255	1 257	1 236	

€360 158

€363 638

€364 510

€357 461

€357 512

- €1 500 607

- €1 514 949

€367 618

€367 586

€484 220

Transportation Lanes

Inventory projection

Production

Capacity by Resource

Capacity by Product

Components

Components (2)

Finance

User: Greg Jones | Planning Area: IPAV1

Template: S 01 E2E Supply RCCP

W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020	W2 2020	W3 2020
€190	€190	€190	€190	€190	€190	€190	€190	€190
€300	€300	€300	€300	€300	€300	€300	€300	€300
€110	€110	€110	€110	€110	€110	€110	€110	€110
753	753	746	746	746	746	730	730	730
€82 877	€82 877	€82 022	€82 022	€82 022	€82 022	€80 336	€80 336	€80 336

€82 877

€82 877

€82 022

€82 022

€82 022

€82 022

€80 336

€80 336

€80 336

W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020
€50	€190	€190	€190	€190	€190	€750	€750	€190	€190	€190
€300	€300	€300	€300	€300	€300	€300	€300	€300	€300	€300
€250	€110	€110	€110	€110	€110	- €450	- €450	€110	€110	€110
	753	753	753	753	753	746	746	746	746	730
€82 877	€82 877	€82 877	€82 877	€82 877	€82 877	- €335 543	- €335 543	€82 022	€82 022	€80 336

€82 877

€82 877

€82 877

€82 877

€82 877

€82 877

- €335 543

- €335 543

€82 022

€82 022

€80 336

W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020
€50	€190	€190	€190	€190	€190	€750	€750	€190	€190	€190
€300	€300	€300	€300	€300	€300	€300	€300	€300	€300	€300
€250	€110	€110	€110	€110	€110	- €450	- €450	€110	€110	€110
	1 224	1 211	1 254	1 222	1 183	1 224	1 228	1 176	1 186	1 188
€134 589	€133 260	€137 966	€134 386	€130 079	- €550 949	- €552 661	€129 385	€130 415	€130 670	

€134 589

€133 260

€137 966

€134 386

€130 079

- €550 949

- €552 661

€129 385

€130 415

€130 670

W43 2019	W44 2019	W45 2019	W46 2019	W47 2019	W48 2019	W49 2019	W50 2019	W51 2019	W52 2019	W1 2020
€50	€190	€190	€190	€190	€190	€750	€750	€190	€190	€190
€300	€300	€300	€300	€300	€300	€300	€300	€300	€300	€300
€250	€110	€110	€110	€110	€110	- €450	- €450	€110	€110	€110
	3 274	3 306	3 314	3 250	3 250	3 335	3 367	3 342	3 342	4 402
€360 158	€363 638	€364 510	€357 461	€357 512	- €1 500 607	- €1 514 949	€367 618	€367 586	€484 220	

€360 158

€363 638

€364 510

€357 461

€357 512

- €1 500 607

- €1 514 949

€367 618

€367 586

€484 220

Transportation Lanes

Inventory projection

Production

Capacity by Resource

Capacity by Product

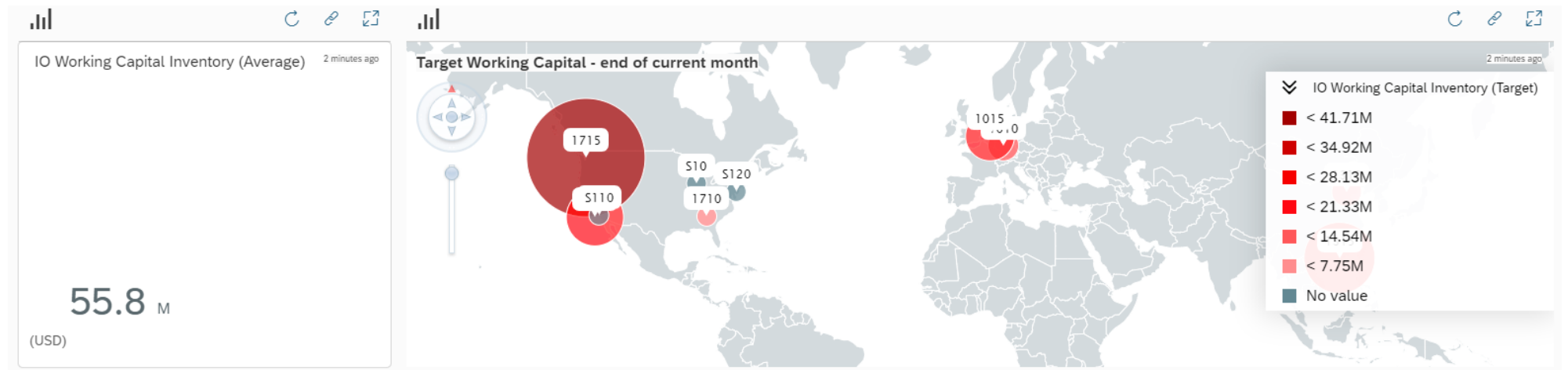
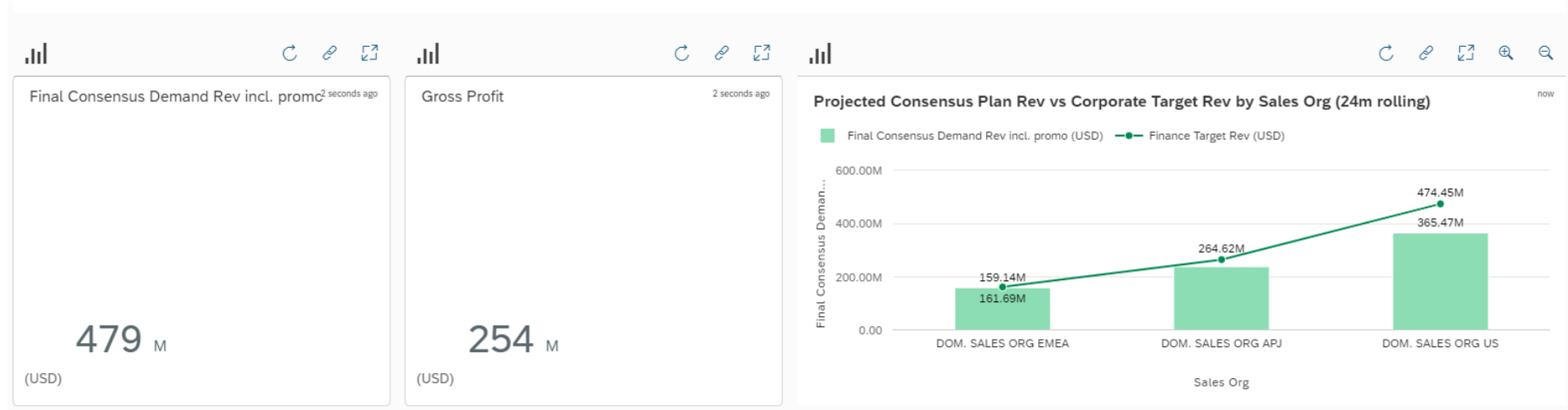
Components

Components (2)

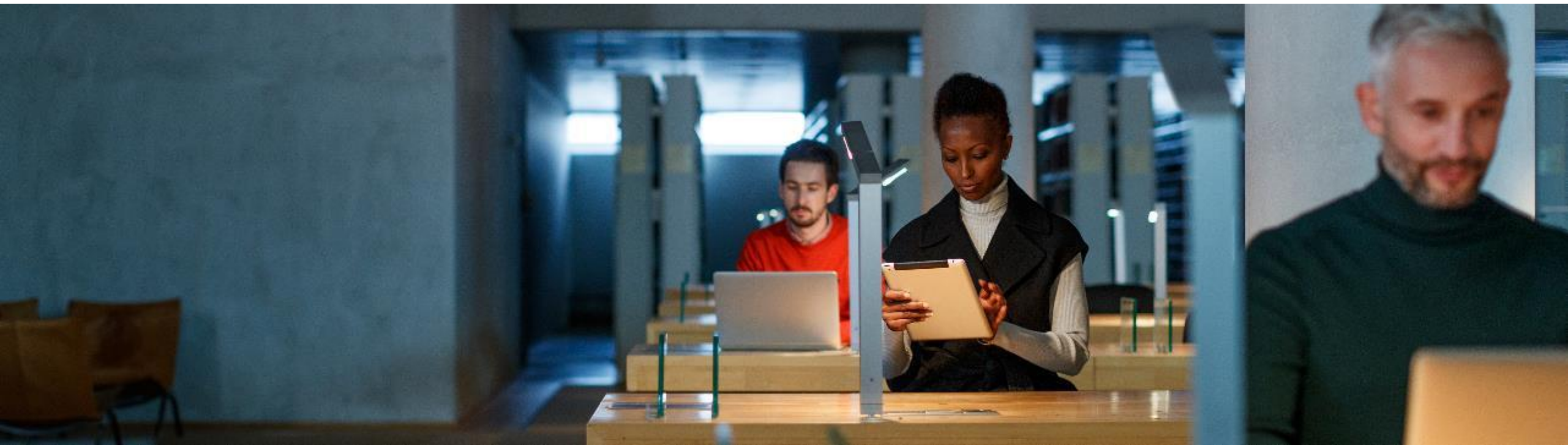
Finance

Profit Driven S&OP with SAP IBP

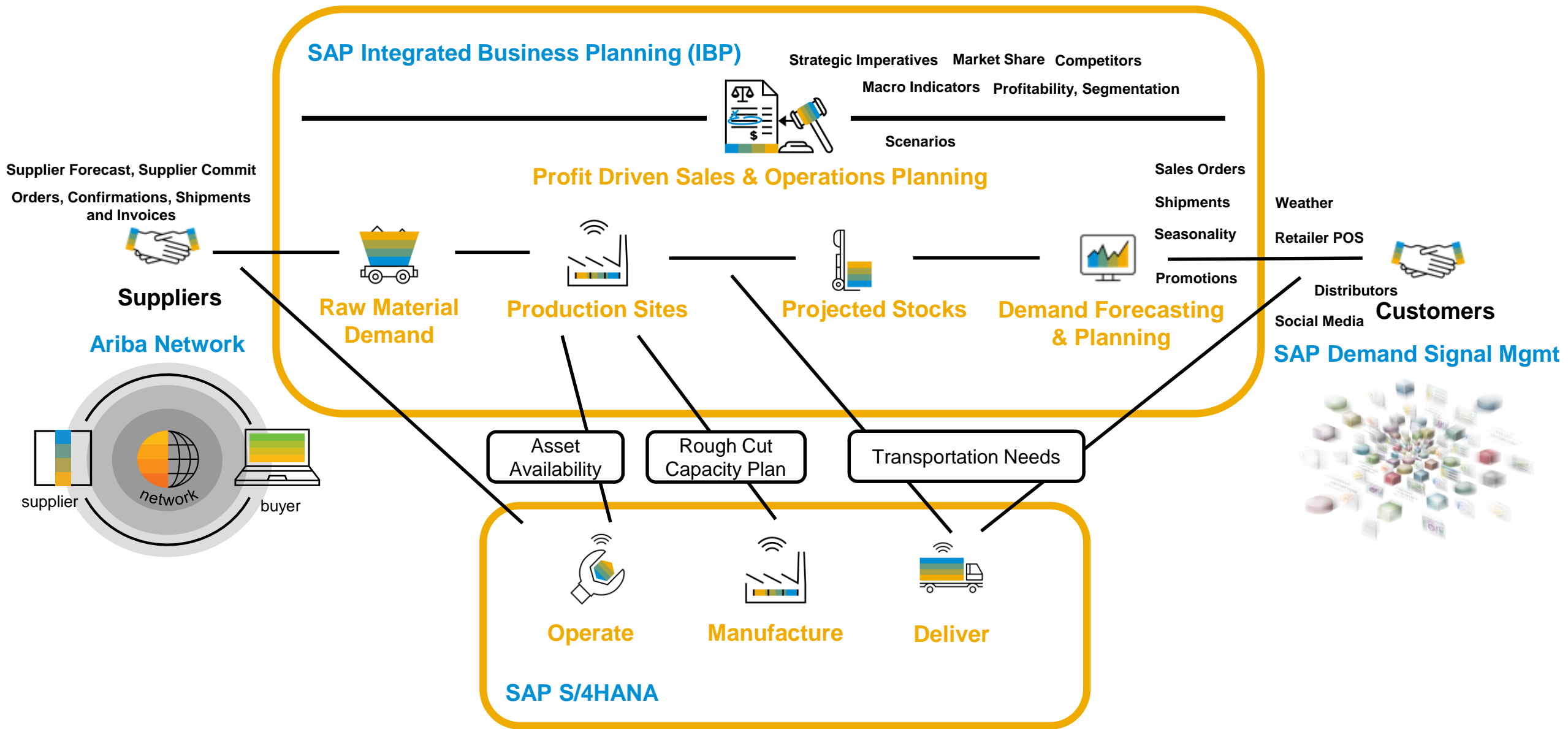
SAP IBP web dashboard to visualize financial outlook



Summary for Profit Driven Planning with SAP IBP



Profit Driven Planning, Collaboration and Execution



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