

Deep Dive: Can AI Make a Difference to Your Supply Chain Planning?

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Chicago

2024

SAPinsider



In This Session

Understand the AI offerings in SAP Supply Chain Planning.

Prioritize AI use cases for planning based on effort and value.

See what is coming in the AI space in the next year.

What We'll Cover

- General AI Discussion
- Overview of Current AI in IBP
- Strategy for Using AI
- Generative AI in IBP
- Roadmap for AI in IBP
- Wrap Up



General AI Discussion



SAP Business AI Approach



Relevant

The most relevant AI delivered in the context of your business processes.



Reliable

Uniquely reliable AI trained on the industry's broadest business data sets.



Responsible

AI built on leading ethics and data privacy standards.



Real business results

SAP Business AI Approach

Relevant. Reliable. Responsible.

Finance | Supply Chain | HR | Procurement | Marketing and Commerce | Sales and Services | IT



Joule

A copilot that truly understands your business

Embedded AI capabilities

Cloud ERP

Human capital
management

Spend management
and business network

Customer relationship
management

Business Technology
Platform

AI foundation

on Business Technology Platform

AI ecosystem partnerships and investments



ANTHROPIC



cohere

databricks

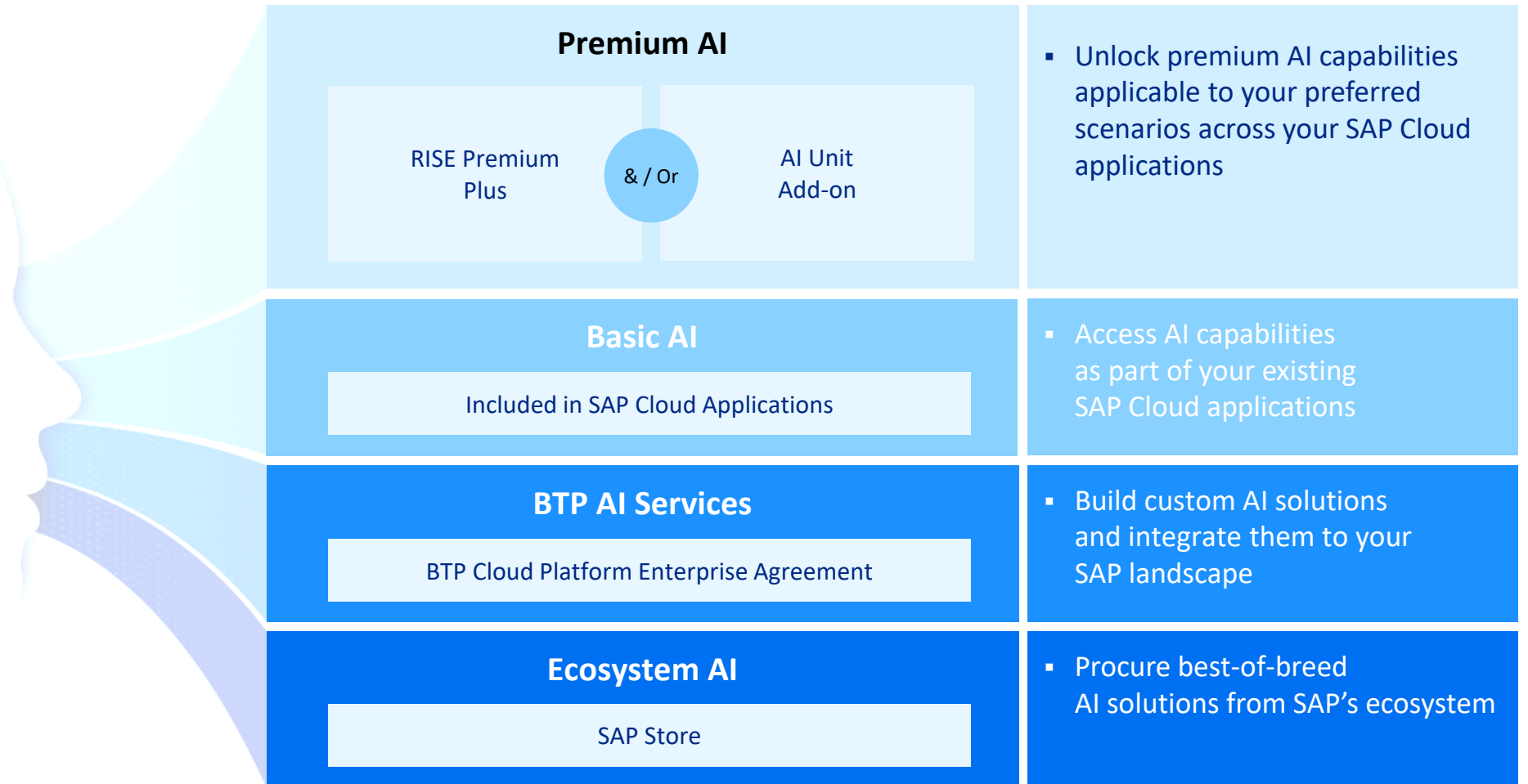
DataRobot

Google Cloud

IBM

Microsoft

How to Consume SAP Business AI



The World of AI

Intelligence: the ability to achieve complex goals

Artificial Intelligence (AI)

Intelligence exhibited by machines

Includes many approaches, like mathematical optimization

Available
in IBP

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Machine Learning (ML)

Computers learn from examples in the data without being explicitly programmed

Numerical and statistical approaches to train a model, including many kinds of algorithms

Supervised learning (including self-supervised learning), unsupervised learning, reinforcement learning

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Deep Learning

A subfield of machine learning that uses specialized computational techniques, namely various artificial neural network architectures (e.g. RNNs, CNNs, transformers...)

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Deep Learning

A subfield of machine learning that uses specialized computational techniques, namely various multilayer artificial neural network architectures (e.g. RNNs, CNNs, transformers··)

Foundation models

Neural networks, typically using the transformer architecture, trained via a self-supervised learning objective

Large Language Models (LLMs)
e.g. ChatGPT

Coming
soon in
IBP

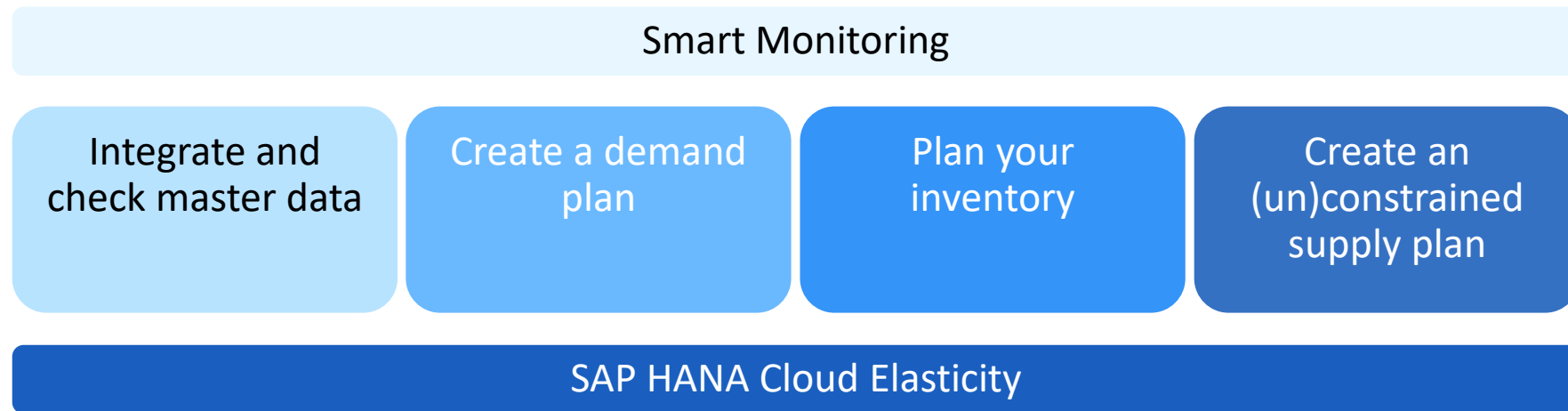
Generative AI

Can create novel output in text, images, sound, or video based on simple user input

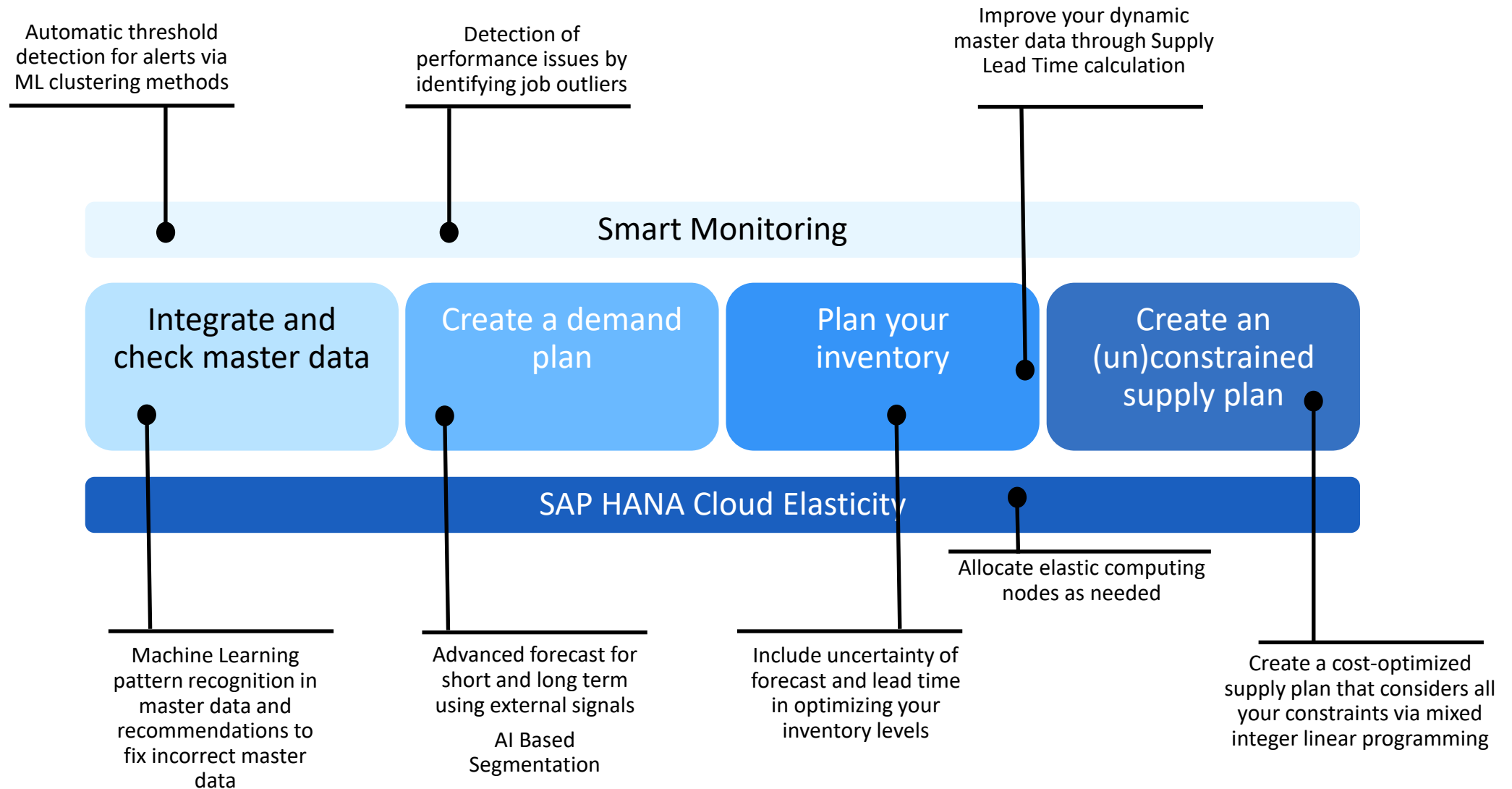
Overview of Current AI in IBP



Business AI in SAP IBP



Business AI in SAP IBP



Strategy for Using AI



General Rules for Adopting AI

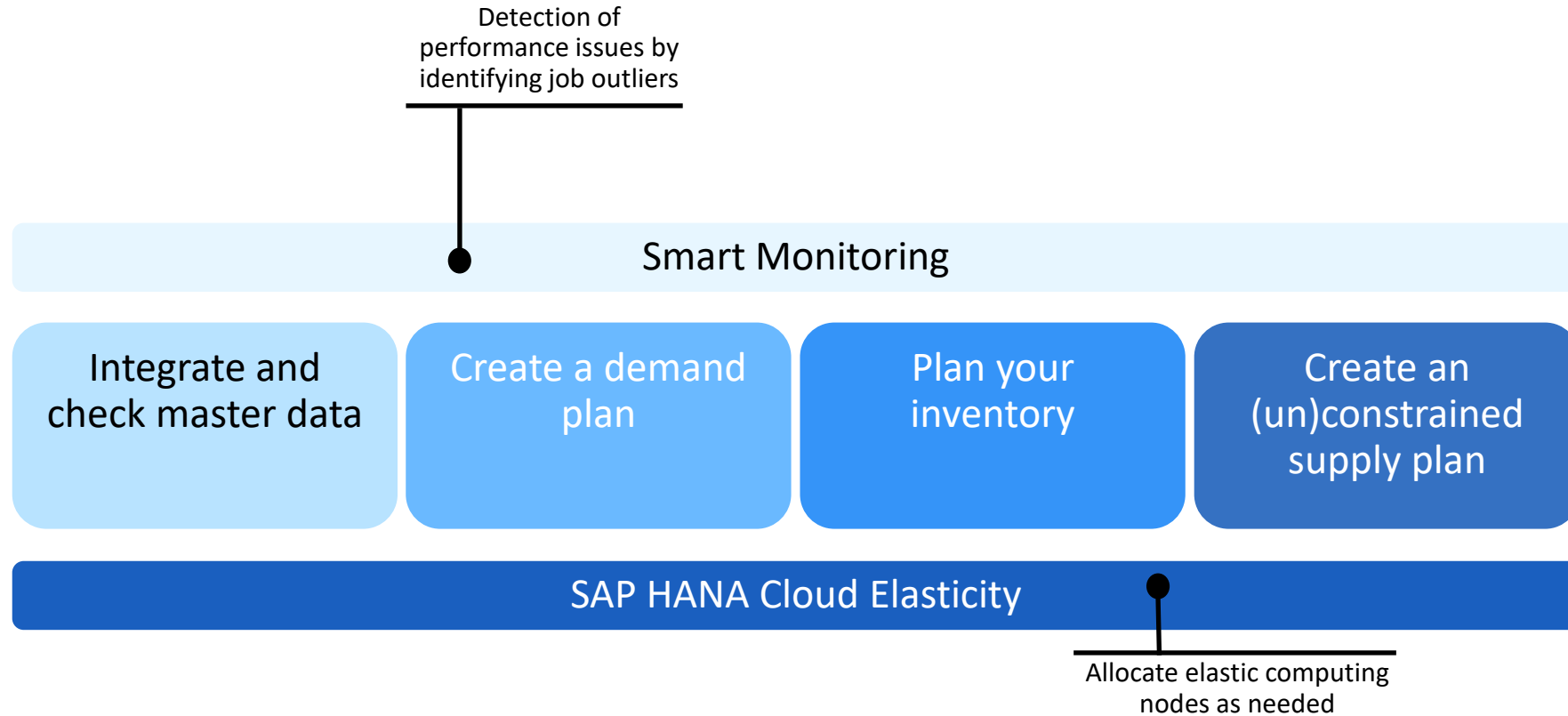
Start Small – Fail Fast

Understand the data that you need

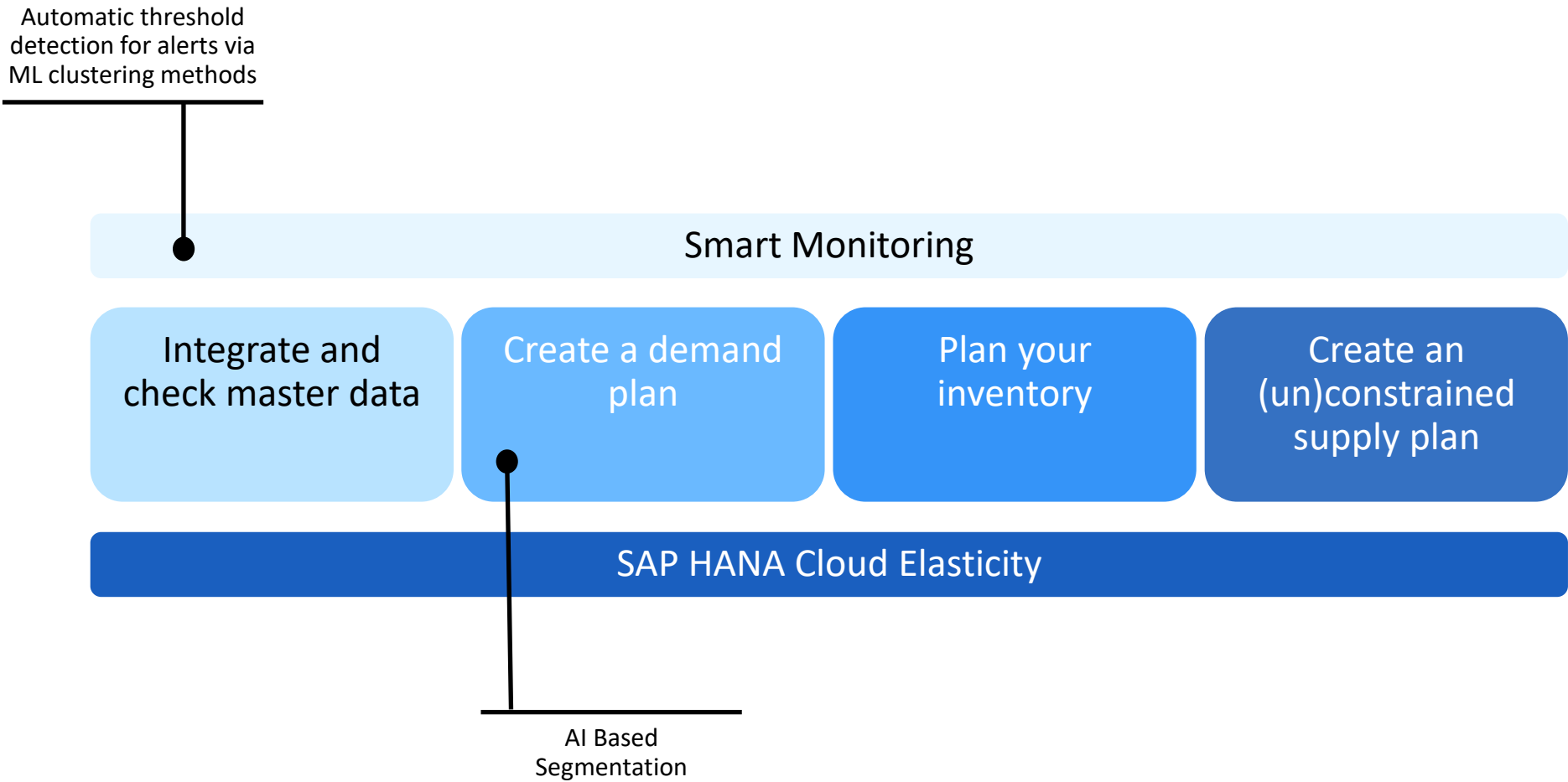
Allocate appropriate resources and time

Look for business value

Where to Start?

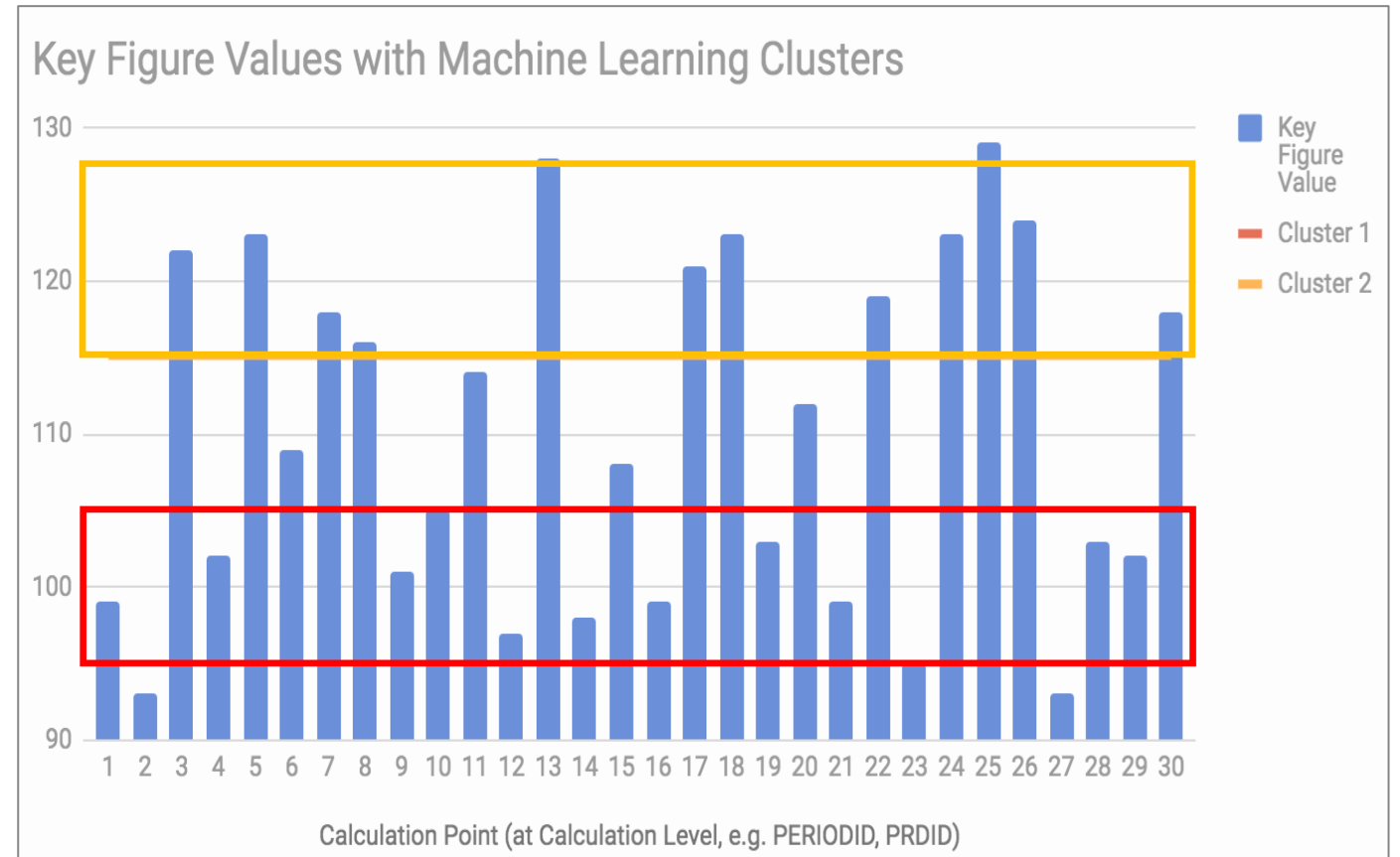


Least Effort to Adopt



Alert Threshold Determination with AI

Automated threshold adaption: With machine learning rules, you can **define custom alerts without knowing the exact thresholds**. If the data changes, your custom alert definition is automatically adjusted.



Attribute Segmentation in IBP

Key Capabilities – ABC/XYZ Segmentation

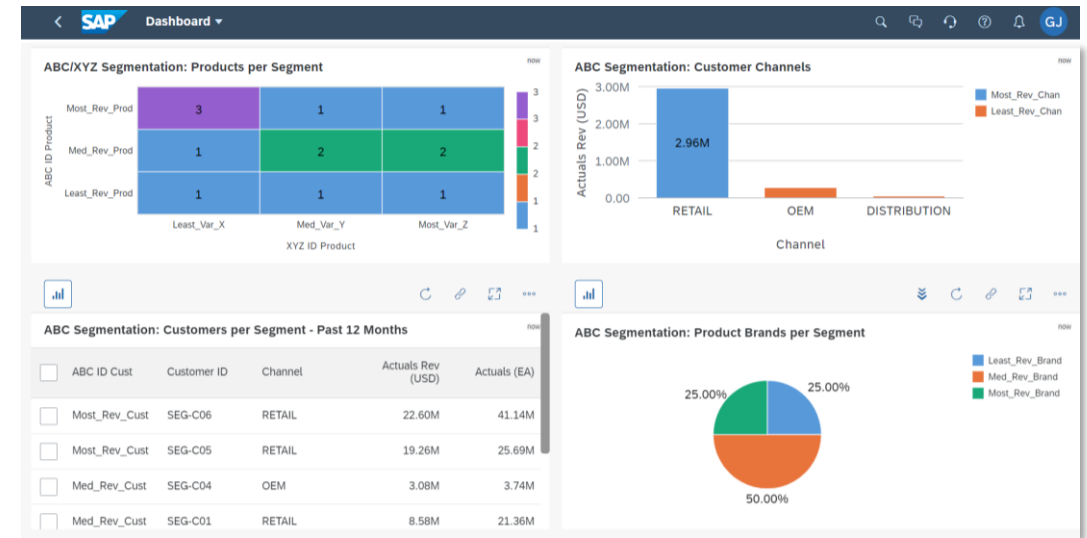
Product Importance / Profitability		
A	B	C



X	Y	Z
Product Volatility / Stability		

Segmentation groups are computed without having to define thresholds

Machine Learning Algorithm (k-means)*



SAP Segmentation Profile DPx_05_Prod_ABC_XYZ

DPx_05_Prod_ABC_XYZ
Product ABC-Rev (ON) and XYZ-Qty (ON)

General **ABC Segmentation** XYZ Segmentation

ABC Segments (3)

Name	Thresholds
Most_Rev_Prod	70 %
Med_Rev_Prod	20 %
Least_Rev_Prod	10 %

Use Locking: ☒

Attribute for Locking: ABC Locked Product (ZXSEGPUBLICLOCKED)

Define ABC and/or XYZ calculation rules

Run segmentation jobs regularly

Define planning strategies based on segmentation results

* K-means: an unsupervised machine learning clustering method that helps you find the right segments

Machine Learning Method in ABC / XYZ Segmentation

Segmentation_ABC_XYZ

Segmentation by Volume and Volatility

General

ABC Segmentation

XYZ Segmentation

-24 Months

Now

Segmentation Method:*

Use Grouping:

Attributes for Grouping:

Target UoM:

Target Currency:

(6) K-Means

(1) By Pareto Principle (Sorted and Cumulated %)

(2) By Pareto Principle (Sorted and Cumulated Values)

(3) By Number of Items (Sorted %)

(4) By Number of Items (Sorted Values)

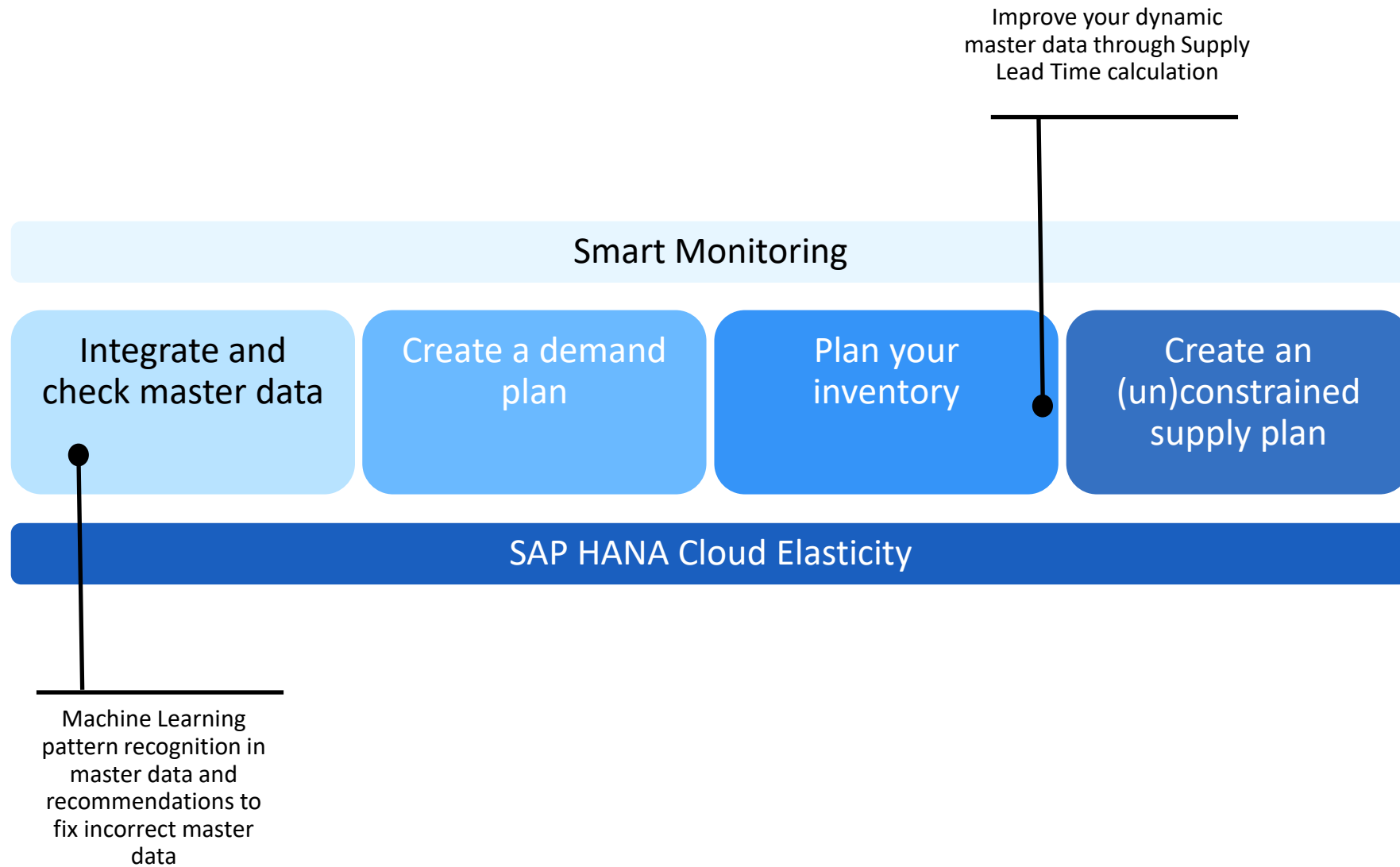
(5) By Segmentation Measure (Single Values)

(6) K-Means

ABC Segments (3)

<input type="checkbox"/>	Name *	Description
<input type="checkbox"/>	A	A
<input type="checkbox"/>	B	B
<input type="checkbox"/>	C	C

Early Business Benefit

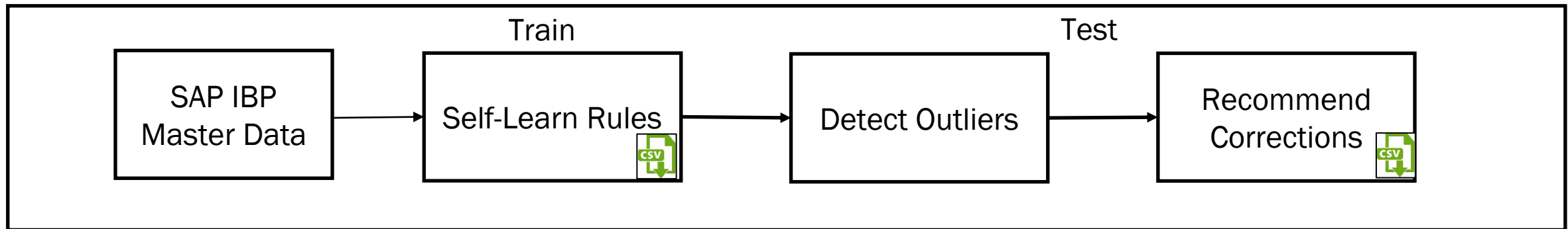


Master Data Consistency Check



Machine learning for Master Data Consistency **improves the master data quality** for planning in SAP IBP by self-learning semantic rules to identify problems in master data and **recommend values for correction**.

This helps **reduce manual efforts** in preparing data for planning.



	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	PRDDESCR	BRAND	PRDGROUP	PRDFAMILY	PRDSUBFAMILY	MATTYPEID	UOMID	COLUMN_NAME	CURRENT_VALUE	RECOMMENDED_VALUE	CONFIDENCE	ANTECEDENT	BEST_ASSOCIATED_RULE	SUPPORT	LIFT
1	IBP-100-1-0003	BRND100	HEADPHONES	FAMILY 100	SUB-FAMILY 100	FG		UOMID	na	EA	0.99981817	BRAND:BRND100	5	0.33325758	2.99999998
2	IBP-100-1-0007	BRND100	HEADPHONES	FAMILY 100	SUB-FAMILY 100	FG	KG	UOMID	KG	EA	0.99981817	BRAND:BRND100	5	0.33325758	2.99999998
3	IBP-100-1-4176	BRND100		FAMILY 100	SUB-FAMILY 100	FG	EA	PRDGROUP	na	HEADPHONES	0.99986364	PRDSUBFAMILY:SUB-FAMILY 100	13	0.33330303	1.00004547
4	IBP-100-2-0001	BRND300	HEADPHONES	FAMILY 200	SUB-FAMILY 200	FG	KG	BRAND	BRND300	BRND200	0.99995455	PRDSUBFAMILY:SUB-FAMILY 200	43	0.33331818	2.99986364
5	IBP-100-2-0002	BRND200	HEADPHONES	family200	SUB-FAMILY 200	FG	KG	PRDFAMILY	family200	FAMILY 200	0.99986364	PRDSUBFAMILY:SUB-FAMILY 200	40	0.33328788	3
6	IBP-100-3-0004	BRND300	HEADPHONES	FAMILY 300	SUB-FAMILY 300	FG		UOMID	na	PC	0.99990909	PRDSUBFAMILY:SUB-FAMILY 300	46	0.33328788	2.99999999
7	IBP-100-3-2419	BRND300		FAMILY 300	SUB-FAMILY 300	FG	PC	PRDGROUP	na	HEADPHONES	0.99977271	MATTYPEID:FG	7	0.19993939	0.99995452
8	IBP-100-3-3156	BRND300		FAMILY 300	SUB-FAMILY 300	FG	PC	PRDGROUP	na	HEADPHONES	0.99977271	MATTYPEID:FG	7	0.19993939	0.99995452
9	IBP-101-R-1-0010	BRND100		FAMILY 100	SUB-FAMILY 100	RAW	EA	PRDGROUP	na	HEADPHONES	0.99986364	PRDSUBFAMILY:SUB-FAMILY 100	13	0.33330303	1.00004547
10	IBP-101-R-1-3128	BRND100	HEADPHONES	FAMILY 100	SUB-FAMILY 100	RAW		UOMID	na	EA	0.99992424	PRDSUBFAMILY:SUB-FAMILY 100 MATTY	210	0.1999697	3.00031822
11	IBP-101-R-2-0017	BRND200		FAMILY 200	SUB-FAMILY 200	RAW	KG	PRDGROUP	na	HEADPHONES	0.99986364	PRDSUBFAMILY:SUB-FAMILY 200	18	0.33328788	1.00004546

Discover Patterns with the Master Data App

Get machine learning-based recommendations on how to fix your master data. The underlying algorithm is the same as the existing Master Data Consistency check, but with a new user-friendly UI.

Recommended Corrections

Corrections (1) Standard

If Purchasing Organization = 0001 then Lead Time should be 3

Pattern ID: 23

Master Data Type: Transportation Lane (KR2TLANE)

Status

Quality

New

Recommended

Conditions

Consequent

Quality

Filter Criteria

Recommended Corrections

Administrative Information

Conditions (1) Standard

Attribute	Value
Purchasing Organization (PURCHASINGORG)	0001

Consequent

Attribute:

Lead Time (LEADTIME)

Value:

3

Quality

Confidence

99.97 %

Confidence compares co-occurrences of attribute values in records (suggested patterns) to the total number of occurrences of the condition in a data set.

Support

79.98 %

Support is the rate of occurrence of a pattern within a data set. It represents the number of records that fit the pattern as a proportion of the number of all records.

Lift

1.25

Lift represents how likely it is that the elements of a pattern - that is, the condition and the consequent - are dependent from each other.

Condition ID

Ship-From Loc. ID

Additional Lane ID

Lead Time (Original Value)

Lead Time (Suggested Value)

2-PLANT

0000000002-SUPPLIER

01

10

3

All

Search

Q

Confidence

Quality

Support

Status

100.000 %

Certain

19.980 %

New

100.000 %

Certain

19.980 %

New

99.9749 %

Recommended

79.980 %

New

99.9749 %

Recommended

79.980 %

New

99.9666 %

Recommended

59.980 %

New

99.9666 %

Recommended

59.980 %

Accepted

99.900 %

Recommended

19.980 %

New

99.900 %

Recommended

19.980 %

New

99.900 %

Recommended

19.980 %

New

99.900 %

Recommended

19.980 %

New

99.900 %

Recommended

19.980 %

New

99.900 %

Recommended

19.980 %

New

99.900 %

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19.980 %

Accepted

99.900 %

Recommended

19.980 %

New

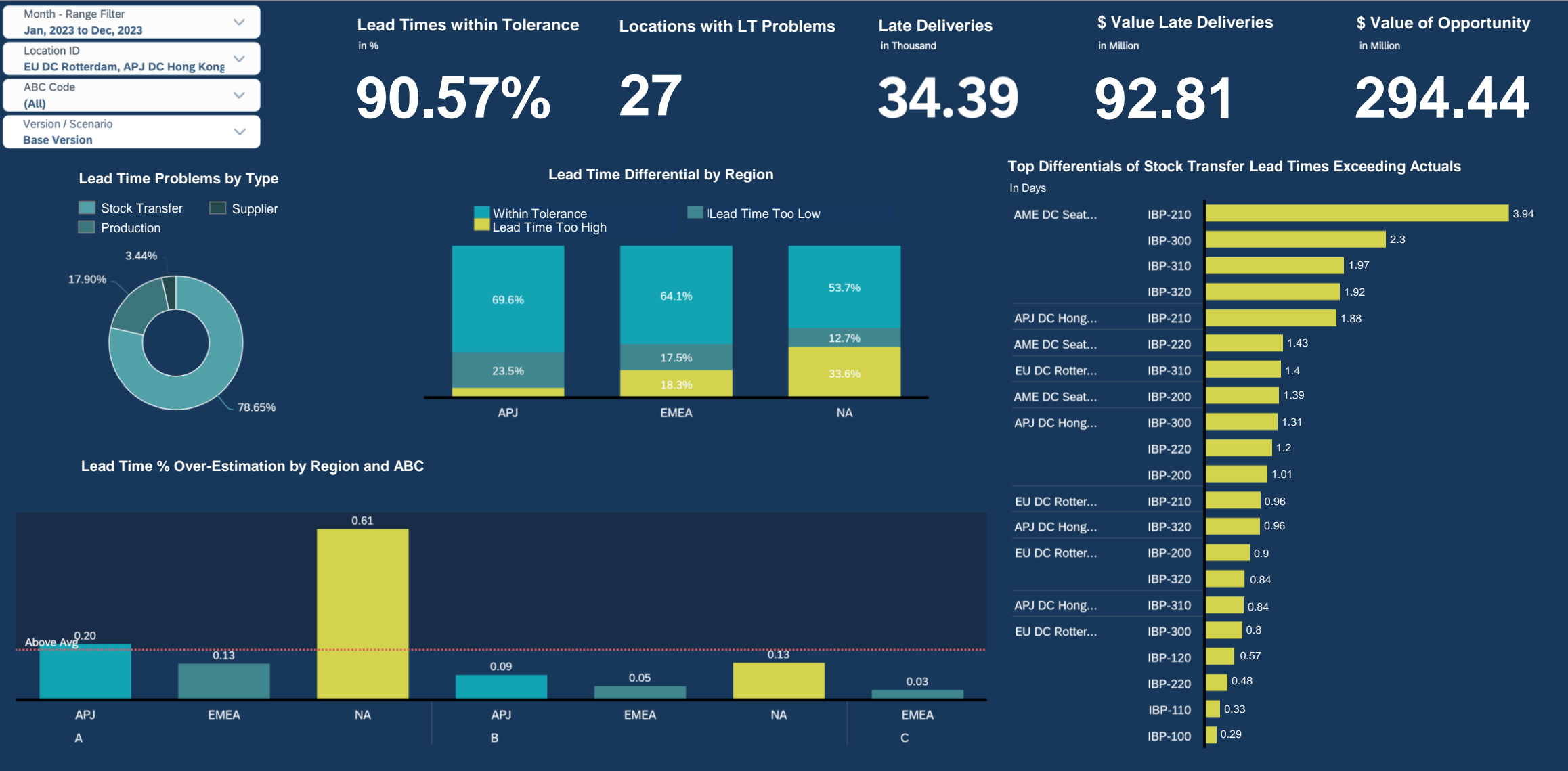
86.750 %

Probable

19.980 %

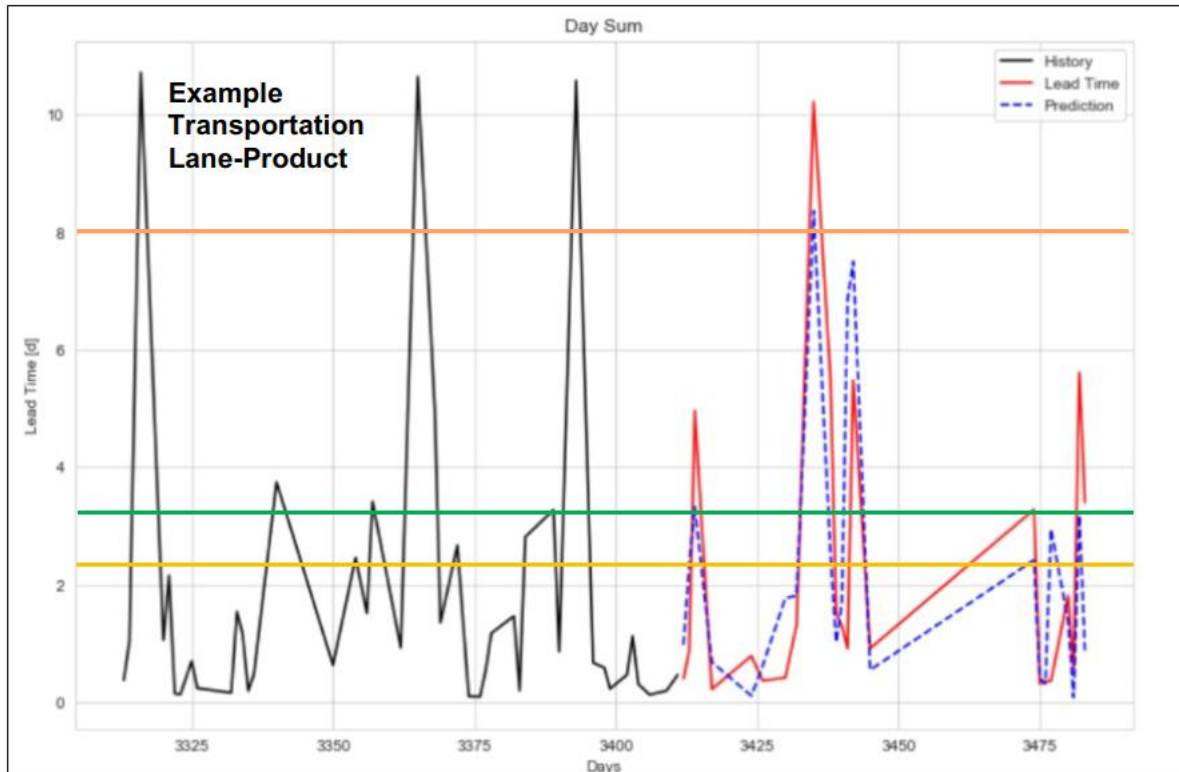
Rejected

Lead Time Analytics Mock-up (Setup Required)



Lead Time Measurement and Prediction

We recommend customers start with analytics first (Pareto principle)



Feature Driven Lead Time Prediction, e.g. Transport from/to Locations, Material ID, Month, Weekday



Historic Average Duration Is a Lead Time Description



Rough Guess of the Lead Time Duration



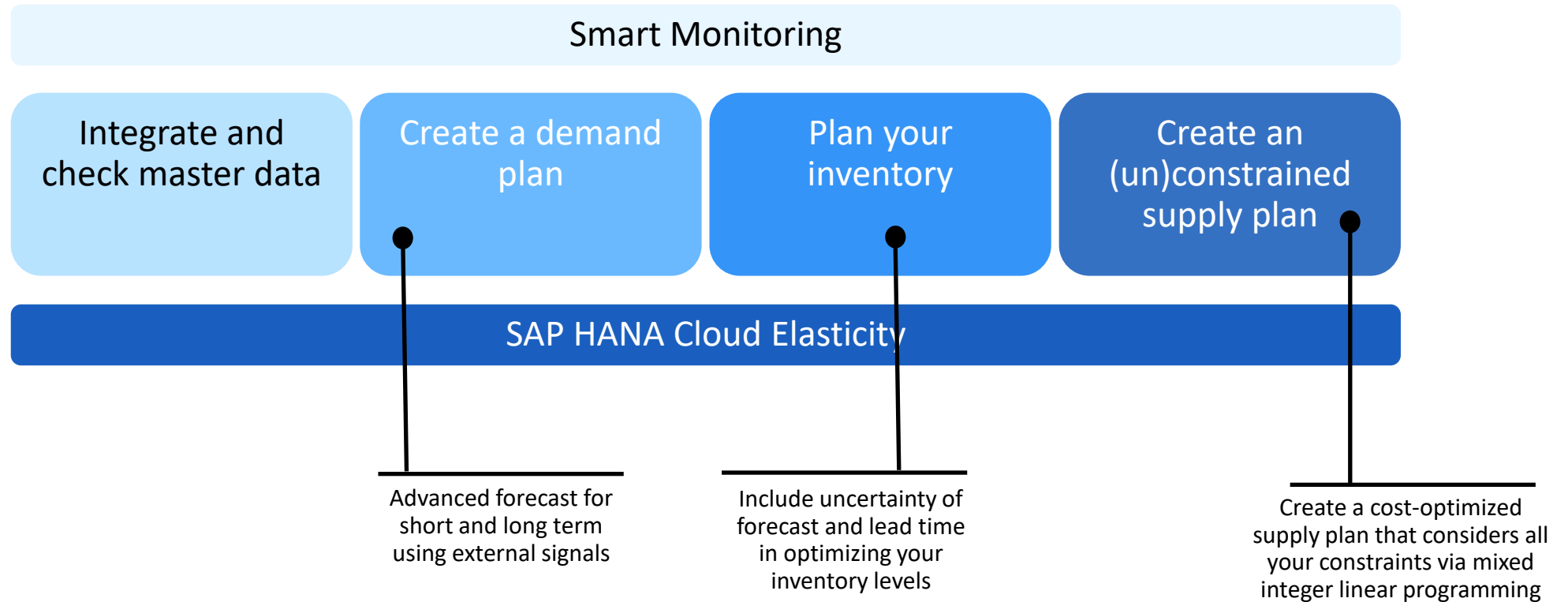
Measurement: Lead Time, Lead Time Standard Deviation, Minimum and Maximum Lead Time

Prediction: Machine Learning based prediction using Forecast Models*, potentially time-varying

(Note: SAP IBP planning operators for Supply and Inventory currently support static lead time)

* IBP for demand license

Needs Data, Analysis and Change Management

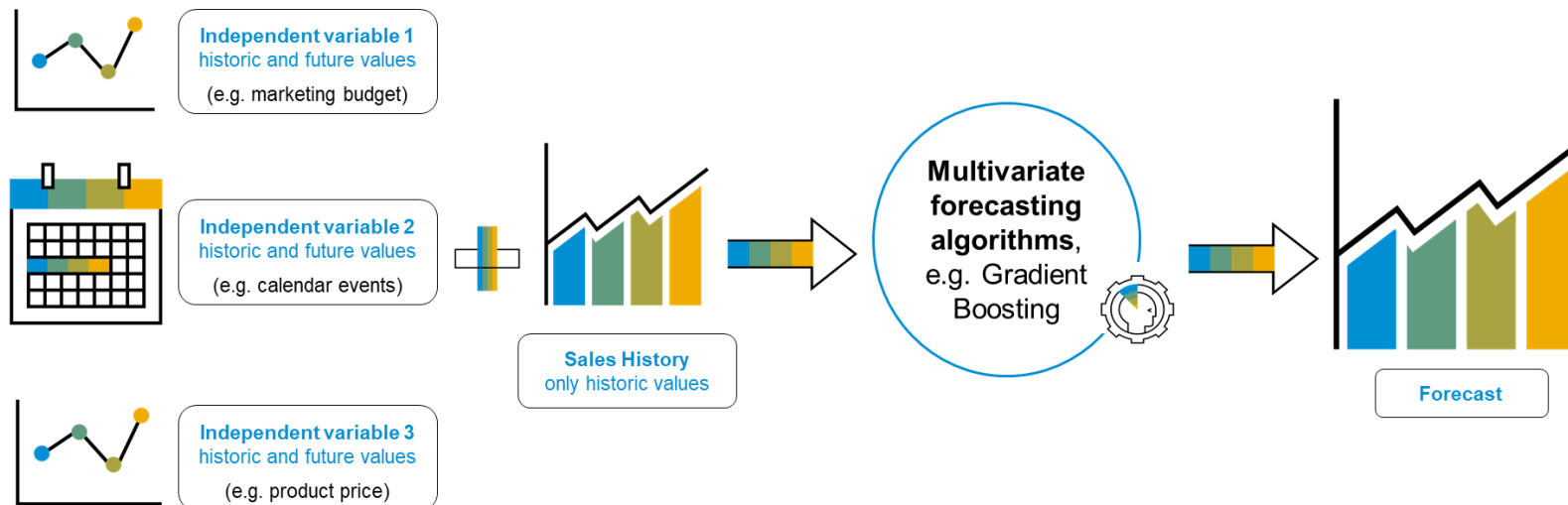


Using ML in Demand Forecasting

Change management – Moving from traditional Time-Series algorithms to multi-variate, ML based Algorithms

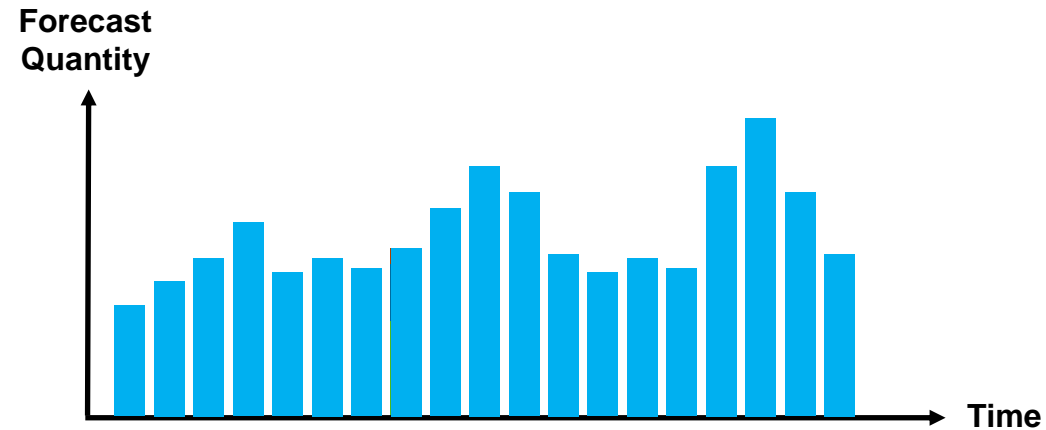
Data needs – Bring more data to the party, but what data?

Where to get data? – Internal and/or External sources, integration effort, mapping, etc...



Forecast Explanation (Decomposition) in IBP

Evaluate the impact of each additional independent variable on the forecast.
The variable impact analysis can be done also for ex-post forecast.



Generative AI in IBP



Generative AI Strategy for IBP

Leverage SAP Joule

- Documentation Search
- Navigation Assistance

Concentrate on what GenAI does well

- Explanation
- Summarization
- Generation of Code/Configuration

Demonstration

Concept for Generative AI use in IBP

- Natural language interaction with IBP
- Explanation of Optimizer Results



Demand Supply Review

Versions / Scenarios

Data

Workspace



Simulate

Save

Scenarios

Jobs

Plan

Design

Save As



01 Demand Supply Workbook | 01 Demand Supply View

Load Planning Filter

Time Periods:

Go Clear Adapt Filters

Consensus Demand

Distribution Center to Customer

Plant to Distribution Center

DC and Plant Location Centric

Production Centric

Production Capacity Usage Chart

	Customer ID	Product ID	Key Figures	OCT 2023	NOV 2023	DEC 2023	JAN 2024	FEB 2024
1	101	PRODUCT1	Customer Demand	3,000	3,000	3,000	3,000	3,000
2	101	PRODUCT1	Total Customer Demand Delivered			3,000	3,000	3,000
3	101	PRODUCT1	Non-Delivery Cost Rate for Customer Demand	200	200	200	200	200
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	3,000	3,000	0	0	0
		PRODUCT2	Customer Demand	3,000	3,000	3,000	3,000	3,000
		PRODUCT2	Total Customer Demand Delivered				3,000	
		PRODUCT2	Non-Delivery Cost Rate for Customer Demand	100	100	100	100	100
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	3,000	3,000	3,000	0	3,000
		PRODUCT1	Customer Demand	1,000	1,000	1,000	1,000	1,000
		PRODUCT1	Total Customer Demand Delivered		1,000	1,000	1,000	1,000
		PRODUCT1	Non-Delivery Cost Rate for Customer Demand	50	50	50	50	50
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	1,000	0	0	0	0
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		PRODUCT2	Total Customer Demand Delivered		2,000	2,000	2,000	2,000
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▼ 01 Demand Supply Workbook

01 Demand Supply View

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Optimizer found optimal solution. Any remaining runtime is not needed.

Optimizer solving time: 0.03 seconds

Optimizer explanation time: 0.14 seconds

Optimization problem contains 1396 variables

Optimization problem contains 0 discrete variables

Optimization problem contains 891 linear constraints

How can I help you?



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Can you summarize the planning run KPIs?



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		PRODUCT1	Non-Delivery Cost Rate for Customer Demand	50	50	50	50	50	
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	1,000	0	0	0	0	
		PRODUCT2	Customer Demand	2,000	2,000	2,000	2,000	2,000	
		PRODUCT2	Total Customer Demand Delivered		2,000	2,000	2,000	2,000	
		PRODUCT2	Non-Delivery Cost Rate for Customer Demand	40	40	40	40	40	
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	2,000	0	0	0	0	

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Optimization problem contains 0 discrete variables

Optimization problem contains 891 linear constraints

Can you summarize the planning run KPIs?

KPI	KPI Value
Status	Optimal Solution Found
Solution Gap	
Total Demand Fulfillment Rate	74.90
Inventory Target Fulfillment Rate	100.00
Adjusted Production Quantity	0
Adjusted Transport Quantity	0

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	Customer ID ▾	Product ID ▾	Key Figures ▾	OCT 2023 ▾	NOV 2023 ▾	DEC 2023 ▾	JAN 2024 ▾	FEB 2024 ▾	
1	101	PRODUCT1	Customer Demand	3,000	3,000	3,000	3,000	3,000	
2	101	PRODUCT1	Total Customer Demand Delivered			3,000	3,000	3,000	
3	101	PRODUCT1	Non-Delivery Cost Rate for Customer Demand	200	200	200	200	200	
4	101	PRODUCT1	Unfulfilled Customer Demand (Shortage)	3,000	3,000	0	0	0	
5	101	PRODUCT2	Customer Demand	3,000	3,000	3,000	3,000	3,000	
6	101	PRODUCT2	Total Customer Demand Delivered				3,000		
7	101	PRODUCT2	Non-Delivery Cost Rate for Customer Demand	100	100	100	100	100	
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	3,000	3,000	3,000	0	3,000	
		PRODUCT1	Customer Demand	1,000	1,000	1,000	1,000	1,000	
		PRODUCT1	Total Customer Demand Delivered		1,000	1,000	1,000	1,000	
		PRODUCT1	Non-Delivery Cost Rate for Customer Demand	50	50	50	50	50	
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	1,000	0	0	0	0	
		PRODUCT2	Customer Demand	2,000	2,000	2,000	2,000	2,000	
		PRODUCT2	Total Customer Demand Delivered		2,000	2,000	2,000	2,000	
		PRODUCT2	Non-Delivery Cost Rate for Customer Demand	40	40	40	40	40	
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	2,000	0	0	0	0	

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KPI	KPI Value
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Solution Gap	
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Inventory Target Fulfillment Rate	100.00
Adjusted Production Quantity	0
Adjusted Transport Quantity	0

Why is the demand fulfillment rate low?



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	Customer ID	Product ID	Key Figures	OCT 2023	NOV 2023	DEC 2023	JAN 2024	FEB 2024
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2	101	PRODUCT1	Total Customer Demand Delivered			3,000	3,000	3,000
3	101	PRODUCT1	Non-Delivery Cost Rate for Customer Demand	200	200	200	200	200
4	101	PRODUCT1	Unfulfilled Customer Demand (Shortage)	3,000	3,000	0	0	0
5	101	PRODUCT2	Customer Demand	3,000	3,000	3,000	3,000	3,000
6	101	PRODUCT2	Total Customer Demand Delivered				3,000	
7	101	PRODUCT2	Non-Delivery Cost Rate for Customer Demand	100	100	100	100	100
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	3,000	3,000	3,000	0	3,000
		PRODUCT1	Customer Demand	1,000	1,000	1,000	1,000	1,000
		PRODUCT1	Total Customer Demand Delivered		1,000	1,000	1,000	1,000
		PRODUCT1	Non-Delivery Cost Rate for Customer Demand	50	50	50	50	50
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	1,000	0	0	0	0
		PRODUCT2	Customer Demand	2,000	2,000	2,000	2,000	2,000
		PRODUCT2	Total Customer Demand Delivered		2,000	2,000	2,000	2,000
		PRODUCT2	Non-Delivery Cost Rate for Customer Demand	40	40	40	40	40
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	2,000	0	0	0	0

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KPI	KPI Value
Status	Optimal Solution Found
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Inventory Target Fulfillment Rate	100.00
Adjusted Production Quantity	0
Adjusted Transport Quantity	0

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	Customer ID ▾	Product ID ▾	Key Figures ▾	OCT 2023 ▾	NOV 2023 ▾	DEC 2023 ▾	JAN 2024 ▾	FEB 2024 ▾	
1	101	PRODUCT1	Customer Demand	3,000	3,000	3,000	3,000	3,000	
2	101	PRODUCT1	Total Customer Demand Delivered			3,000	3,000	3,000	
3	101	PRODUCT1	Non-Delivery Cost Rate for Customer Demand	200	200	200	200	200	
4	101	PRODUCT1	Unfulfilled Customer Demand (Shortage)	3,000	3,000	0	0	0	
5	101	PRODUCT2	Customer Demand	3,000	3,000	3,000	3,000	3,000	
6	101	PRODUCT2	Total Customer Demand Delivered				3,000		
7	101	PRODUCT2	Non-Delivery Cost Rate for Customer Demand	100	100	100	100	100	
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	3,000	3,000	3,000	0	3,000	
		PRODUCT1	Customer Demand	1,000	1,000	1,000	1,000	1,000	
		PRODUCT1	Total Customer Demand Delivered		1,000	1,000	1,000	1,000	
		PRODUCT1	Non-Delivery Cost Rate for Customer Demand	50	50	50	50	50	
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	1,000	0	0	0	0	
		PRODUCT2	Customer Demand	2,000	2,000	2,000	2,000	2,000	
		PRODUCT2	Total Customer Demand Delivered		2,000	2,000	2,000	2,000	
		PRODUCT2	Non-Delivery Cost Rate for Customer Demand	40	40	40	40	40	
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	2,000	0	0	0	0	

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The demand fulfillment rate is low due to two main reasons:

1. Resource Capacity: The resource capacity of 4000.000000 is too low. The data suggests that the resource capacity needs to be increased by at least 2000.000000 to 3000.000000 in various instances to meet the customer demand.

2. Sourcing Issues: There are instances where sourcing for the required supply could not be performed in time due to the planning horizon. This has resulted in a shortfall in the fulfillment of customer demand.

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Production Capacity Usage Chart

	Customer ID ▾	Product ID ▾	Key Figures ▾	OCT 2023 ▾	NOV 2023 ▾	DEC 2023 ▾	JAN 2024 ▾	FEB 2024 ▾	
1	101	PRODUCT1	Customer Demand	3,000	3,000	3,000	3,000	3,000	
2	101	PRODUCT1	Total Customer Demand Delivered			3,000	3,000	3,000	
3	101	PRODUCT1	Non-Delivery Cost Rate for Customer Demand	200	200	200	200	200	
4	101	PRODUCT1	Unfulfilled Customer Demand (Shortage)	3,000	3,000	0	0	0	
5	101	PRODUCT2	Customer Demand	3,000	3,000	3,000	3,000	3,000	
6	101	PRODUCT2	Total Customer Demand Delivered				3,000		
7	101	PRODUCT2	Non-Delivery Cost Rate for Customer Demand	100	100	100	100	100	
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	3,000	3,000	3,000	0	3,000	
		PRODUCT1	Customer Demand	1,000	1,000	1,000	1,000	1,000	
		PRODUCT1	Total Customer Demand Delivered		1,000	1,000	1,000	1,000	
		PRODUCT1	Non-Delivery Cost Rate for Customer Demand	50	50	50	50	50	
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	1,000	0	0	0	0	
		PRODUCT2	Customer Demand	2,000	2,000	2,000	2,000	2,000	
		PRODUCT2	Total Customer Demand Delivered		2,000	2,000	2,000	2,000	
		PRODUCT2	Non-Delivery Cost Rate for Customer Demand	40	40	40	40	40	
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	2,000	0	0	0	0	

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The demand fulfillment rate is low due to two main reasons:

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2. Sourcing Issues: There are instances where sourcing for the required supply could not be performed in time due to the planning horizon. This has resulted in a shortfall in the fulfillment of customer demand.

demand fulfillment for Product 2/Customer 101



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	Customer ID	Product ID	Key Figures	OCT 2023	NOV 2023	DEC 2023	JAN 2024	FEB 2024
1	101	PRODUCT1	Customer Demand	3,000	3,000	3,000	3,000	3,000
2	101	PRODUCT1	Total Customer Demand Delivered			3,000	3,000	3,000
3	101	PRODUCT1	Non-Delivery Cost Rate for Customer Demand	200	200	200	200	200
4	101	PRODUCT1	Unfulfilled Customer Demand (Shortage)	3,000	3,000	0	0	0
5	101	PRODUCT2	Customer Demand	3,000	3,000	3,000	3,000	3,000
6	101	PRODUCT2	Total Customer Demand Delivered				3,000	
7	101	PRODUCT2	Non-Delivery Cost Rate for Customer Demand	100	100	100	100	100
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	3,000	3,000	3,000	0	3,000
		PRODUCT1	Customer Demand	1,000	1,000	1,000	1,000	1,000
		PRODUCT1	Total Customer Demand Delivered		1,000	1,000	1,000	1,000
		PRODUCT1	Non-Delivery Cost Rate for Customer Demand	50	50	50	50	50
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	1,000	0	0	0	0
		PRODUCT2	Customer Demand	2,000	2,000	2,000	2,000	2,000
		PRODUCT2	Total Customer Demand Delivered		2,000	2,000	2,000	2,000
		PRODUCT2	Non-Delivery Cost Rate for Customer Demand	40	40	40	40	40
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	2,000	0	0	0	0

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due to the planning horizon. This has resulted in a shortfall in the fulfillment of customer demand.

Explain the possible causes for low demand fulfillment for Product 2/Customer 101?

Based on the data provided, the low demand fulfillment for Product 2/Customer 101 can be attributed to two main issues:

1. Resource Capacity: The resource capacity of 4000.000000 is too low to meet the customer's demand of 3000.000000. The resource capacity needs to be increased by at least 2000.000000 to

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	Customer ID	Product ID	Key Figures	OCT 2023	NOV 2023	DEC 2023	JAN 2024	FEB 2024
1	101	PRODUCT1	Customer Demand	3,000	3,000	3,000	3,000	3,000
2	101	PRODUCT1	Total Customer Demand Delivered			3,000	3,000	3,000
3	101	PRODUCT1	Non-Delivery Cost Rate for Customer Demand	200	200	200	200	200
4	101	PRODUCT1	Unfulfilled Customer Demand (Shortage)	3,000	3,000	0	0	0
5	101	PRODUCT2	Customer Demand	3,000	3,000	3,000	3,000	3,000
6	101	PRODUCT2	Total Customer Demand Delivered				3,000	
7	101	PRODUCT2	Non-Delivery Cost Rate for Customer Demand	100	100	100	100	100
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	3,000	3,000	3,000	0	3,000
		PRODUCT1	Customer Demand	1,000	1,000	1,000	1,000	1,000
		PRODUCT1	Total Customer Demand Delivered		1,000	1,000	1,000	1,000
		PRODUCT1	Non-Delivery Cost Rate for Customer Demand	50	50	50	50	50
		PRODUCT1	Unfulfilled Customer Demand (Shortage)	1,000	0	0	0	0
		PRODUCT2	Customer Demand	2,000	2,000	2,000	2,000	2,000
		PRODUCT2	Total Customer Demand Delivered		2,000	2,000	2,000	2,000
		PRODUCT2	Non-Delivery Cost Rate for Customer Demand	40	40	40	40	40
		PRODUCT2	Unfulfilled Customer Demand (Shortage)	2,000	0	0	0	0

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to be increased by at least 2000.000000 to 3000.000000 in various periods to fully satisfy the customer's demand.

2. Planning Horizon: The company is unable to source the missing supply of 3000.000000 in time due to the planning horizon. This means that the company's planning and forecasting may not be accurately predicting customer demand, leading to insufficient supply to meet the demand.

These issues are causing the customer's demand to not be fully satisfied, leading to low demand fulfillment.

How can I help you?

Roadmap for AI in IBP



Basic AI in SAP Integrated Business Planning

Latest and planned innovations

**Q1
2024**

Extreme Gradient
Boosting for
Forecasting

Supply Lead Time
Recommendation

Basic AI in SAP Integrated Business Planning

Latest and planned innovations

**Q1
2024**

Extreme Gradient
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Recommendation

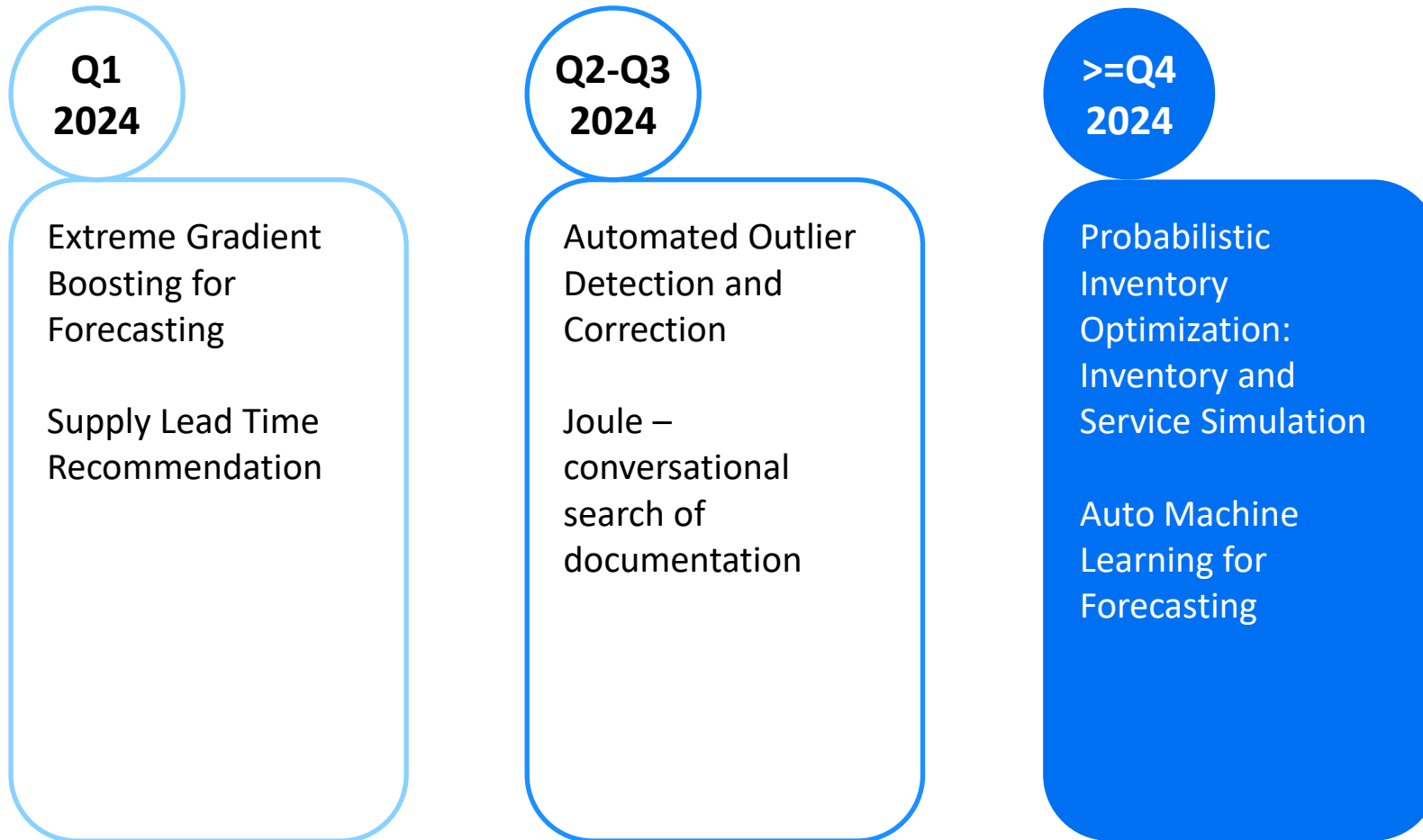
**Q2-Q3
2024**

Automated Outlier
Detection and
Correction

Joule –
conversational
search of
documentation

Basic AI in SAP Integrated Business Planning

Latest and planned innovations



Premium AI in SAP Integrated Business Planning

Planned innovations -

General Usability

GenAI for Excel Add-
In usability

Premium AI in SAP Integrated Business Planning

Planned innovations

General Usability

GenAI for Excel Add-In usability

Scenario Planning

Joule – What If Scenario Planning

Premium AI in SAP Integrated Business Planning

Planned innovations

General Usability

GenAI for Excel Add-In usability

Scenario Planning

Joule – What If Scenario Planning

Faster Insights

Joule – Explanation of optimizations run

Forecast Explainability powered by GenAI

Premium AI in SAP Integrated Business Planning

Planned innovations

General Usability

GenAI for Excel Add-In usability

Scenario Planning

Joule – What If Scenario Planning

Faster Insights

Joule – Explanation of optimizations run

Forecast Explainability powered by GenAI

Accelerated Execution

Joule - Execution Assistant to create orders

Wrap Up



Where to Find More Information

www.sap.com/ai

- Get started with SAP Business AI

[Supply Chain | SAP Business AI](#) (on SAP.com)

- Scroll to Planning for more information

SAP Business AI White Paper

- Our Vision and approach for SAP Business AI

[IBP Roadmap](#) (S-user required – to request [click here](#))

- Select “Focus Topics” > Artificial Intelligence (must have an S-User to access)

<http://help.sap.com/IBP>

- Follow Product Hierarchy > Supply Chain Management > SAP Extended Warehouse Management > SAP Extended Warehouse Management (SAP EWM)

Key Points to Take Home

- AI is more than just Generative AI
- Business AI is SAP's strategy for Relevant, Responsible and Reliable AI
- SAP IBP already has AI embedded in the application
- There are ways to start small with AI
- Generative AI is coming in SAP IBP

Thank you! Any Questions?

Tod Stenger

Tod.Stenger@sap.com

[Linkedin.com/in/](https://www.linkedin.com/in/)

Please remember to
complete your session
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