

A Risk-Resilient and Sustainable Supply Chain

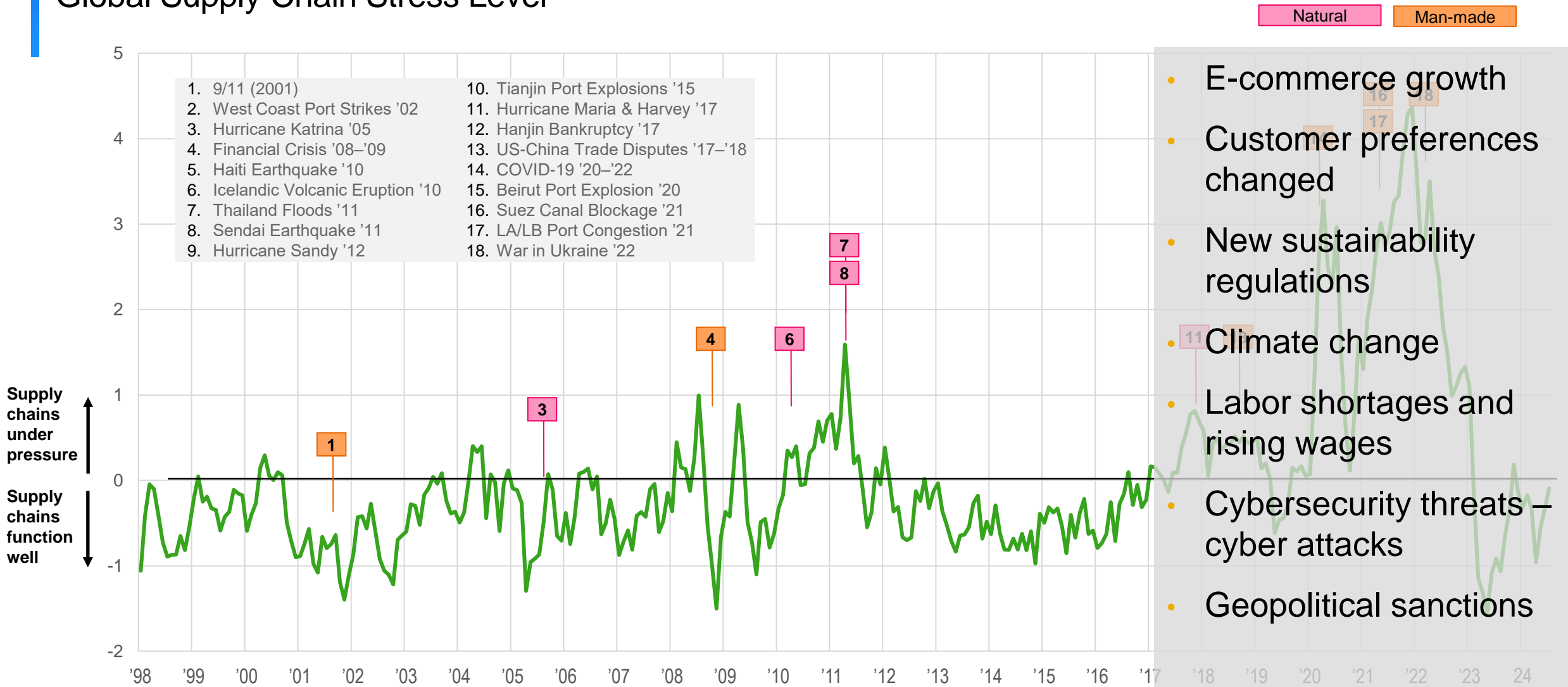
Juan Cartier, CRO - Digital Supply Chain, SAP EMEA

INTERNAL – SAP and Customers Only

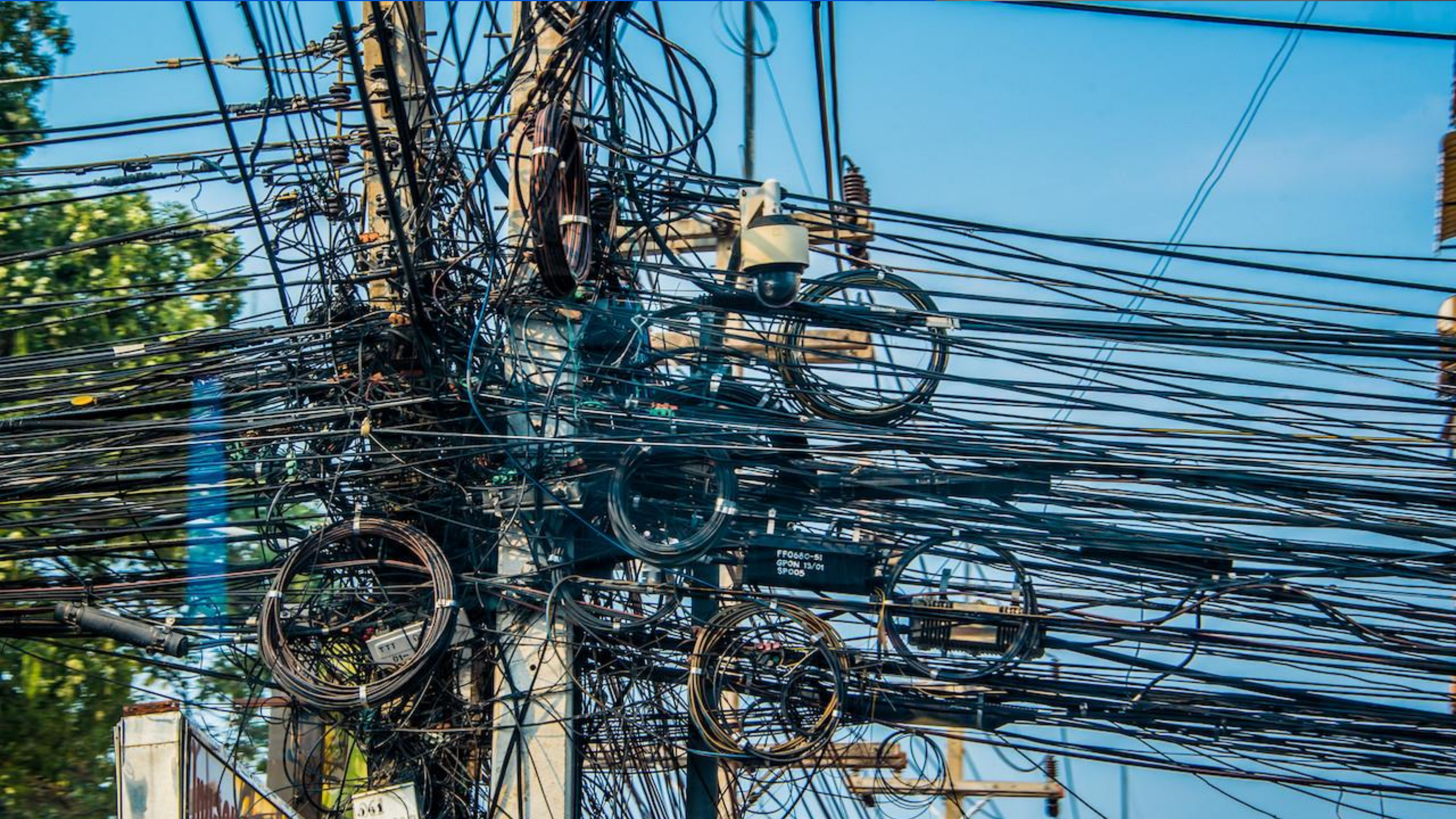


Global disruptions are increasing supply chain pressure

Global Supply Chain Stress Level



Source: Federal Reserve Bank of New York, Global Supply Chain Pressure Index (GSCPI), [link](#); [Link](#) to interactive graphic

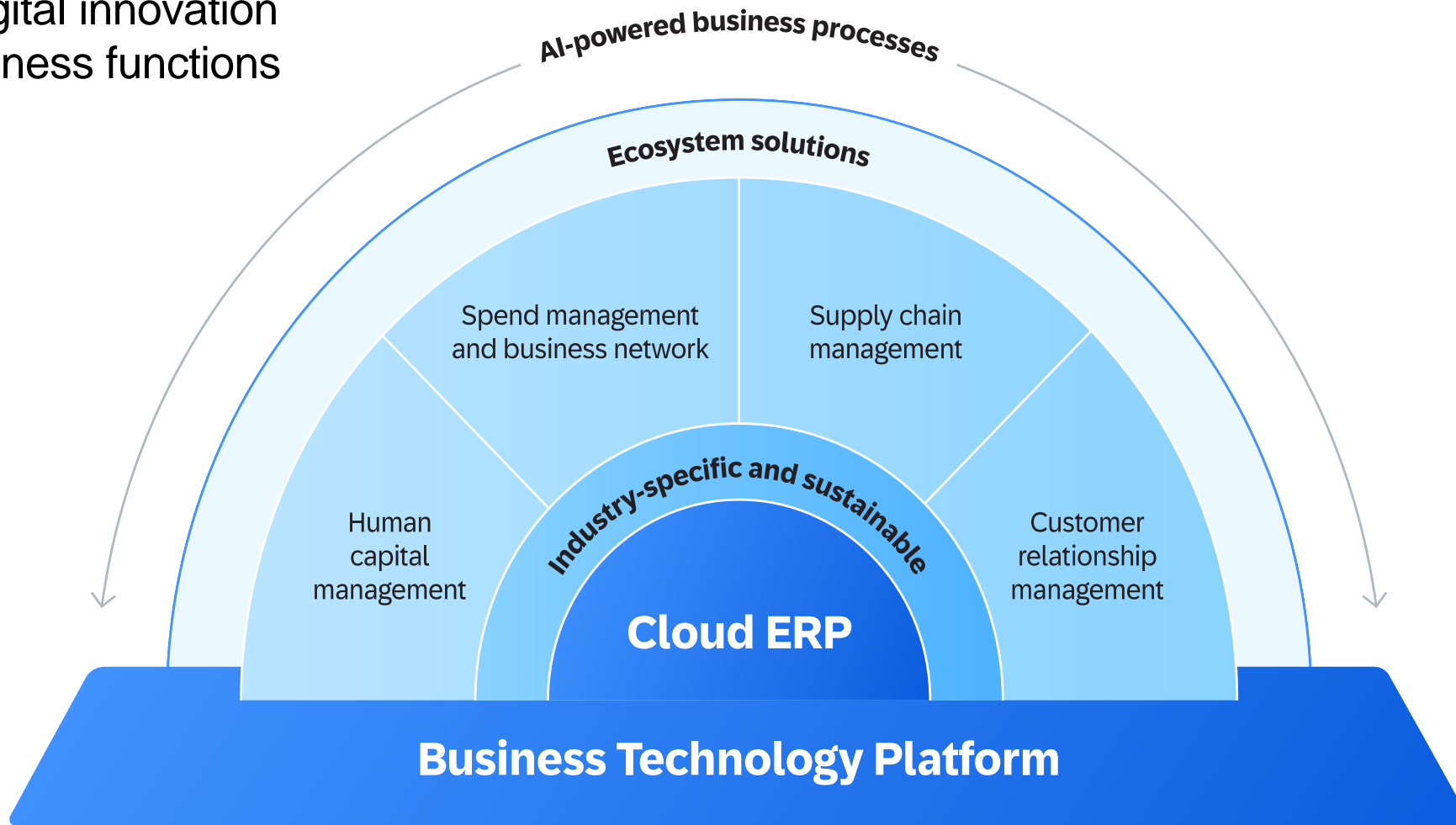


FF066C-51
GPON 13/01
SP005

561

SAP Strategy

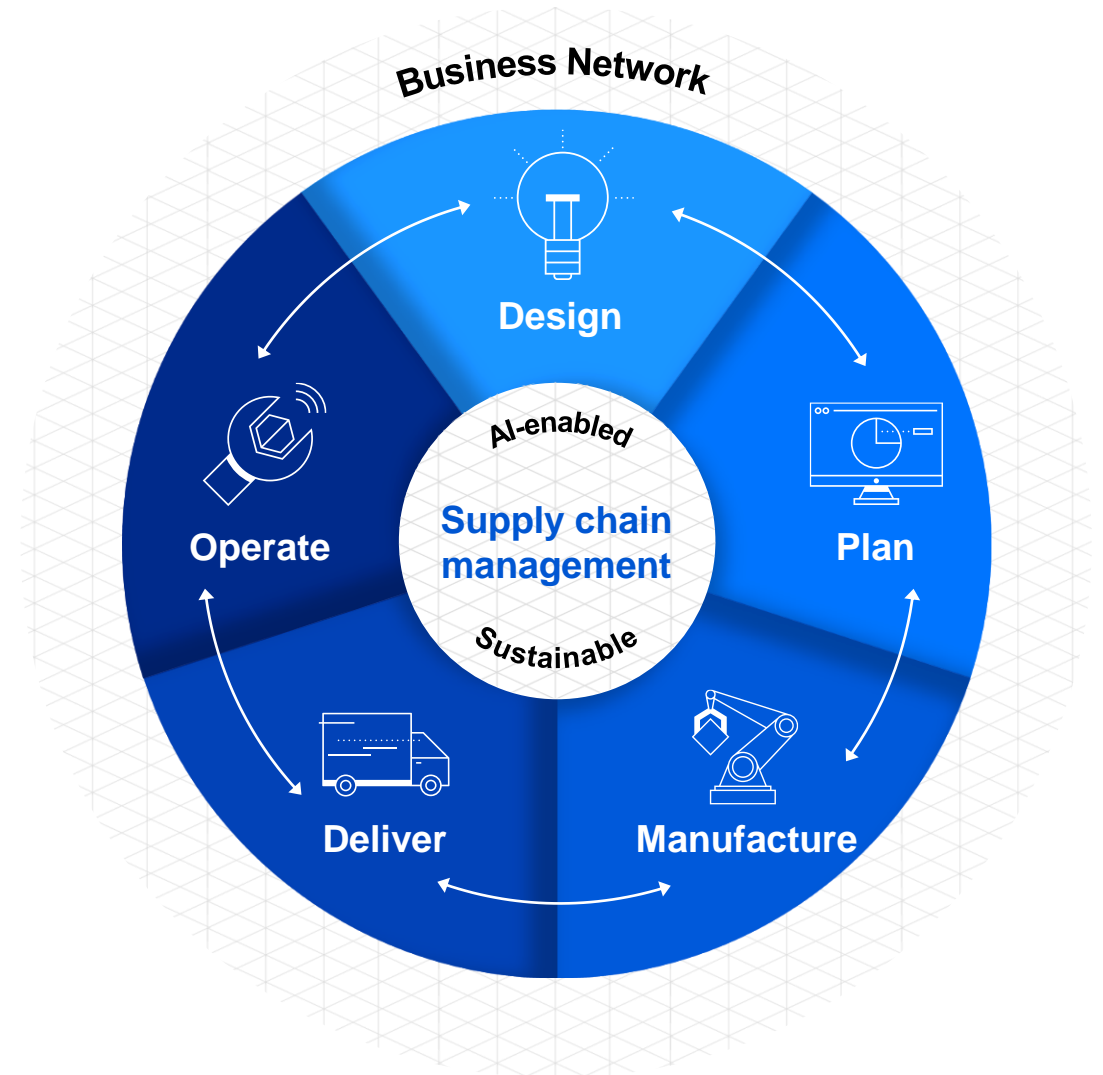
Unleash digital innovation
across business functions



SAP Digital Supply Chain

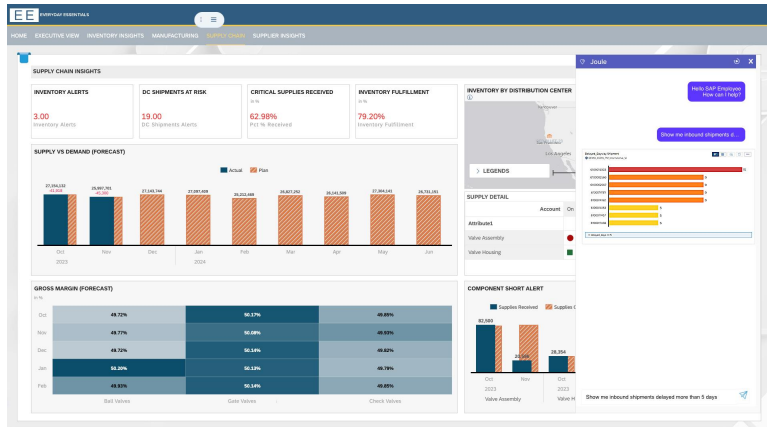
Unleash digital innovation
across business functions

- 1 Connect every process
- 2 Contextualize every decision
- 3 Collaborate with your ecosystem

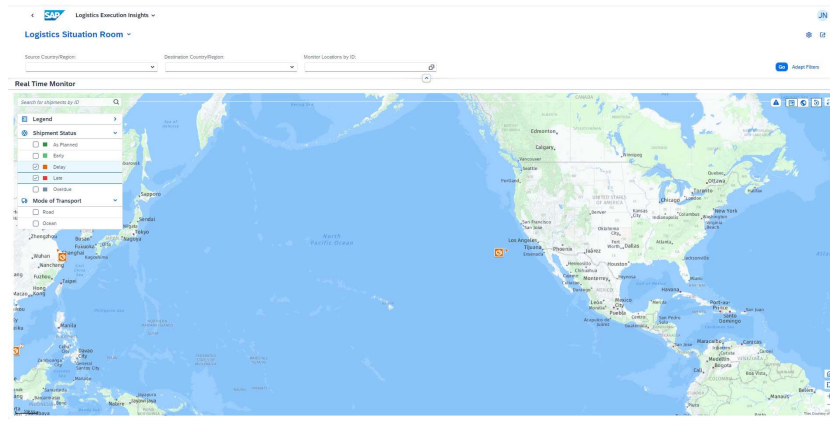


SAP Strategy

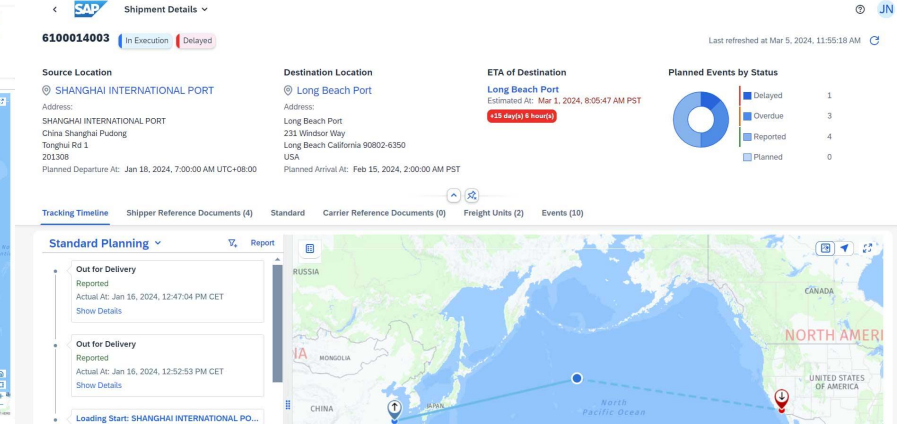
Unleash digital innovation
across business functions



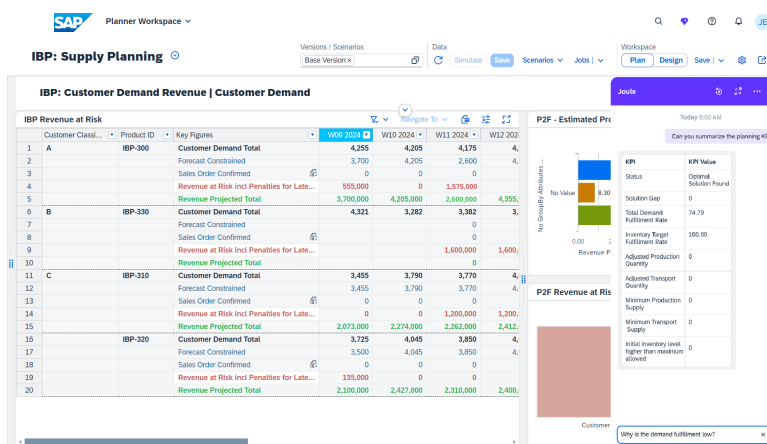
Intelligent Dashboard



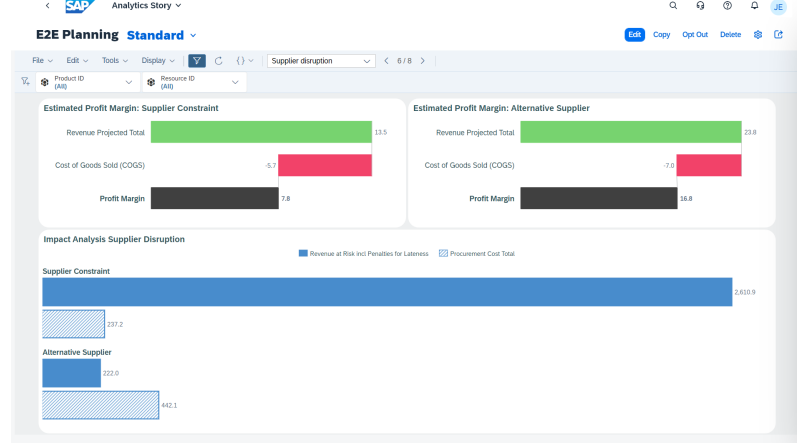
Logistics Situation Room



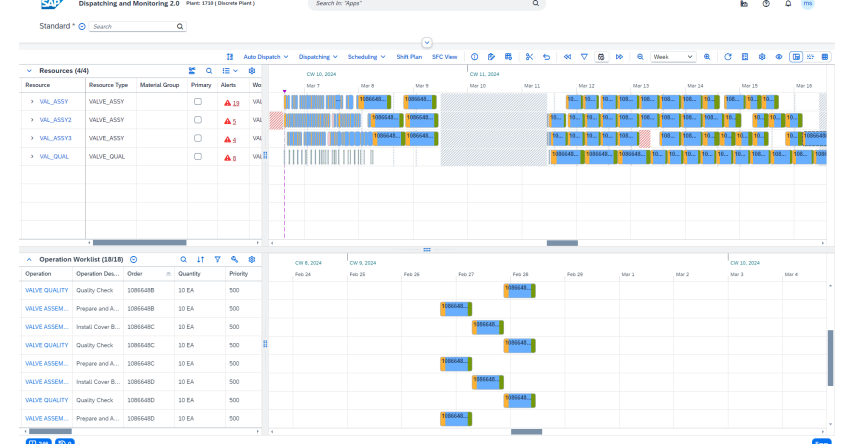
Global Track and Trace



Identify Alternative Sourcing



Financial Impact & Decision



Production Schedule Adjustments

SUPPLY CHAIN INSIGHTS

INVENTORY ALERTS

3.00
Inventory Alerts

DC SHIPMENTS AT RISK

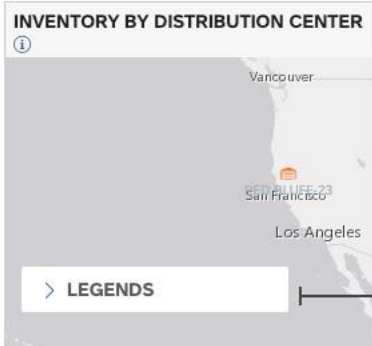
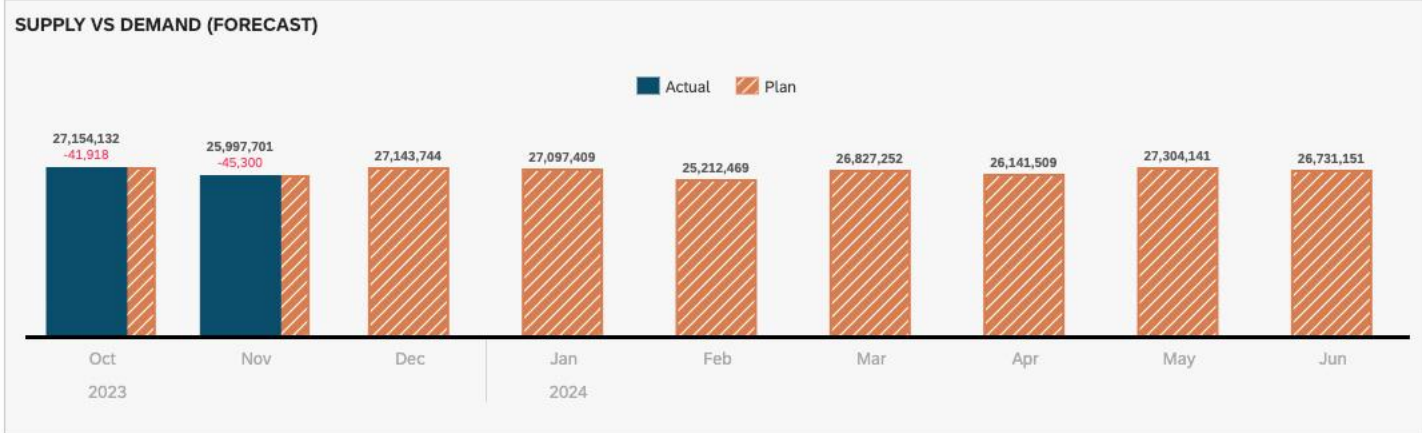
19.00
DC Shipments Alerts

CRITICAL SUPPLIES RECEIVED
in %

62.98%
Pct % Received

INVENTORY FULFILLMENT
in %

79.20%
Inventory Fulfillment



SUPPLY DETAIL

Account	On
Valve Assembly	●
Valve Housing	■



Joule

Hello SAP Employee
How can I help?

Show me inbound shipments d...

Delayed_Days by Shipment

Shipment ID	Delayed Days
6100014003	15
6100002566	9
6100002567	9
6100014181	9
6100014182	9
6100014183	5
6100014257	5
6100014258	5

— delayed_days >= 5

Show me inbound shipments delayed more than 5 days

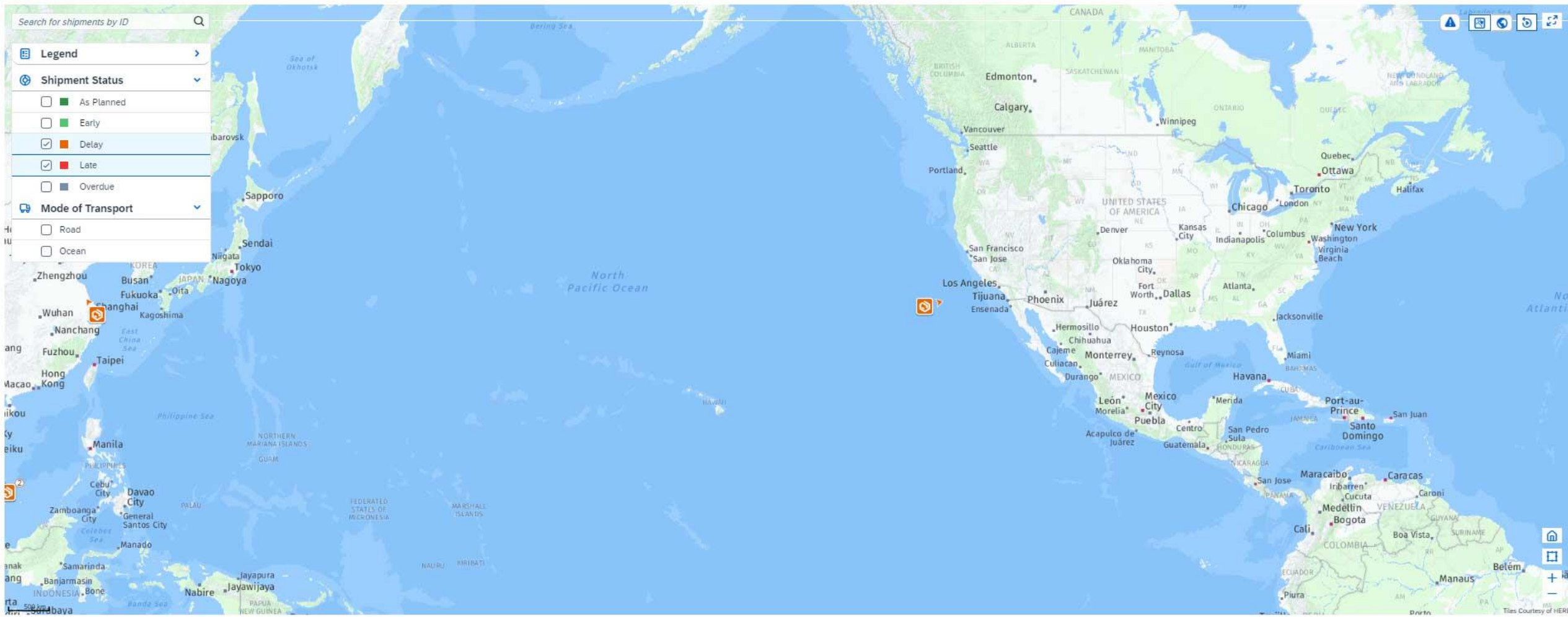
Logistics Situation Room



Source Country/Region: Destination Country/Region: Monitor Locations by ID:

Go Adapt Filters

Real Time Monitor





6100014003

In Execution

Delayed

Last refreshed at Mar 5, 2024, 11:55:18 AM



Source Location

SHANGHAI INTERNATIONAL PORT

Address:

SHANGHAI INTERNATIONAL PORT

China Shanghai Pudong

Tonghui Rd 1

201308

Planned Departure At: Jan 18, 2024, 7:00:00 AM UTC+08:00

Destination Location

Long Beach Port

Address:

Long Beach Port

231 Windsor Way

Long Beach California 90802-6350

USA

Planned Arrival At: Feb 15, 2024, 2:00:00 AM PST

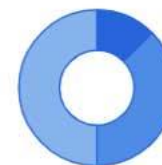
ETA of Destination

Long Beach Port

Estimated At: Mar 1, 2024, 8:05:47 AM PST

+15 day(s) 6 hour(s)

Planned Events by Status



Delayed

1

Overdue

3

Reported

4

Planned

0



Tracking Timeline

Shipper Reference Documents (4)

Standard

Carrier Reference Documents (0)

Freight Units (2)

Events (10)

Standard Planning ▾



Report

Out for Delivery

Reported

Actual At: Jan 16, 2024, 12:47:04 PM CET

Show Details

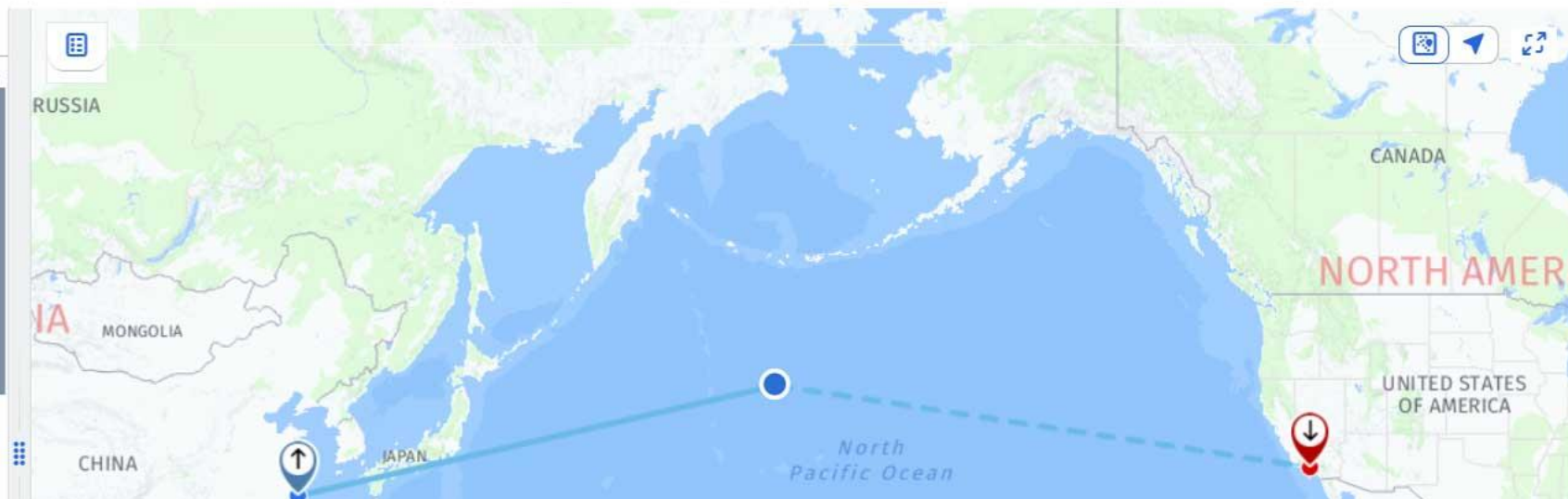
Out for Delivery

Reported

Actual At: Jan 16, 2024, 12:52:53 PM CET

Show Details

Loading Start: SHANGHAI INTERNATIONAL PO...



IBP: Supply Planning

Versions / Scenarios

Base Version ×

Data



Simulate

Save

Scenarios ▾

Jobs | ▾

Workspace

Plan Design

Save | ▾



IBP: Customer Demand Revenue | Customer Demand

Joule



IBP Revenue at Risk

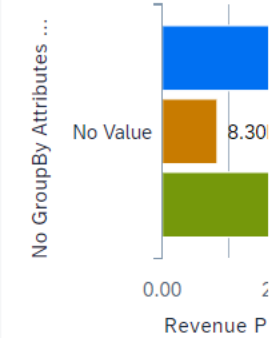
Filter ▾ Navigate To ▾

	Customer Classi...	Product ID	Key Figures	W09 2024	W10 2024	W11 2024	W12 2024
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5			Revenue Projected Total	3,700,000	4,205,000	2,600,000	4,355,000
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8			Sales Order Confirmed			0	0
9			Revenue at Risk incl Penalties for Late...			1,600,000	1,600,000
10			Revenue Projected Total			0	0
11	C	IBP-310	Customer Demand Total	3,455	3,790	3,770	3,770
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15			Revenue Projected Total	2,073,000	2,274,000	2,262,000	2,412,000
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P2F - Estimated Proc

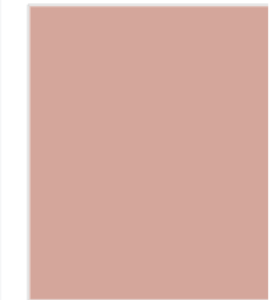
Today 8:00 AM

Can you summarize the planning KPIs



KPI	KPI Value
Status	Optimal Solution Found
Solution Gap	0
Total Demand Fulfillment Rate	74.79
Inventory Target Fulfillment Rate	100.00
Adjusted Production Quantity	0
Adjusted Transport Quantity	0
Minimum Production Supply	0
Minimum Transport Supply	0
Initial inventory level higher than maximum allowed	0

P2F Revenue at Ris



Customer

Why is the demand fulfillment low?



IBP: Supply Planning

Versions / Scenarios

Base Version x

Data

Simulate

Save

Scenarios

Jobs

Workspace

Plan

Design

Save

Settings

Share

IBP: Customer Demand Revenue | Customer Demand

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 Refresh
Fullscreen
More
Close

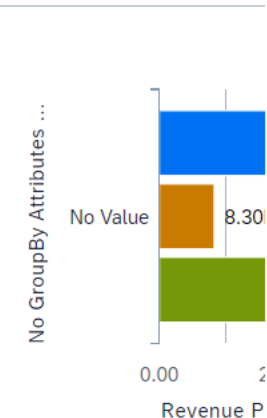
IBP Revenue at Risk

Filter, Sort, Navigate To, Print, Refresh, Fullscreen

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P2F - Estimated Proc

Today 8:00 AM



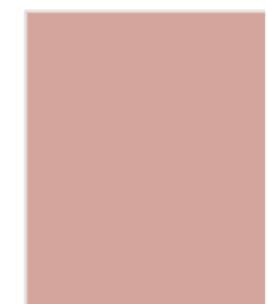
Initial inventory level higher than maximum allowed 0

Why is the demand fulfillment low?

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

1. Insufficient supply: the data shows that the company is unable to source the required amount of products in time to meet the customer demand.
2. Limited Resource Capacity: the company's resource capacity at Factory US (1710) is too low to meet the demand.

P2F Revenue at Ris



What are the mitigation options for product IBP-300?

IBP: Supply Planning

Versions / Scenarios

Base Version ×

Data



Simulate

Save

Scenarios ▾

Jobs | ▾

Workspace

Plan Design

Save | ▾



IBP: Customer Demand Revenue | Customer Demand

Joule

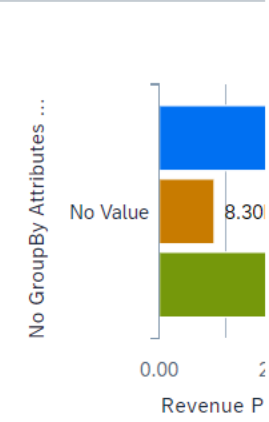


IBP Revenue at Risk

Filter ▾ Navigate To ▾

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P2F - Estimated Procurement



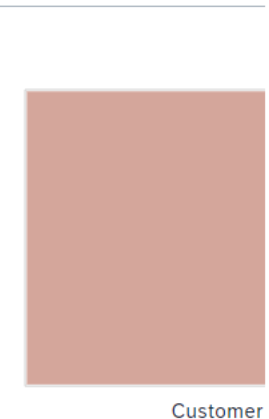
You could order the necessary component from another supplier. Here are all supplier options:

Makes Sense Ltd.

Component: PCB_BOARD
 Delivery: 🚚 5 days by truck

\$8,200
Total Procurement Cost

P2F Revenue at Risk



Message Joule...

IBP: Supply Planning

Versions / Scenarios

Base Version ×

Data



Simulate

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Scenarios ▾

Jobs | ▾

Workspace

Plan Design

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IBP: Customer Demand Revenue | Customer Demand

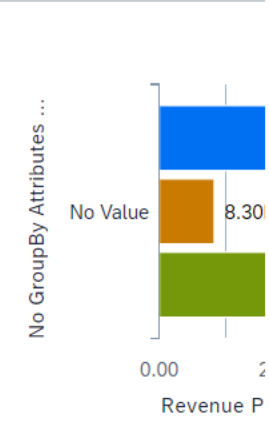
Joule
↺ ↻ ⋮ ✕

IBP Revenue at Risk

🔽 ▾ Navigate To ▾ 🗒️ 📄 🔄

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P2F - Estimated Procurement



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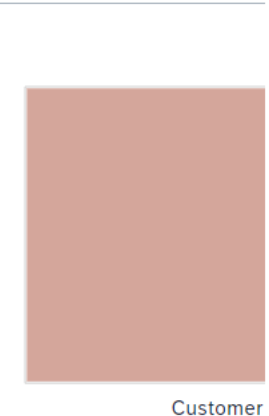
Sensorwerk

Component: PCB_BOARD

Delivery: 🚚 6 weeks by ship

\$ 3,300
Total Procurement Cost

P2F Revenue at Risk



Message Joule...

IBP: Supply Planning

Versions / Scenarios

Base Version ×

Data



Simulate

Save

Scenarios ▾

Jobs | ▾

Workspace

Plan

Design

Save | ▾



IBP: Customer Demand Revenue | Customer Demand

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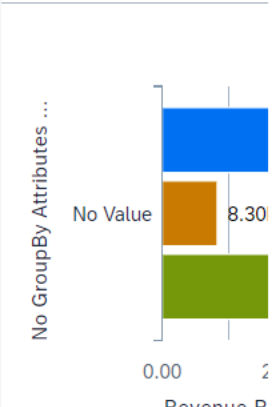


IBP Revenue at Risk

Filter ▾ Navigate To ▾

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P2F - Estimated Procurement



P2F Revenue at Risk



Scenarios created:

Scenario ID	Supplier	Transport
113047VEND3	MakesSense Ltd	
113047VEND1	Sensorwerk	

After comparing all details of the scenarios, considering various factors like long- and midterm risk rating, the scenario using supplier MakesSense Ltd. turned out to be the best option to mitigate the risk.

Makes Sense Ltd.

Total Procurement Cost
\$8,200
 Total

Order Amount: 110 pieces Delivery: 5 days by truck

[Create Purchase Requisition](#)

Message Joule...

E2E Planning Standard

Edit Copy Opt Out Delete ⚙️ 🔄

File Edit Tools Display Supplier disruption 6 / 8

Product ID (All) Resource ID (All)

Estimated Profit Margin: Supplier Constraint



Estimated Profit Margin: Alternative Supplier



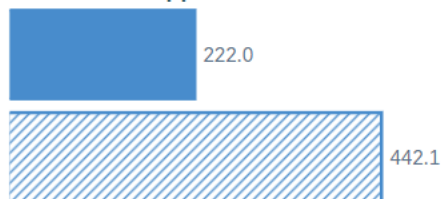
Impact Analysis Supplier Disruption

Revenue at Risk incl Penalties for Lateness Procurement Cost Total

Supplier Constraint

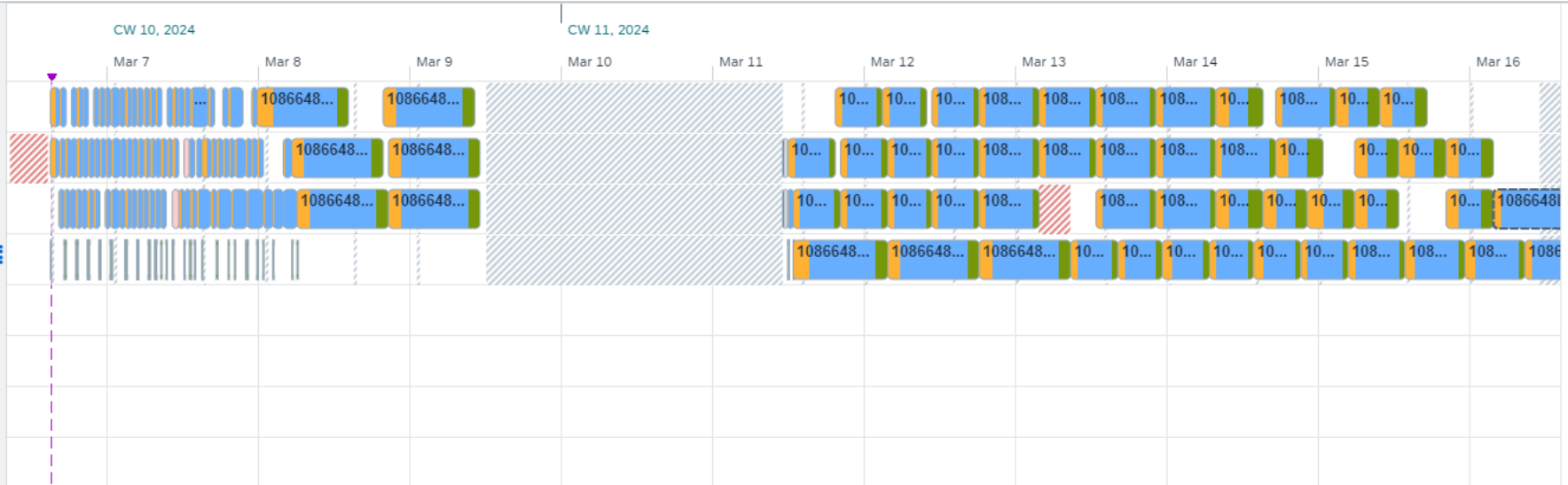


Alternative Supplier

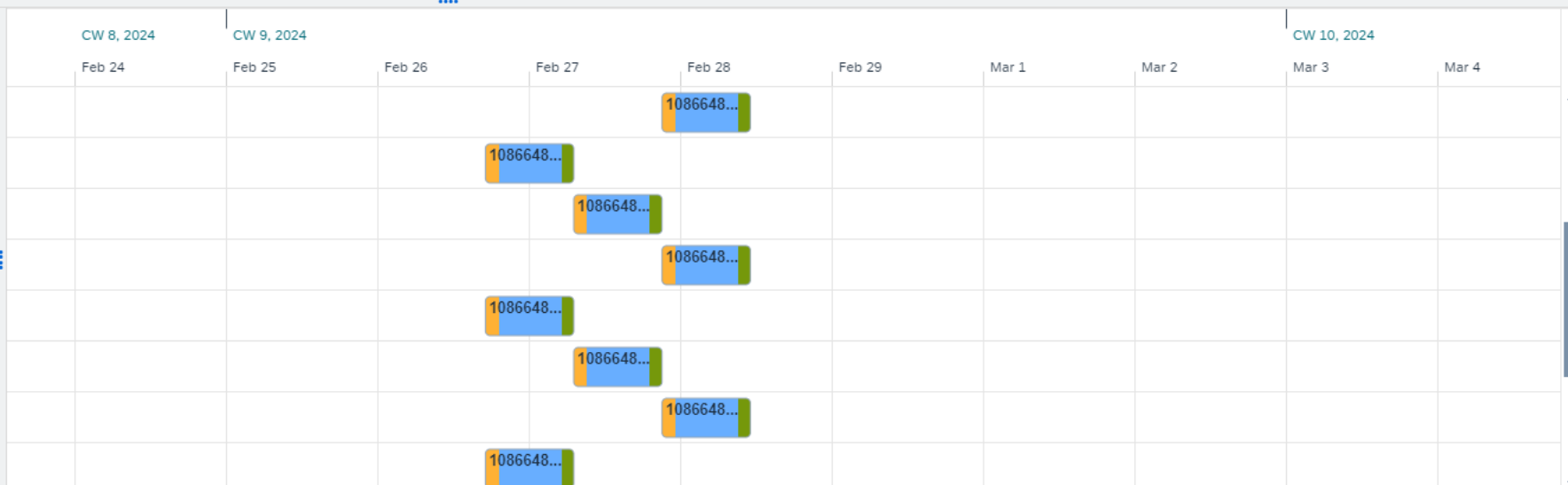


Standard *
Auto Dispatch Dispatching Scheduling Shift Plan SFC View

Resources (4/4)					
Resource	Resource Type	Material Group	Primary	Alerts	Wo
> VAL_ASSY	VALVE_ASSY		<input type="checkbox"/>	▲ 19	VAL
> VAL_ASSY2	VALVE_ASSY		<input type="checkbox"/>	▲ 5	VAL
> VAL_ASSY3	VALVE_ASSY		<input type="checkbox"/>	▲ 4	VAL
> VAL_QUAL	VALVE_QUAL		<input type="checkbox"/>	▲ 8	VAL

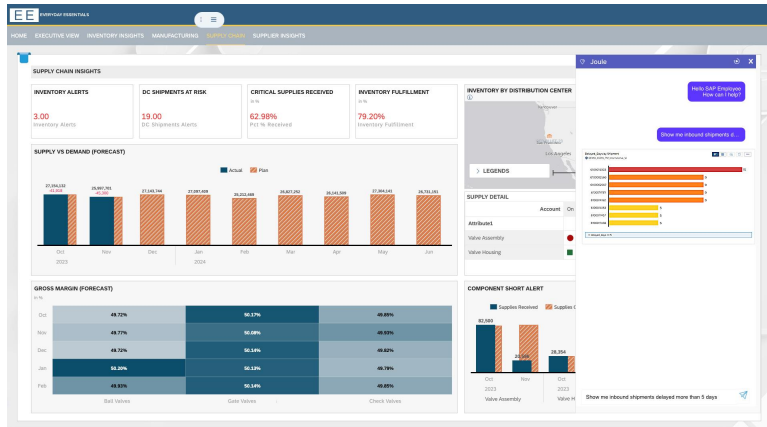


Operation Worklist (18/18)					
Operation	Operation Des...	Order	Quantity	Priority	
VALVE QUALITY	Quality Check	1086648B	10 EA	500	
VALVE ASSEM...	Prepare and A...	1086648B	10 EA	500	
VALVE ASSEM...	Install Cover B...	1086648C	10 EA	500	
VALVE QUALITY	Quality Check	1086648C	10 EA	500	
VALVE ASSEM...	Prepare and A...	1086648C	10 EA	500	
VALVE ASSEM...	Install Cover B...	1086648D	10 EA	500	
VALVE QUALITY	Quality Check	1086648D	10 EA	500	
VALVE ASSEM...	Prepare and A...	1086648D	10 EA	500	

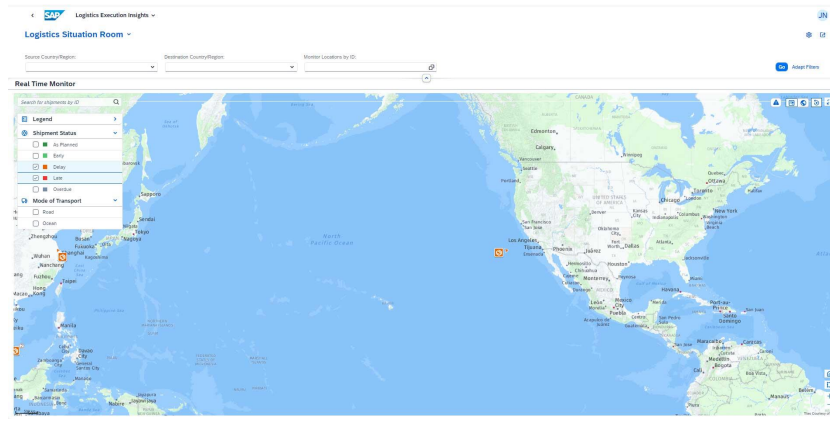


SAP Strategy

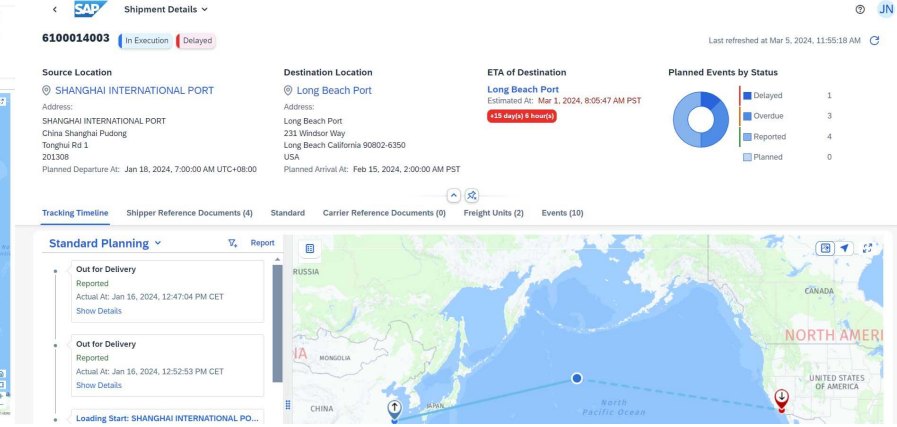
Unleash digital innovation
across business functions



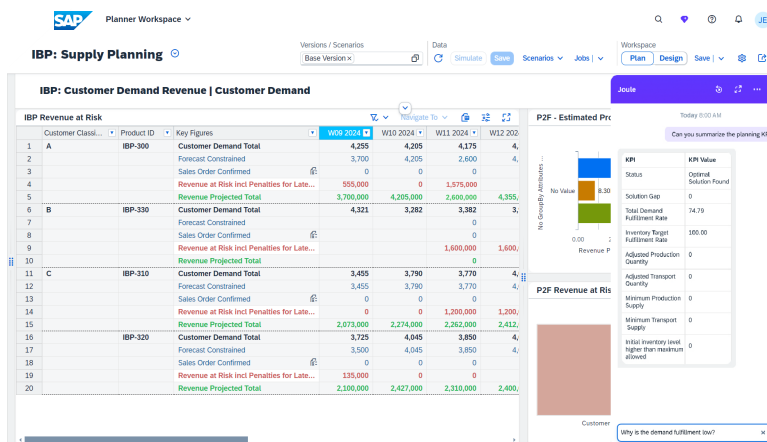
Intelligent Dashboard



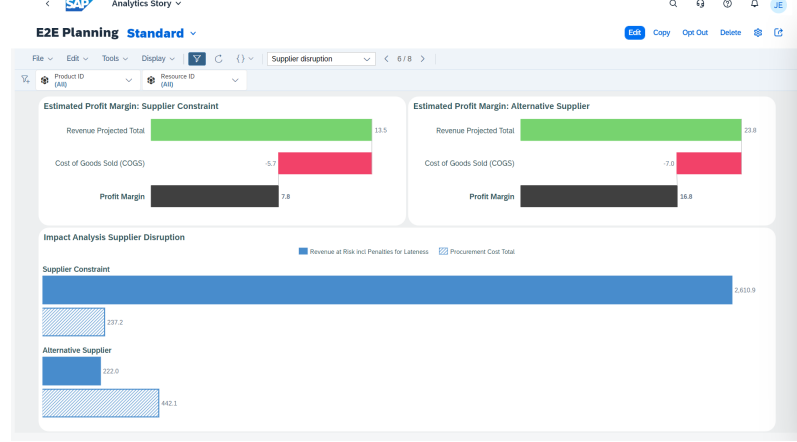
Logistics Situation Room



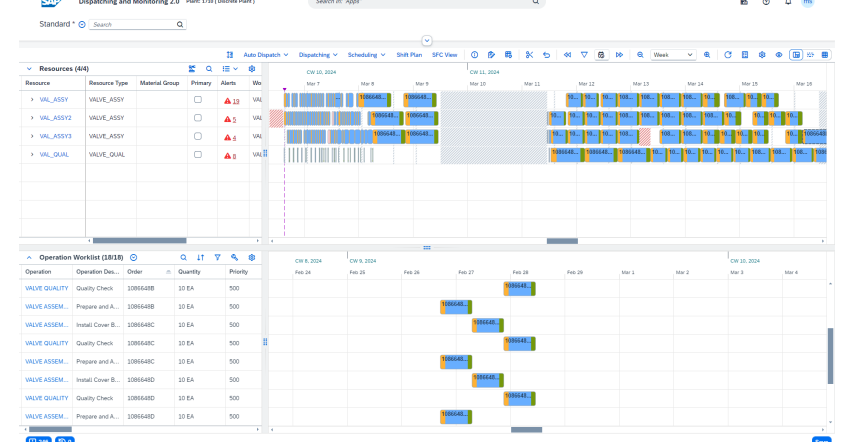
Global Track and Trace



Identify Alternative Sourcing

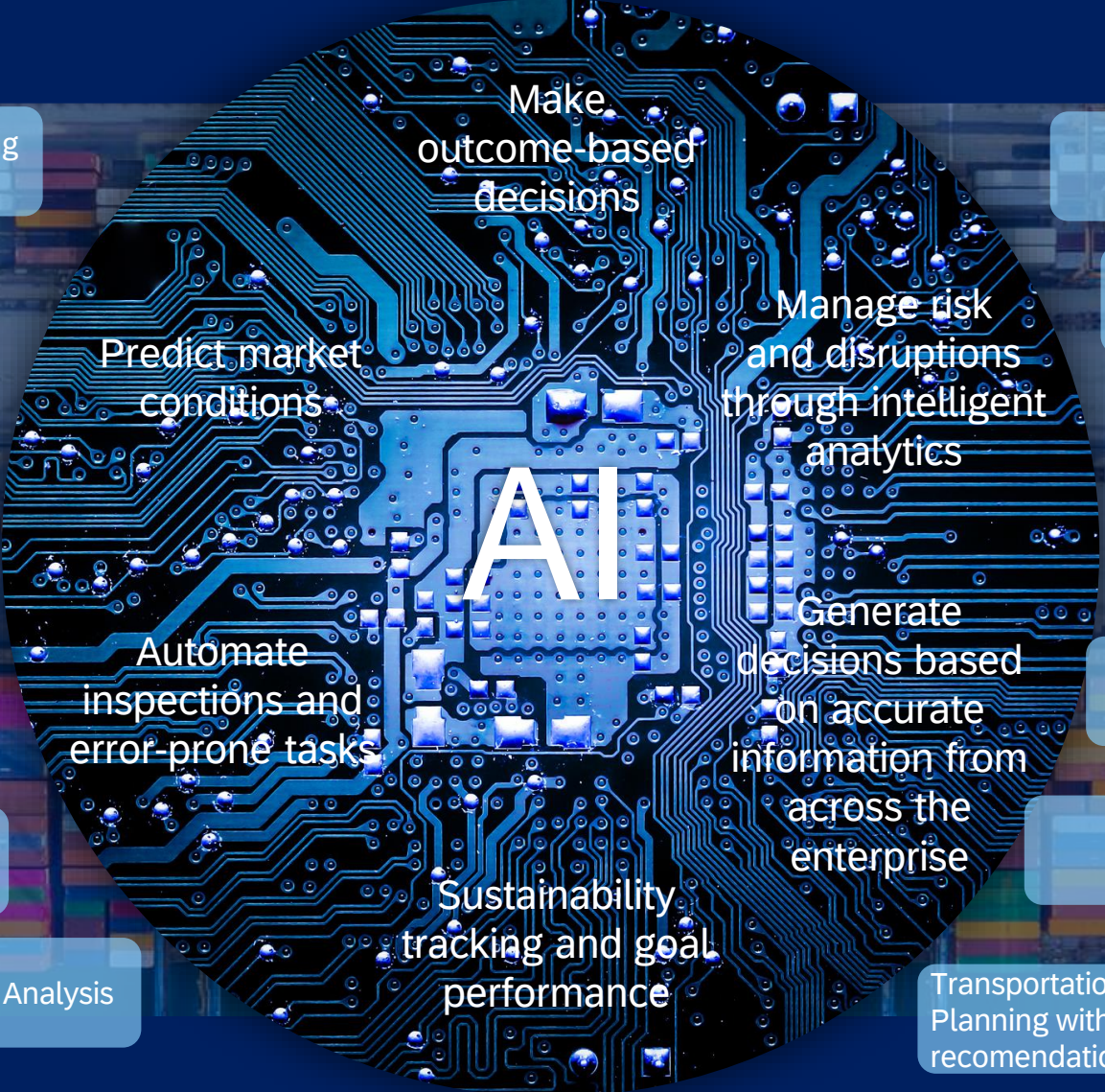


Financial Impact & Decision



Production Schedule Adjustments

Success within supply chain includes AI that helps



Joule to explain IBP planning results

IBP – What if scenarios

IBP – Automated Outlier Detection

SAP Digital Manufacturing – Visual Inspection

AI-assisted Master Data for Enterprise Product Development

Asset Performance Mngt– Anomaly detection based on indicator values

TM: Goods Receipt Analysis

Intelligent Matching of Employees to Projects

ATP – Automated Back Order Processing – variant or segment generation

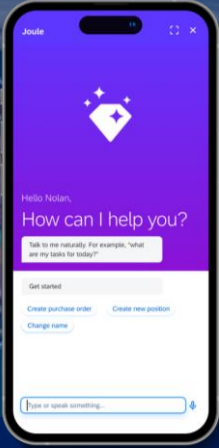
Intelligent Maintenance Order Recommendation

Intelligent Lead Time predictions

Joule Across SAP Digital Supply Chain

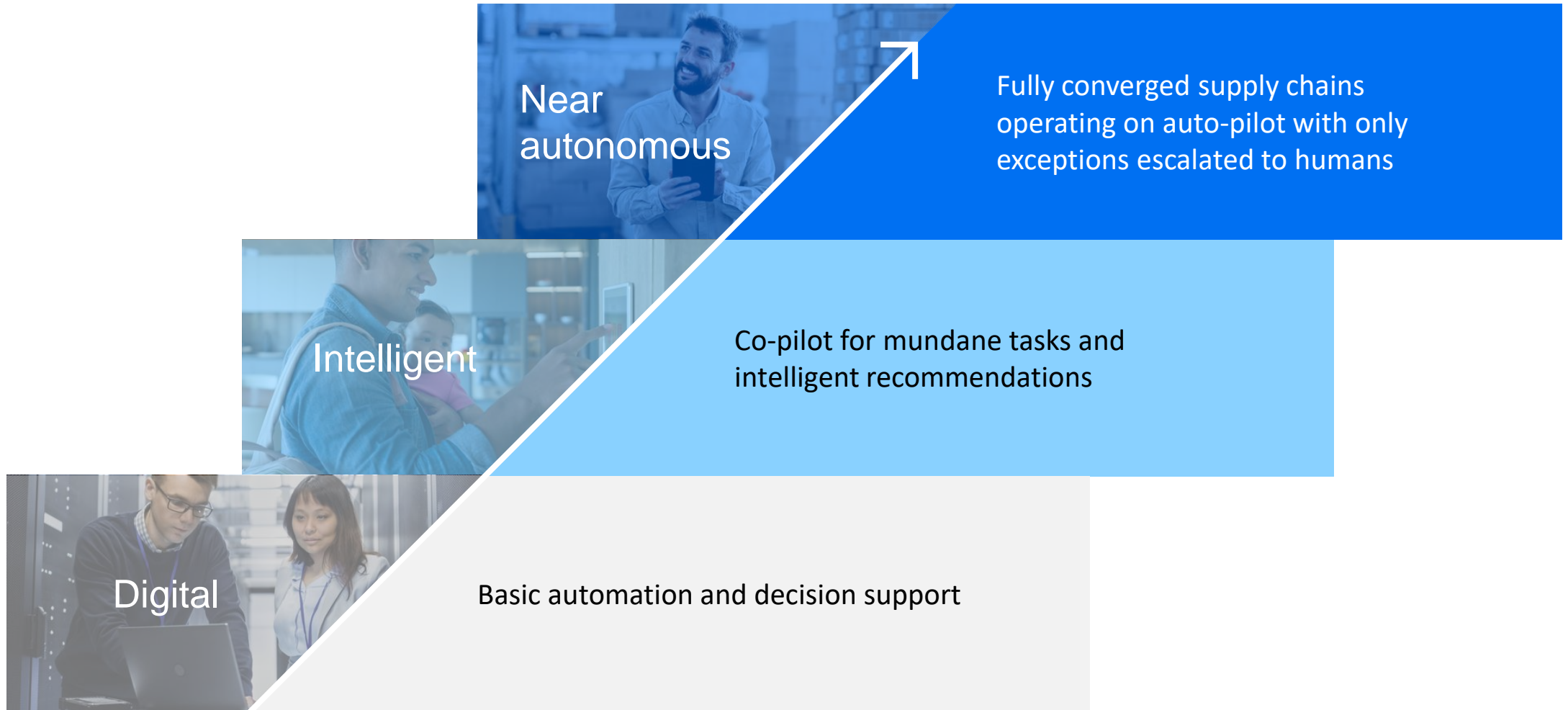
Intelligent Slotting

Transportation Cockpit Planning with real time recommendations



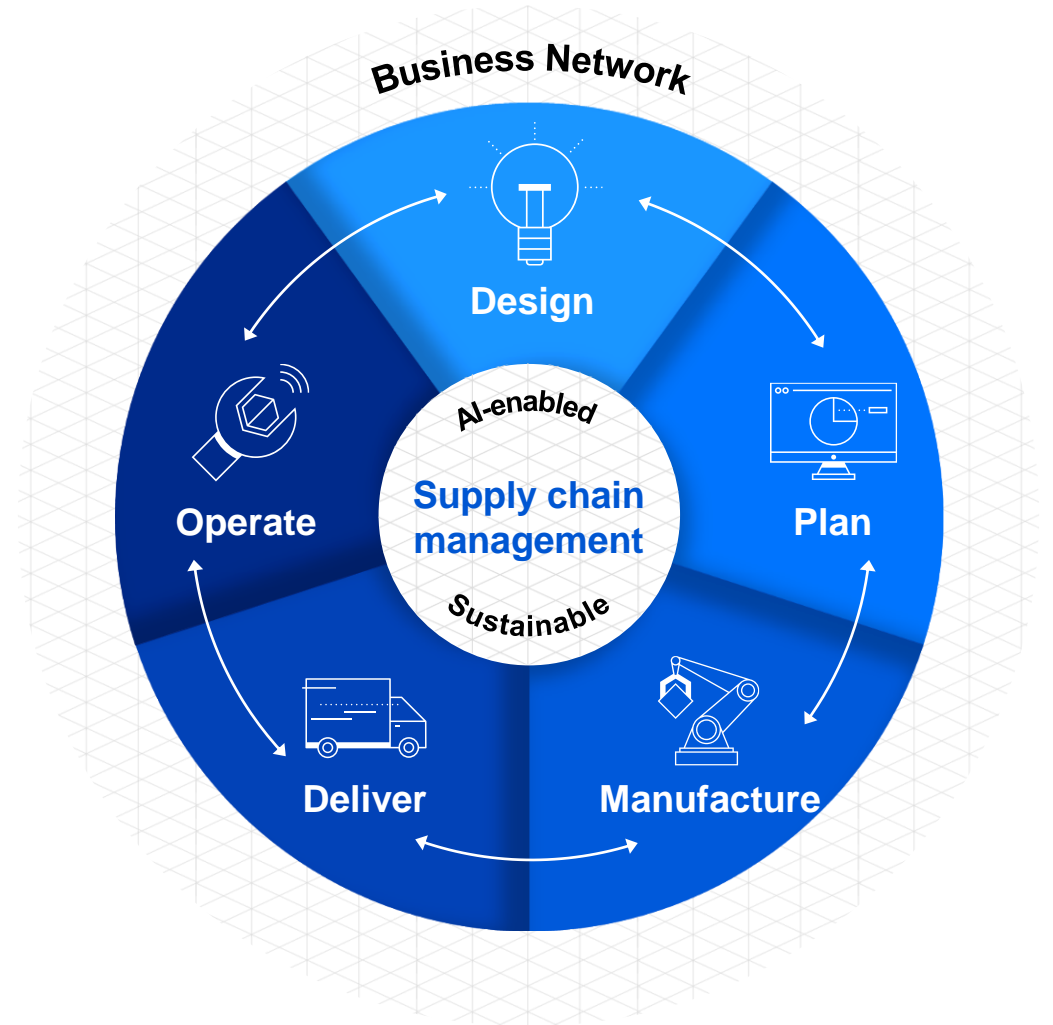
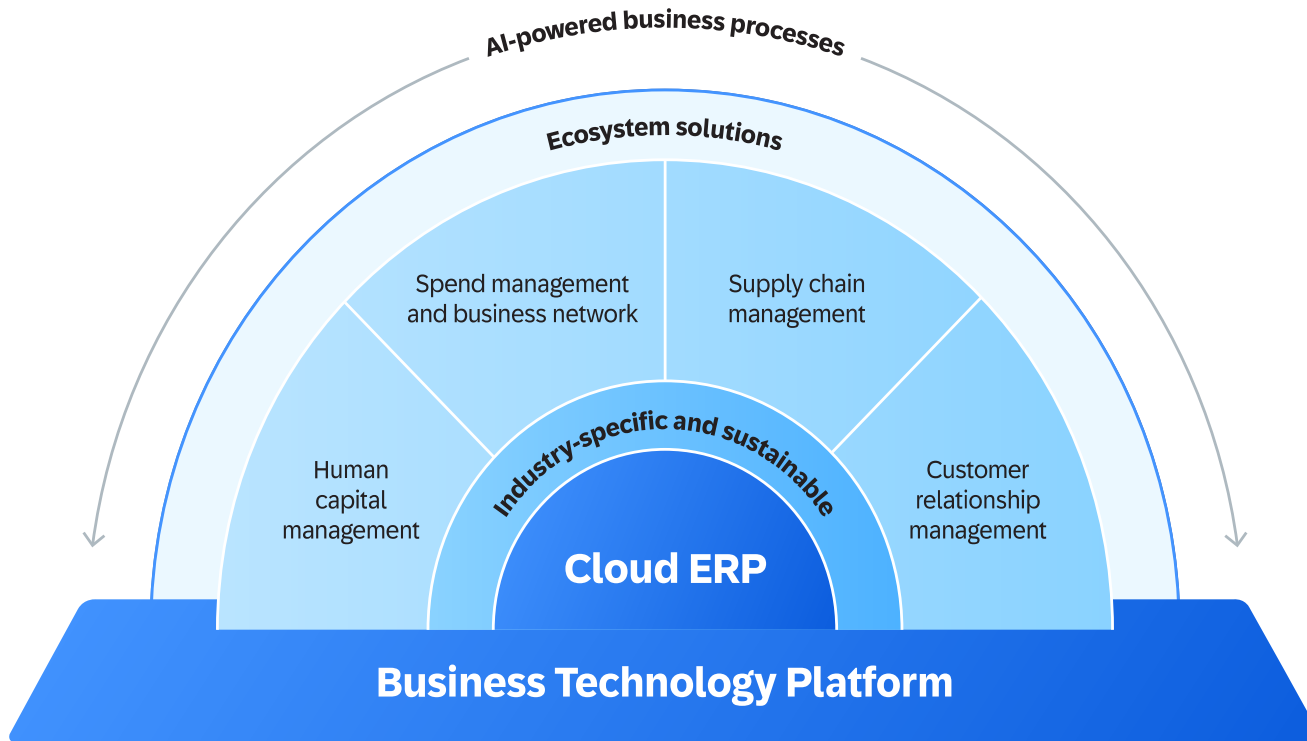
SAP Strategy

Unleash digital innovation
across business functions



SAP Strategy

Unleash digital innovation
across business functions



Thank you.

Contact information:



Juan Cartier
Chief Revenue Officer @ SAP | DSC

