

Autonomous Supply Chain Planning

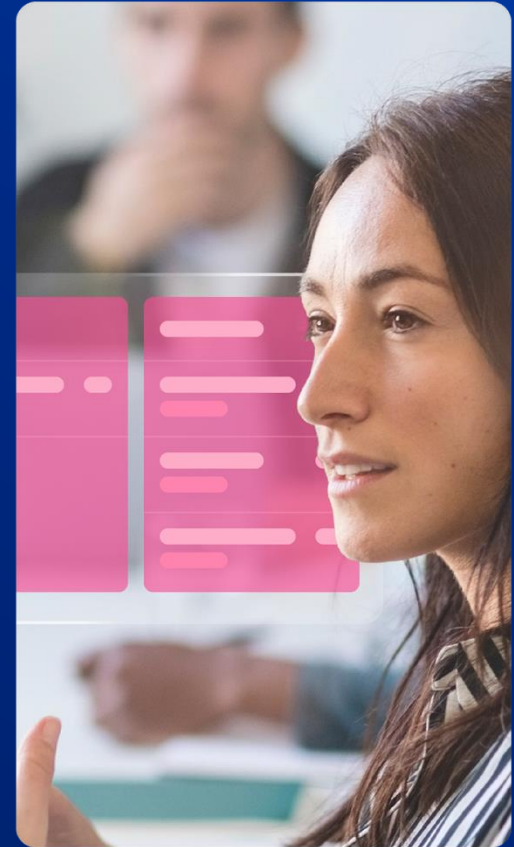
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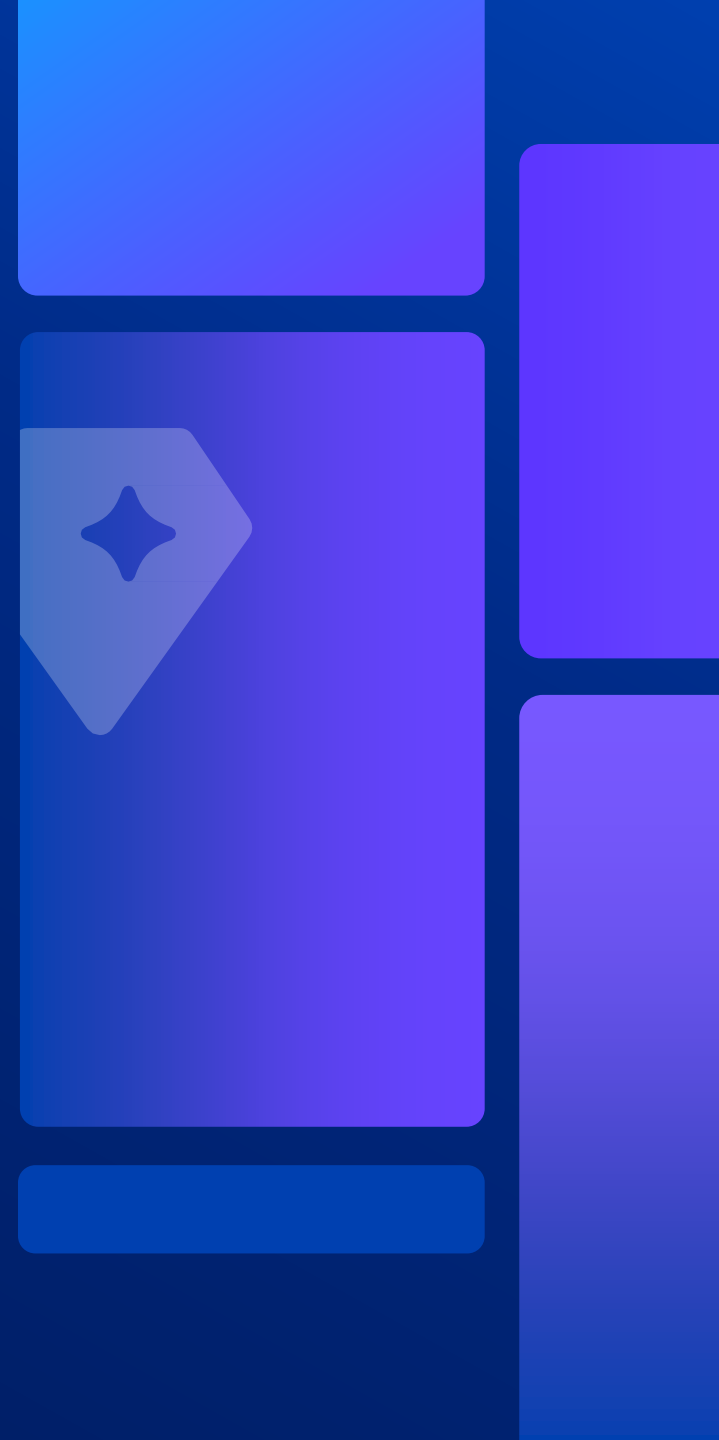
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Agenda

01 Why there is a need to Change

02 What Change looks like with SAP

03 How companies take AI on (IM_)



“What happens outside your supply chain can disrupt everything inside it.”



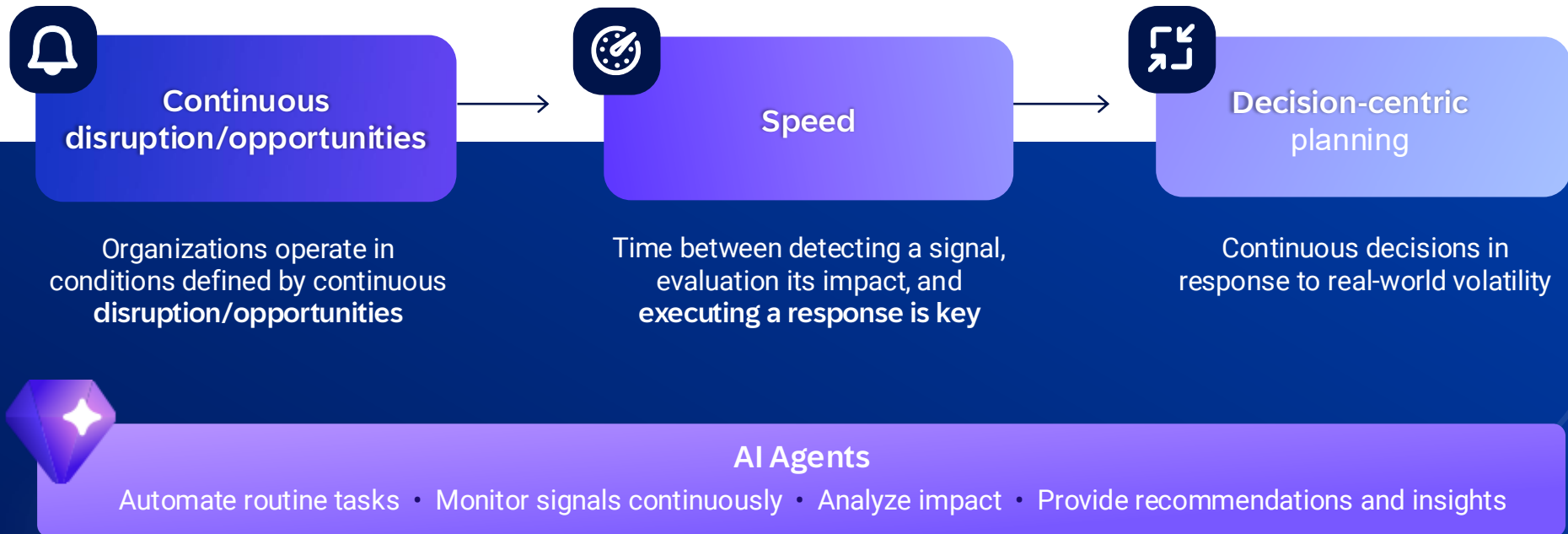
2020



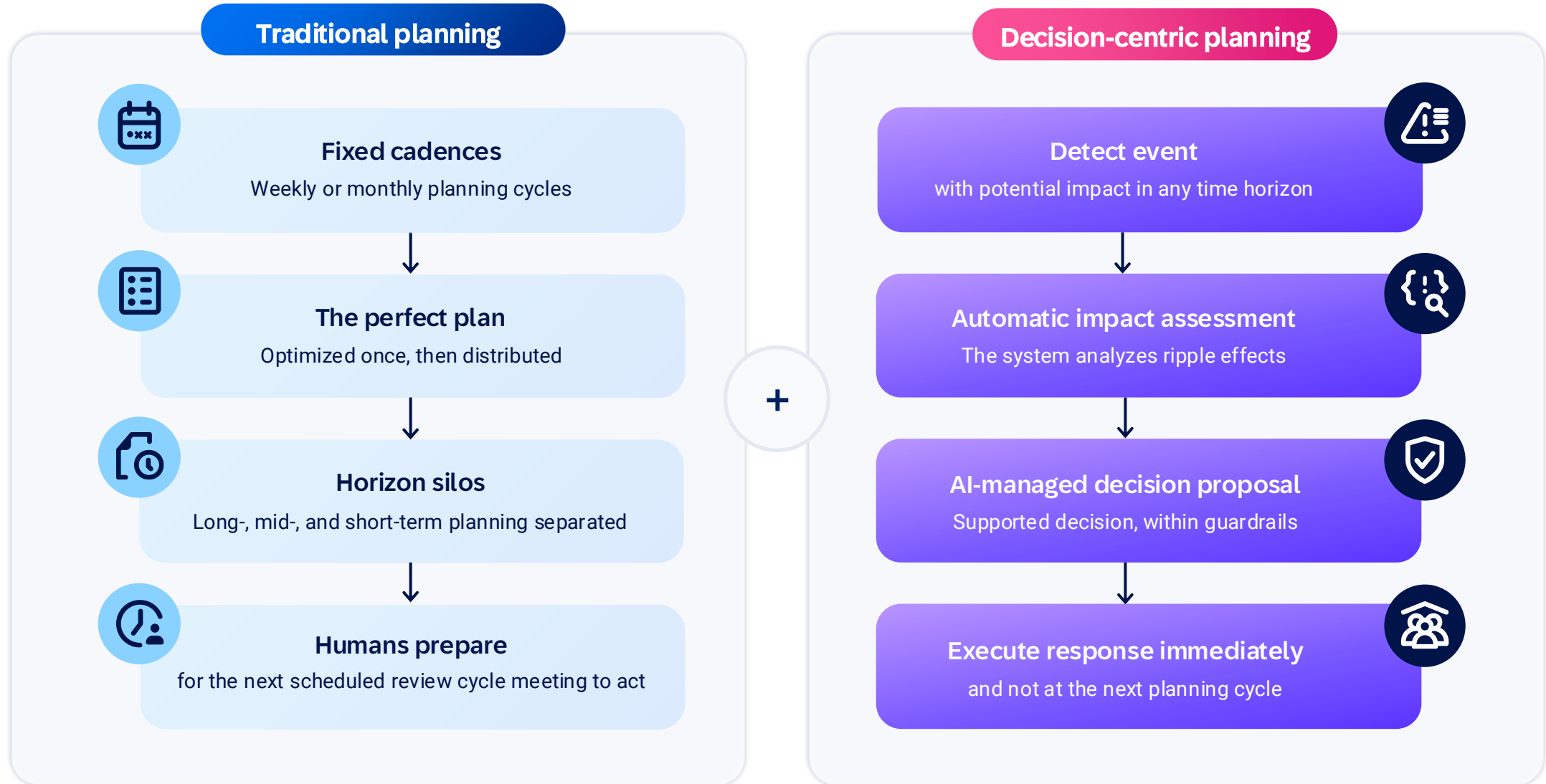
1973

"There is an acute shortage of toilet paper in the good old United States. We gotta quit writing on it!"

Why the planning process must evolve now



Overlaying traditional planning with decision-centric planning

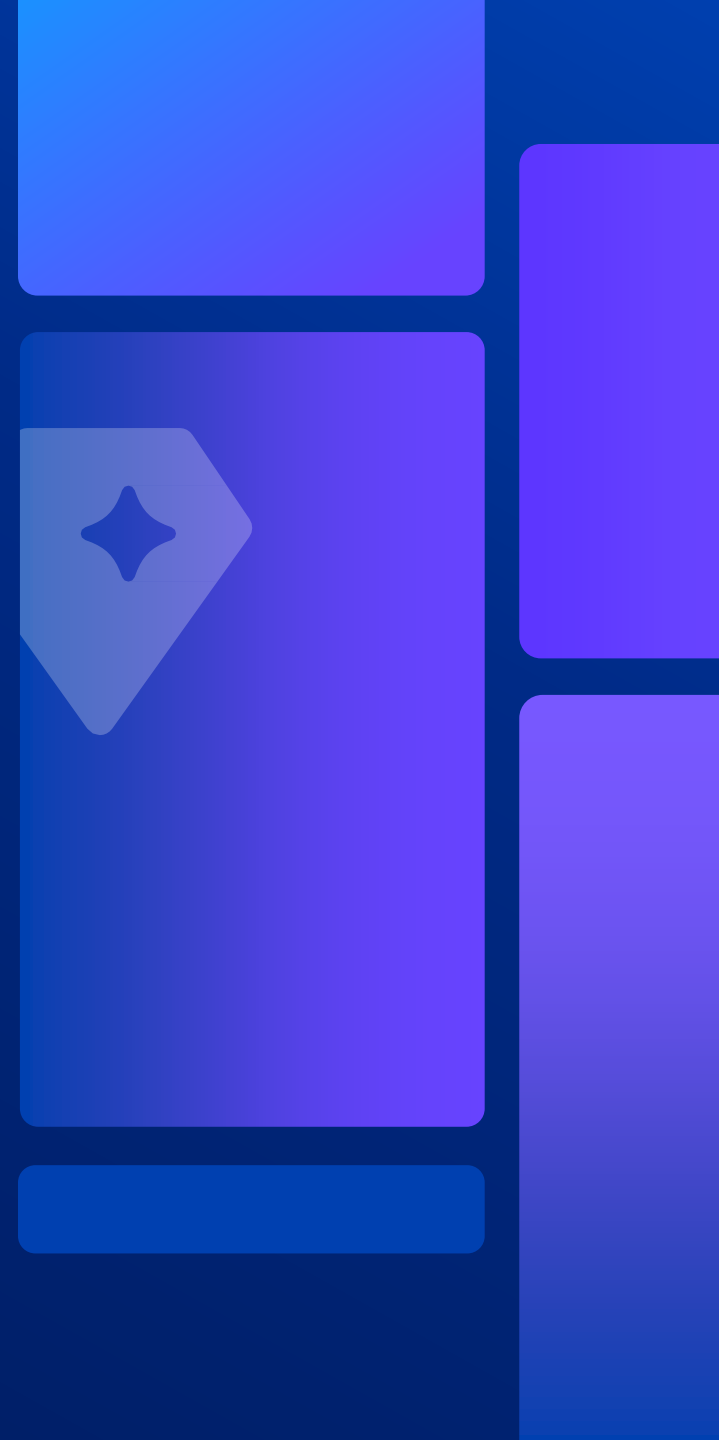


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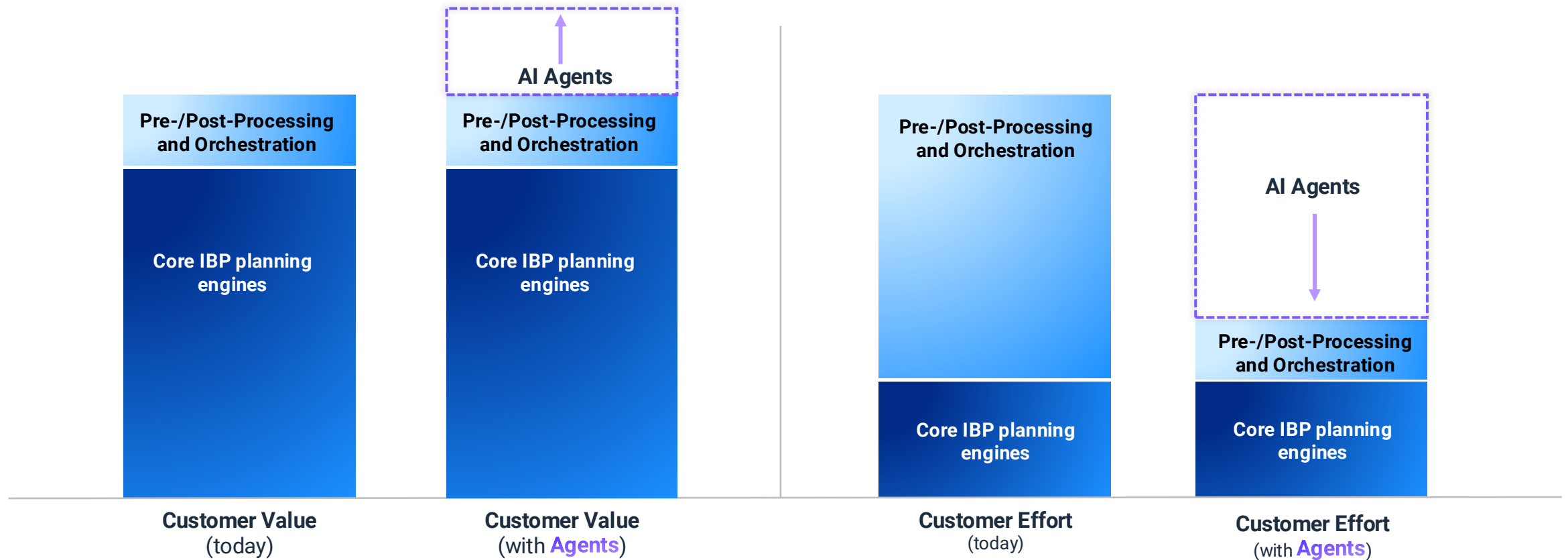
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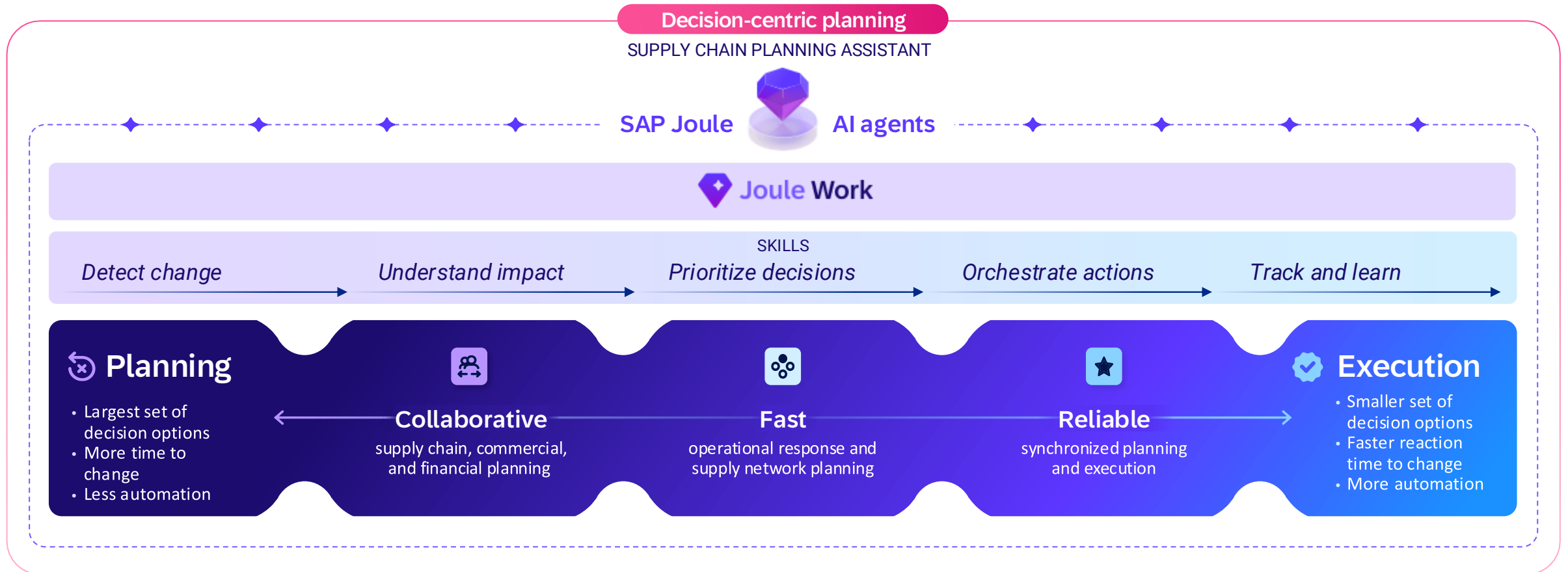
In Planning, the main value comes from the core planning engines. Agents absorb the effort around it. Both increase the level of autonomous planning.

Customer Value and Effort in Supply Chain Planning



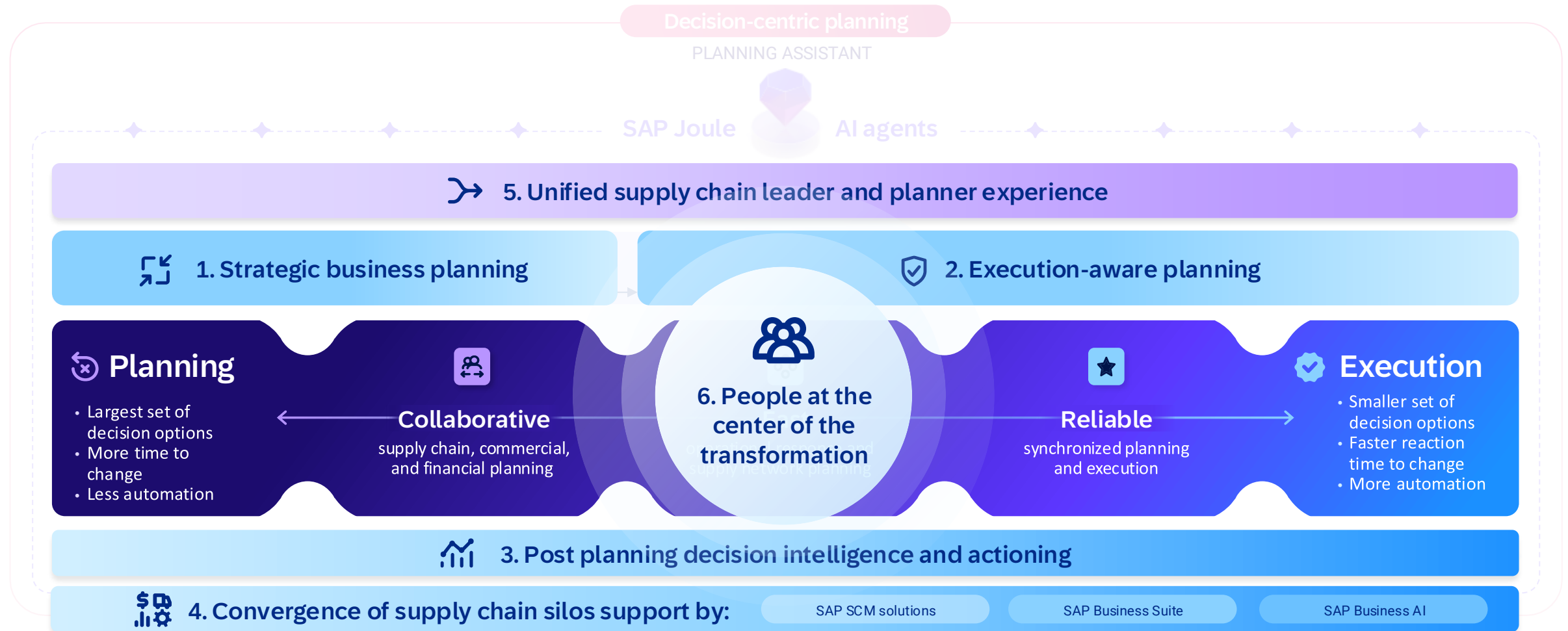
Supply Chain Planning Reimagined:

Confident decisions, autonomous planning, and reliable execution



Supply Chain Planning Reimagined:

Confident decisions, autonomous planning, and reliable execution





Autonomous Supply Chain Management

Product Design Assistant

Product Change Impact Analysis Agent **New**
Product Development Collaboration Agent **New**
Project Completion Agent **New**
Product Handover Management Agent **New**
Product Compliance Assessment Agent **New**
Packaging Compliance Agent **New**
Product Requirements Validation Agent **New**
Product Task Validation Agent **New**
Product Knowledge Retrieval Agent
Recipe Formulation Agent
Product Change Management Agent
Product Data Maintenance Agent
Change Record Management Agent
Product Structure Optimization Agent

Supply Chain Planning Assistant

Supply Plan Explainability Agent **New**
Footprint Optimization Agent **New**
Exception Management Agent
Inventory Investment Allocation Agent

Business Network Assistant

Supplier Performance Scoring Agent **New**
Supplier Discovery Agent **New**
Dynamic Supplier Optimization Agent **New**
Commodity Price and Cost Insights Agent **New**
Demand Trend Agent **New**
Supply Chain Collaboration Exception Management Agent **New**
Order Prioritization Agent **New**
Tendering Insights Agent **New**
Logistics Predictive Insights and Response Agent **New**
SAP Business Network AI-assisted onboarding
Service Entry Collaboration Agent
Advanced Ship Notice Collaboration Agent
Invoice Collaboration Agent
Order Confirmation Collaboration Agent

Manufacturing Assistant

Material Requirements Planning Agent **New**
Manufacturing Quality Nonconformance Resolution Agent **New**
Product Inspection Readiness Agent **New**
Supplier Nonconformance Management Agent **New**
Missing Component Resolution Agent **New**
Production Diagnostics Agent **New**
Production Configuration Agent **New**
Workplace Safety Agent **New**
Production Planning and Operations Agent
Production Master Data Readiness Agent
Production Planning Order Progress Agent

Logistics Assistant

Consignment Order Advance Shipping Notice Agent **New**
Handling Unit Packing Optimization Agent **New**
Goods Movement Resolution Agent **New**
Outbound Delivery Creation Agent **New**
Warehouse Workload Optimization Agent
Warehouse Outbound Optimization Agent
Inventory Supervisory Agent
Transportation Dispatching Agent
Logistics Issue Resolution Agent
Fixed Bin Maintenance Agent
Outbound Warehouse Task Management Agent
Internal Stock Replenishment Agent
Material Reservation Processing Agent
Batch Optimization Agent
Logistics Configuration Agent

Asset Operations Assistant

Maintenance Safety Planning Agent **New**
Asset Operations Orchestration Agent **New**
Dynamic Forms Insight Agent **New**
Maintenance Program Optimization Agent **New**
Service and Maintenance Workload and Capacity Optimization Agent **New**
Mobile Application Integration Framework Troubleshooting Agent **New**
Asset Performance Risk Assessment Agent **New**
Asset Performance Health Analysis Agent
Maintenance Plan Cost Simulation Agent
Operational Maintenance Planning Agent
Maintenance Job Debrief Agent
Maintenance Activity Insights Agent
Reliability Case Management Agent
Asset Performance Alert Processing Agent
Maintenance Task List Management Agent
Maintenance Request Screening Agent
Business Rule Management Agent
Custom Extension Quality Check Agent
Maintenance Shift Briefing Agent **New**
Usage-Based Maintenance Timing Agent **New**
Failure Mode and Effects Analysis Assessment Agent **New**
Asset Master Data Change and Impact Analysis Agent **New**
Crew Planning and Management Agent **New**
Field Service System Administration Management Agent **New**
Field Service System Customization Management Agent **New**
Resource Reservations Management Agent
Scheduling Policy Management Agent
Service and Maintenance Dispatching Agent
Functional Location Insights Agent
Task Planning Management Agent for Compatible Units
Maintenance Opportunity Planning Agent
Equipment Insights Agent
Technician Briefing Agent
Maintenance Request Initiation Agent
Maintenance Event Planning Agent
Equipment Enrichment Agent

Supply Chain Planning Assistant - Orchestrate the planning story

Alignment & collaboration through the Planning Assistant

Shared context • Reconciled assumptions • Decision-ready narrative

Exception Management Agents

Alert triage, root cause,
resolution recommendation

Demand Planning Agents

Forecast change,
NPI monitoring

Inventory & Supply Agents

Lead-time intelligence,
safety-stock trade-offs

S&OP Alignment Agents

Financial reconciliation,
executive review prep

SAP Business AI Platform | Business Technology Platform | Business Data Cloud

Signal-to-Resolution

Efficient operational planning

Sense changing signals, investigate root causes, quantify impact, and recommend or automate guarded responses.

Post-Planning Intelligence

Proactive planning

Explain plan outcomes, identify recurring KPI drivers, and turn cycle-over-cycle learning into investment and risk scenarios.

Planning Data Consistency

End-to-end planning processes | SAP and non-SAP Data

Signal-to-Resolution

The system owns the complete journey - from detecting a business signal to delivering an approved resolution path.



KEY AGENTS

Exception & Scenario Management Agent

Component Shortage Monitoring

Capacity Shortage Resolution

Deployment confirmation

Customer order confirmation

Resolution Automation: Once patterns recur, the system proposes enabling automatic resolution for low-risk exception types. Planners define guardrails — cost thresholds, revenue limits, customer priority rules - and future matching exceptions are resolved automatically. The planner receives a summary rather than an investigation request.

Demand Fulfilment

Versions / Scenarios

Scenarios ▾

🔄

Simulate

Save Data

Jobs ▾

Plan

Design

⚙️

🔗

Demand Fulfilment Planning View

Product...	Locatio...	Locatio...	Key Fig...	Total	W17 2026	W18 2026	W19 2026	W20 2026	W21 2026	W22 2026	W23 2026	W24 2026	W25 2026	W26 2026	W27 2026	W28 2026	W29 2026	W30 2026
Fresh Skim...	Hatfield DC	GB	Total Demand	112.600	7.442	7.582	7.488	8.052	7.463	7.807	7.954	7.661	7.667	7.682	7.597	7.745	7.343	
			Total Receip...	81.353	12.927	13.558	13.595	14.047	13.312	13.914								
			Stock Projec...	21.972	4.472	3.500	3.500	3.500	3.500	3.500								
			Stock Projec...	21.608	4.108	3.500	3.500	3.500	3.500	3.500								
			Unfulfilled T...	5.574	345	393	386	425	359	365	406	395	340	393	412	326	420	
Natural Yog...	Hatfield DC	GB	Total Demand	57.401	3.940	3.884	4.170	3.890	4.186	3.755	4.144	3.819	4.002	3.629	3.930	3.601	3.963	
			Total Receip...	40.512	6.725	6.632	7.050	6.689	6.952	6.464								
			Stock Projec...	21.000	3.500	3.500	3.500	3.500	3.500	3.500								
			Stock Projec...	21.000	3.500	3.500	3.500	3.500	3.500	3.500								
			Unfulfilled T...	2.834	191	202	222	187	231	162	181	199	210	178	202	149	202	
Strawberry ...	Hatfield DC	GB	Total Demand	73.795	4.788	4.960	5.200	5.159	5.022	5.075	4.798	4.858	5.033	5.064	5.004	5.010	5.166	
			Total Receip...	51.710	8.466	8.475	8.835	8.783	8.545	8.606								
			Stock Projec...	21.000	3.500	3.500	3.500	3.500	3.500	3.500								
			Stock Projec...	21.000	3.500	3.500	3.500	3.500	3.500	3.500								
			Unfulfilled T...	3.571	227	246	233	273	223	244	231	226	258	219	253	282	247	

Demand Fulfillment Aggregated



Exception Management

Procedure Playbook

Please give a thumbs up or thumbs down on the proposed mitigation. Your feedback helps our AI agent learn and improve mitigation proposals.

Redistribution Opportunity

Mitigation

An alert was triggered for product MILK_FRESH_SKIM_1L at location UK45 (Great Britain/UK) for Week 18 of 2026, customer 00000283104352, under the Demand Fulfilment Risk Process playbook. Analysis of the ZUNFULTOTALDEMANDCUS keyfigure at the DAYPRODLOCDEMAND planning level indicates unfulfilled demand of 70 units for customer 00000283104352 on 2026-05-05. A query of the STOCKPROJECTED keyfigure at the DAYPRODLOC planning level identified that location UK22 maintains 6,023 units of MILK_FRESH_SKIM_1L on the same date, with forecasted demand of only 1,881 units over the subsequent 3-day period, representing 3.2 days of available supply. Stock Availability Location ID UK22 can fulfill the shortage with a recommended transfer quantity of 100 units. It is recommended to initiate an inter-location transfer from UK22 to UK45 to mitigate the fulfilment gap for customer 00000283104352 while maintaining adequate service levels at the source location.

👍

👎

Show Details

Lower Date Stock Utilization

Mitigation

An alert was triggered for product MILK_FRESH_SKIM_1L at location UK45 (Great Britain/UK) for Week 18 of 2026, customer 00000283104352, under the Shelf Life Optimization playbook. A query of inventory aging data at the DAYPRODLOC planning level identified 340 units with a remaining shelf life of 3 days (best-before date 2026-05-08), while the ZUNFULTOTALDEMANDCUS keyfigure shows 70 units of unfulfilled demand for customer 00000283104352 on 2026-05-05. Current allocation logic prioritizes newest, creating a risk of obsolescence for the lower-date inventory while unfulfilled demand persists. Historical data indicates customer 00000283104352 maintains a 96% sell-through rate within 24 hours and has accepted near-date stock without service complaints in the prior 90-day period. It is recommended to reallocate the lower-date stock (340 units available) to fulfill the 70-unit shortage for customer 00000283104352, optimizing inventory turnover and reducing waste exposure while meeting customer demand requirements.

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👎

Show Details

Post-Planning Intelligence

Empowering Supply Chain Decision-Makers at Every Level



Example Use Cases:

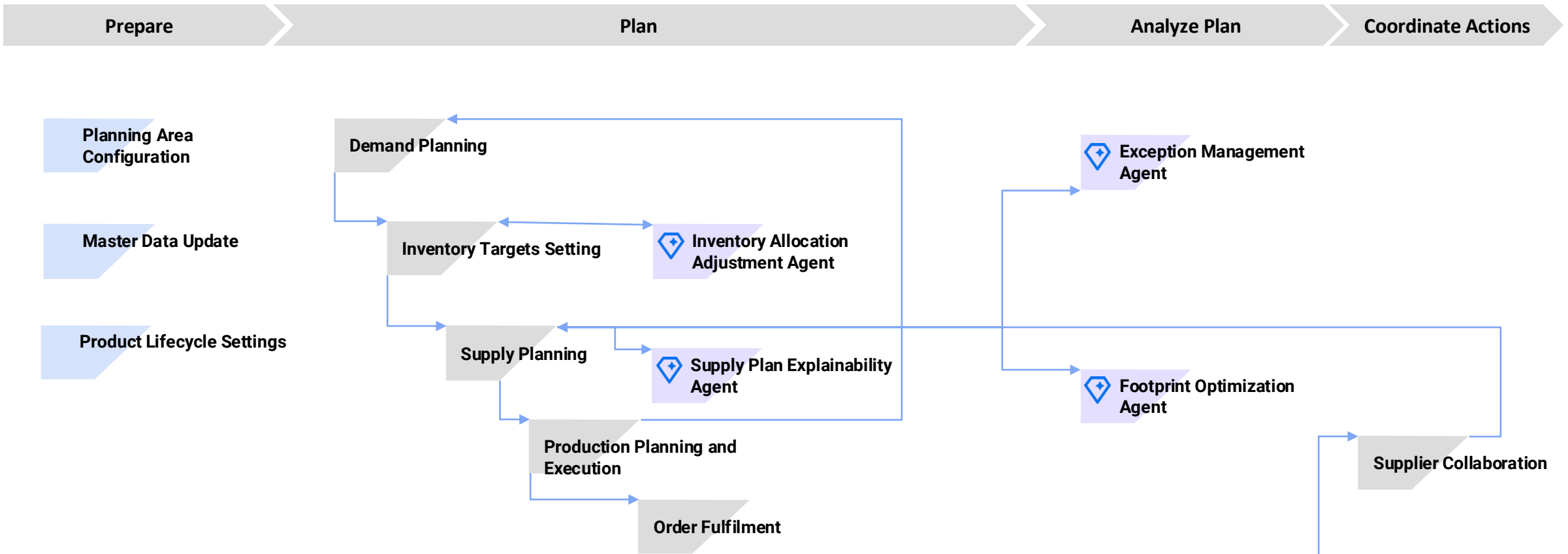
Cycle-over-cycle change

Compare current vs. prior cycle performance across forecasts, inventory, and demand fulfilment. Identify guardrail breaches in the plan and improvement actions for the next cycle.

Lead Time Intelligence

Assess if the planning team monitored and adapted to leadtime changes from external or internal events, understood cost impacts or benefits, and identified improvement actions.

Supply Chain Planning – Process Overview



Creating AI Value with the SAP Supply Chain Management

FDE Labs Preview

Planning Assistant



Exception Management Agent

Ensures reliable demand fulfillment by analyzing Arla's supply chain gating factors, transport lanes and inventory positions.

3-5%
reduction in E&O
inventory write-off

20-30%
faster planning
cycles



Exception Management Agent

Efficiently manages storage overload capacity by adjusting STR quantities and prioritizing allocations based on constraints.

30-50%
less firefighting

20-30%
faster planning
cycles

Logistics Assistant



Warehouse Workload Optimization Agent

Continuously monitors daily workload against planned staffing and active warehouse resources across activity areas.

10-15%
E2E transportation
cost reduction

3-5%
improvement in
inventory accuracy



Logistics Issue Resolution Agent

Efficient monitoring and autonomous resolution of issues between LGM and external systems.

10-15%
E2E transportation
cost reduction

15-20%
fewer missed ETAs

Asset & Service Assistant



Asset Performance Alert Processing Agent

Analyzes rule logic, detects violated and non-violated indicators, and delivers clear, configurable summaries with built-in explainability.

10-15%
maintenance cost
reduction

10-15%
faster alert-to-
resolution



Technician Briefing Agent

Automatically creates a unified, actionable job briefing by consolidating job, asset, performance, risk, and parts information within SSAM.

20-25%
faster compliance
documentation

3-5%
improvement in
asset availability

Business Network Assistant



Logistics Configuration Agent

Manages shipment exceptions in SAP GTT, automates ETA deviations and missing milestones, and recommends cost-efficient paths to ensure delivery reliability.

50-60%
faster cross-
enterprise exception
resolution

15-20%
reduction in
single-source
supplier exposure

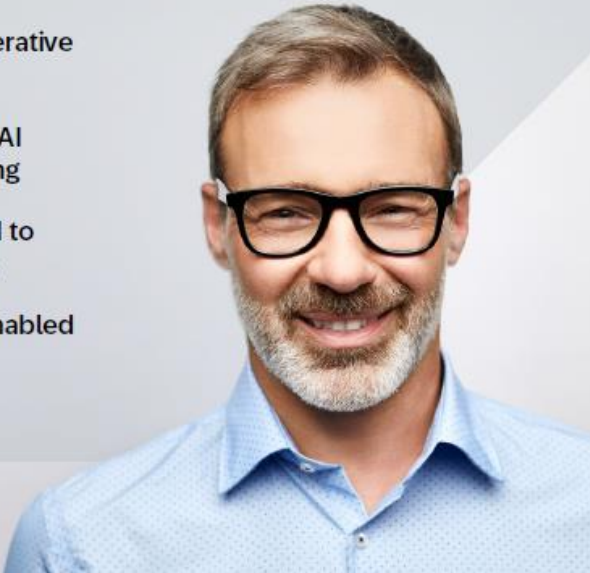
The First SAP Buyer's Guide for SC Planning

What you should know about planning with agentic AI

A buyer's guide to intelligent, decision-centric planning

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- 7 Understanding the AI evolution in planning
- 12 Applying agentic AI to planning decisions
- 17 Evaluating agent-enabled planning solutions



Planning transformation in action with agentic AI



[Link to Buyer's Guide](#)

How agentic AI supports the planning lifecycle



Sense and anticipate

Monitoring signals across supply, demand, and operations, agents continuously:

- Detect disruptions and emerging risks early.
- Surface exceptions that require attention.
- Provide visibility across the supply chain.



Model and decide

Once a signal is detected, agents help evaluate possible responses by:

- Generating and comparing planning scenarios.
- Analyzing trade-offs across service, cost, and inventory.
- Supporting faster, more informed decisions.



Orchestrate and execute

After a decision is made, agents assist in the coordination of required actions by:

- Aligning planning and execution systems.
- Routing actions across functions and workflows.
- Translating decisions into operational responses.



Learn and improve

Agents analyze outcomes and strengthen future decisions, as well as:

- Monitor performance and key metrics.
- Identify root causes and improvement opportunities.
- Refine recommendations over time.

How agentic AI transforms planning from insights to action

Traditional

Generate forecasts, alerts, and recommendations.

Depend on planners to interpret outputs and initiate action.

Require coordination across functions before execution.



Agent assisted

Interpret signals within defined objectives continuously.

Evaluate response options across constraints and trade-offs.

Support and initiate actions within governed boundaries.

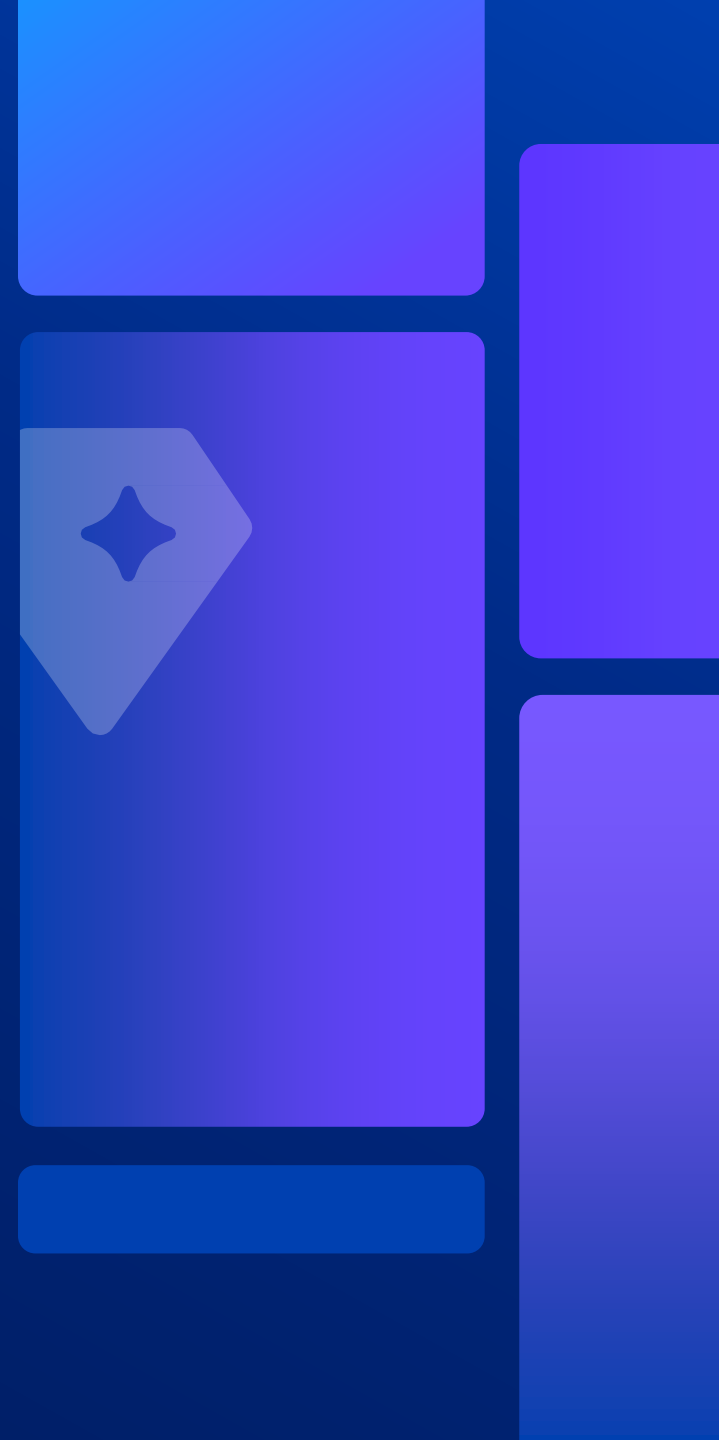


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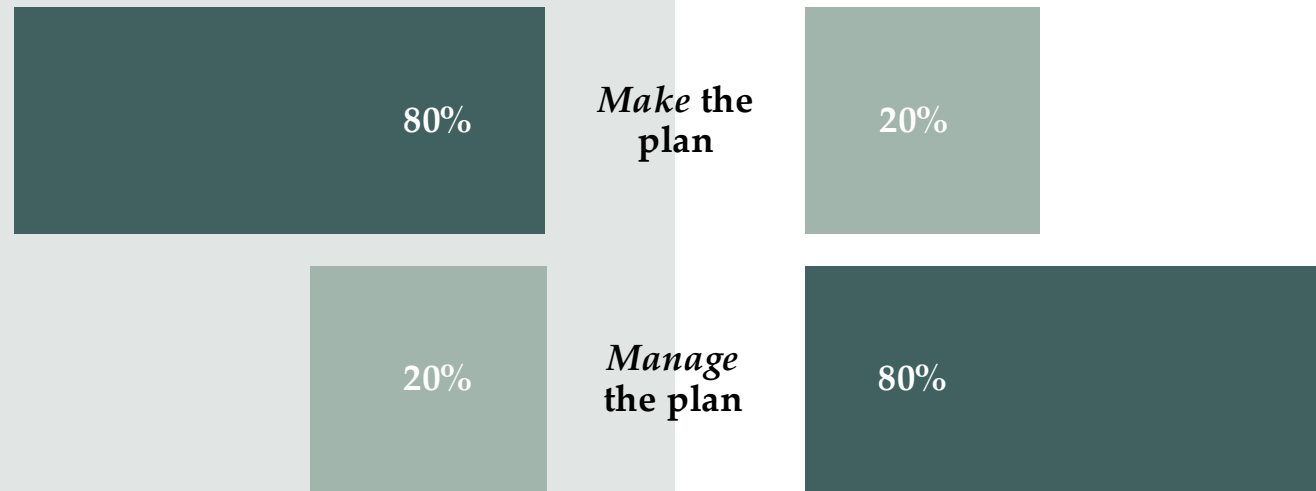
02 What Change looks like with SAP

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Most planning organisations
spend 80% of their time making
the plan and 20% managing it.
The ones getting real value from
AI have flipped that.

The flip: from making the plan to managing it

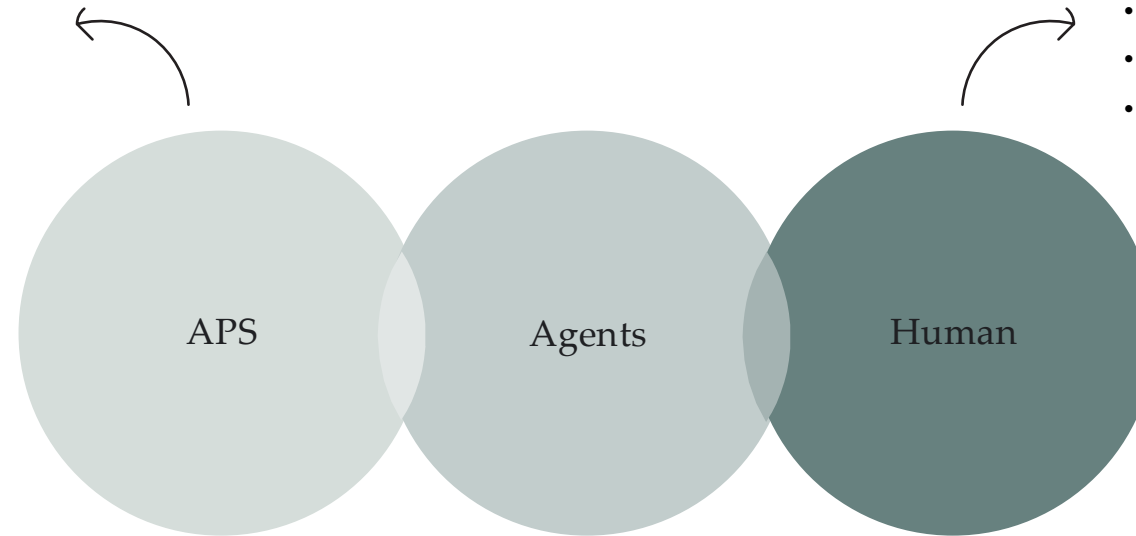


The ones getting real value from AI have focuses on manage the plan
This requires a mindset change and redesign where time is spent.

Agents can be used as the bridge between APS systems and Humans and help improve the input to the plans and increase the explainability of output

Advanced Planning System connected to ERP backbone

- Demand Plan & Supply Plans
- Link to execution
- Enabling industry specific solutions and orchestrations on top



Decision Architects

- Define business rules
- Define Guardrails and decision rights
- Define and monitor assumptions

Agents working together in agentic framework

- AI as a Process Execution System
- Redesign how workflows and where humans should be in the loop

Virtual assistants

- AI as personal assistants
- Fundamentally the same process, just done quicker and with higher quality

Most companies have invested in advanced planning models. Few get the full value out of them.

TRUE VALUE of your advanced planning engine:

Better plans × Business adoption

Why planners stop trusting advanced models



Wrong outputs

Almost always poor inputs - not a poor algorithm.



Right outputs, no explanation

A planner who cannot explain a number will not defend it.

How agents can increase business adoption



Agents question the inputs

Assumptions and data are challenged before the model runs.



Agents explain the outputs

Explainability of results and plan changes to help planners, makes it easier to avoid overwrites

Virtual assistants support both sides of the plan across all planning domains, increasing algorithm ROI through higher user adoption

3 Planning Domains

Demand Planning

Product Lifecycle Assistant

Flags inconsistent inputs before the model runs. Lifecycle stage, missing external variables, outdated seasonality.

ML Forecasting

XGBoost, neural nets, ensemble models etc

Demand Review Prep Assistant

Prepares the demand review. What changed, what drove it, open questions for Sales and Data Science.

Supply Planning

Supply Network Health Check

Validates master data before every run. Anomaly gate for backlog spikes and false signals.

Network Optimisation

Mixed Integer Programming, capacity constraints, constraint solving.

Explainability Assistant

Translates optimizer logic into plain language. Why preproduce, why move production, why short a customer.

Inventory Planning

Inventory Assumption Auditor

Compares actuals against model predictions at category level. Flags where assumptions have drifted.

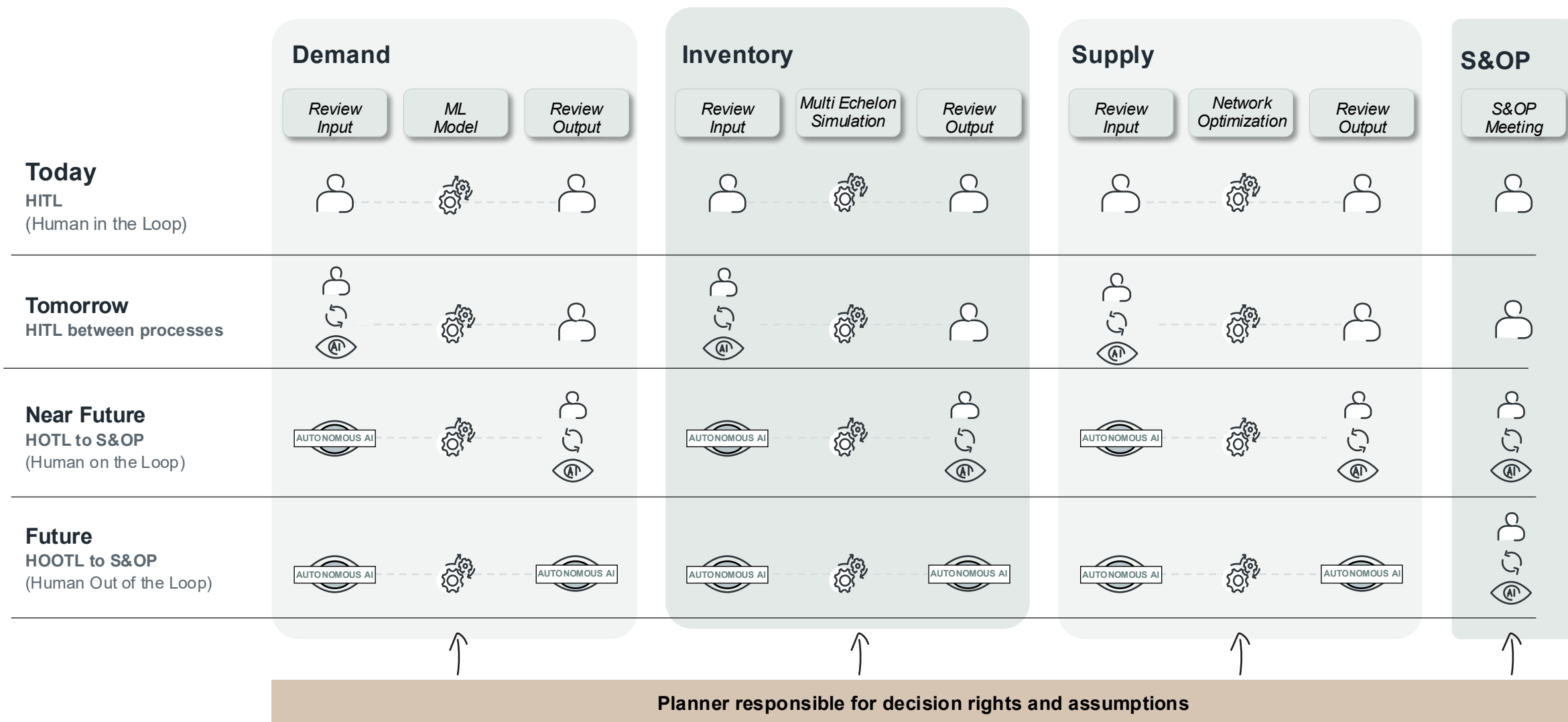
Multi-echelon Simulations

Stochastic modelling, cost-optimal safety stock settings across the full network, safety stock calibration.

Inventory Explainability Assistant

Surfaces what changed, the cost of ignoring it, and where to act to reduce net working capital.

Agents can be used to orchestrate flow, but it will happen stepwise from human-led, to escalation-led to fully agent-led



Human



Calculation engine



Agents escalating based on guardrails

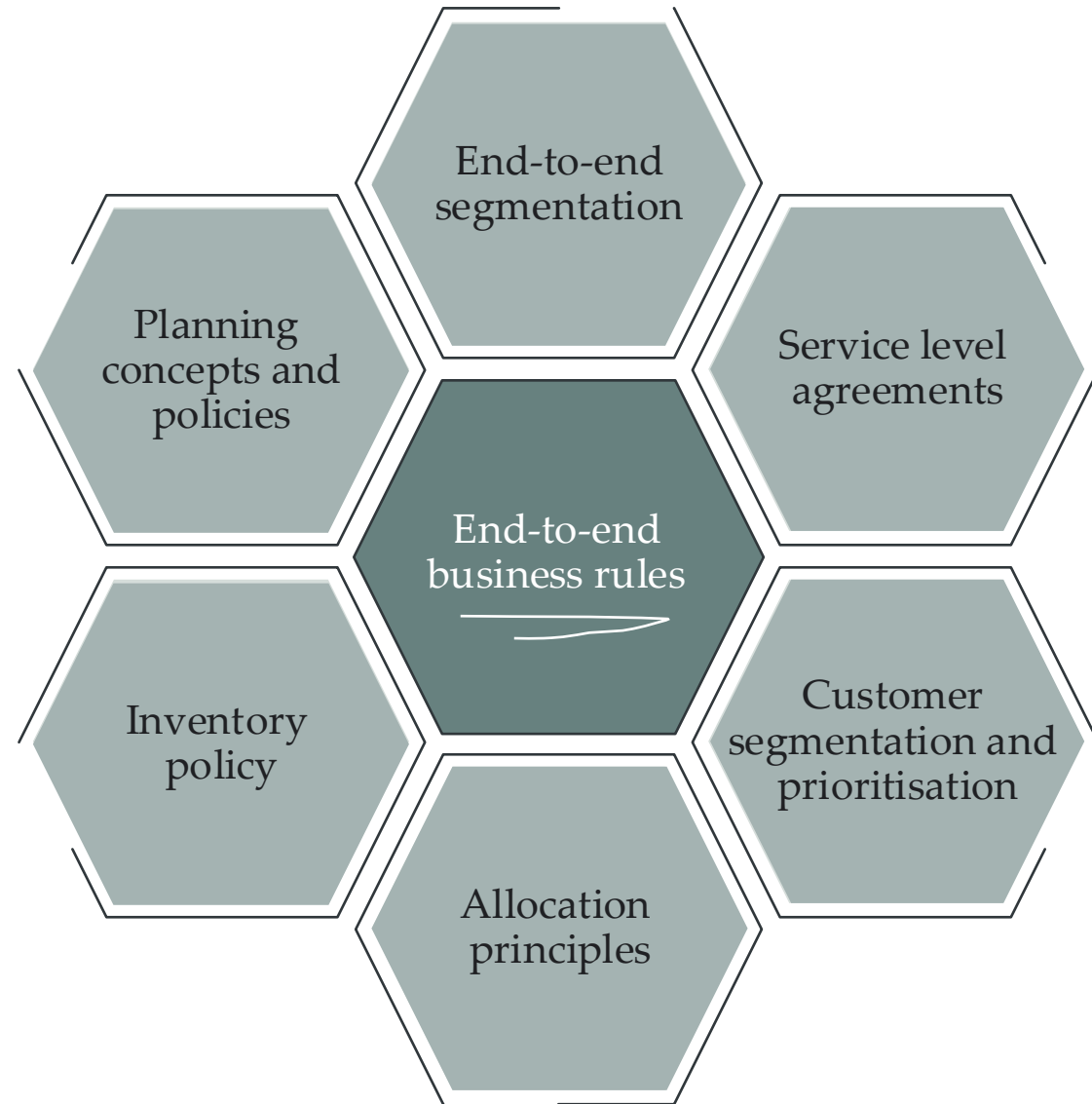


Autonomous agent

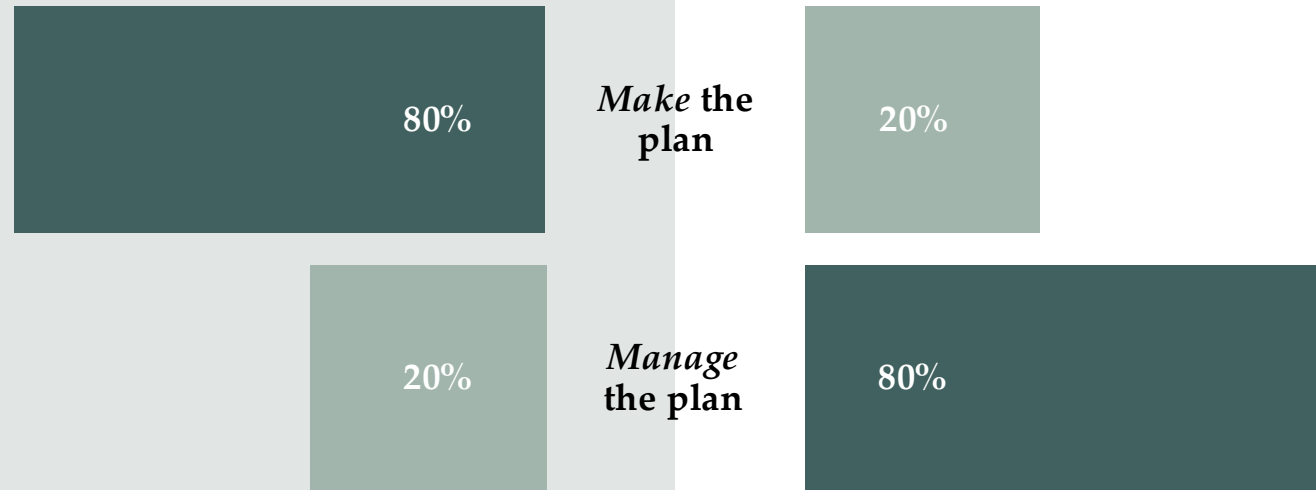
Business rules

End-to-end business rules are crucial to translating customer priorities and S&OP decisions into controlling operational planning and execution.

These should be used for define decision rights and guardrails for AI agents and ensuring a common planning foundation across APS, AI Agents and Supply Chain Leaders



The flip: from making the plan to managing it



Agents can help bringing the trust back into the model and increase user adoption

01

Improve inputs

Agents questioning the inputs and increase quality of inputs

02

Explain outputs

Explainability of results and plan changes to help planners, which makes it easier for planners to avoid overwrites

Thank you.

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