



## Supply Chain Planning

Be the Master of your Future

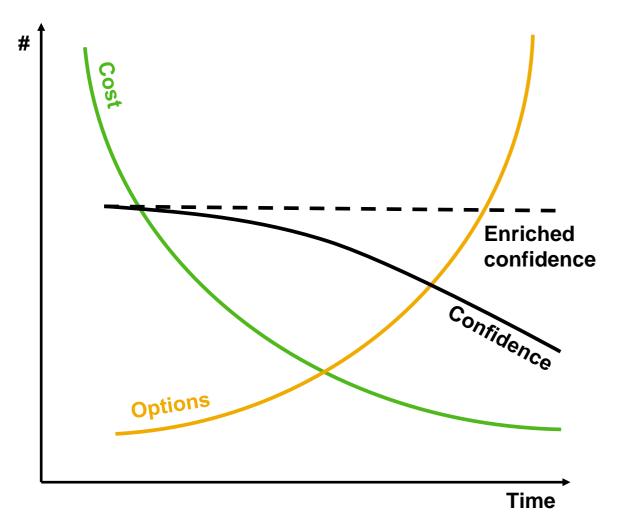
**Claus Jensen** 



# "Good fortune is what happens when opportunity meets with planning"

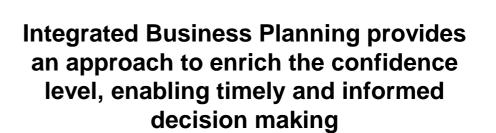
**Thomas Edison** 

#### Beat the Risk Mitigation and Opportunity Capturing challenge



Making the right decision is challenged by a number of facts:

- 1. The earlier an event can be identified, the more options are available
- 2. The earlier a decision is made, the lower the cost will be
- 3. The longer into the future, the lower the confidence to make a decision



#### Supply chain disruptions increase in frequency and impact



More than 6 out of 10 global organizations expect that geopolitical instability may have a detrimental impact on their supply chains in the next 3 years.



Almost half of global organizations consider cyber security as an important operational challenge for their supply chains through the next 3 years.



71% of global companies highlight raw material costs as their number one supply chain threat for 2023.



67% of organizations consider meeting customer expectations for speed of delivery as a critical force impacting the structure and flow of their supply chains over the next 12-18 months.

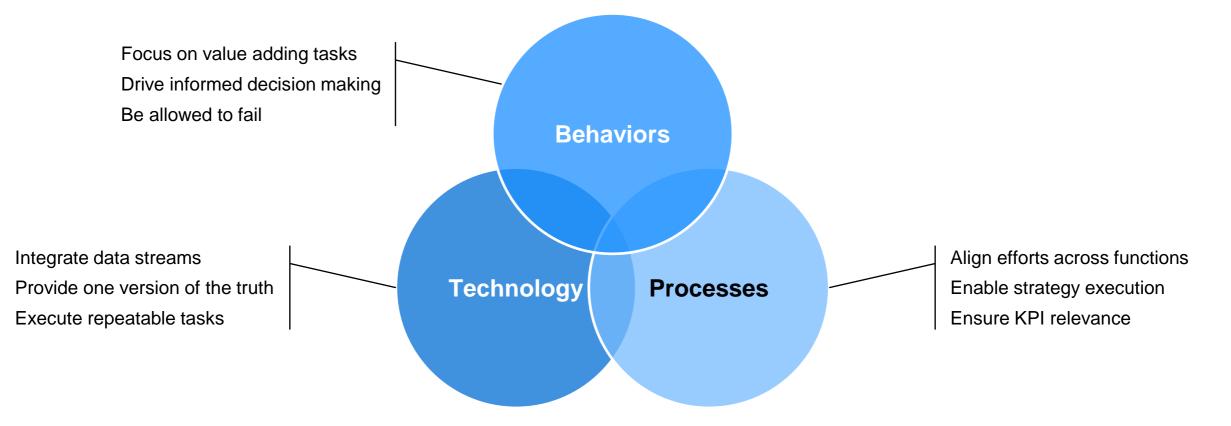


6 in 10 plan to invest in digital technology to bolster their supply chain processes, data synthesis and analysis capabilities.

#### 3 pillars for successful business evolution and innovation

"The definition of insanity is doing the same thing over and over again and expecting a different result"

Hence we need to balance the three pillars that drive success:



Talent gap drives attention towards AI/ML as a resolution

The talent gap is limiting organizations ability to transform for agility and resilience

**52%** of respondents rank 'Talent Shortage' as a top 5 supply chain challenge

**64%** of supply chain professionals reported a talent shortage in their organizations

**50%** of respondents report talent shortage as a key challenge over the next 12 months

Supply chain centric organizations investigate and implement innovate technology to stay competitive

**63%** see **breakthrough technology** having a positive impact in the short term (2 years). – **81%** see this impact in the mid term (2-5 years)

**85%** of respondents predict **adoption of AI and IoT** within 5 years.

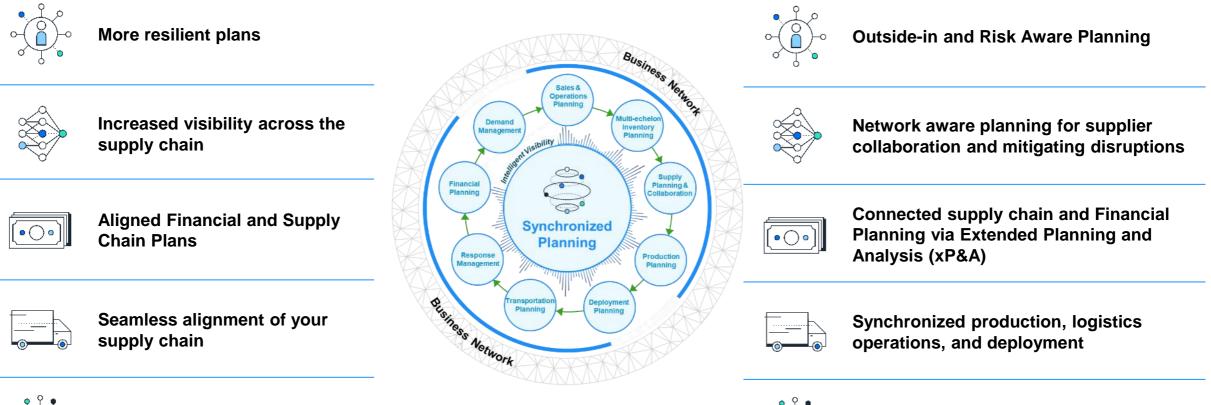
**74%** are **increasing** their investments in **technology** – **58%** cite **AI as their current leading area of investment** 

Sources: MHI, CSCMP & Alcott

## Sense, predict and act – Synchronized Planning 🔽 📿 🗆

**Use Cases** 

#### Value





Automation with artificial intelligence

and machine learning

### 

#### Autonomous supply chains require built-in Intelligence, Data Driven and Resilient Planning

Planning **Automation** based on embedded AI and Optimization **Data as strategic asset** for planning and decision making

Enable companies to **anticipate and respond** quickly to risks and opportunities

## Built-in intelligence and advanced decision support targeting an end-state of near-autonomy

Planning **Automation** based on embedded AI and Optimization





#### Decision Intelligence

Embedded AI proposes and guides planning decisions towards increased autonomy and touchless planning



#### Autonomous Agents

Leverage Large Language Models to sense on their environment and act by creating, prioritizing, and executing tasks



High Performance Create Algorithms Create

Create optimal supply chain plans and inventory proposals that support your company objectives

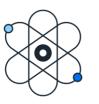


Planner Centricity planners from

Intelligent Planning UIs guide they planners from exceptions over insights to resolutions, and automate repetitive tasks

## High-Performing Algorithms drive user-guided and autonomous planning





- Market leading algorithms quickly create and adapt best-feasible supply chain plans
- Planner-defined objectives and priorities define the strategies for autonomous and usedguided generation of executable plans

#### Touchless Forecasting

Fully automated forecast model selection, parametrization and adaptation based on target demand metrics scaled to volume with massive parallelization



#### Optimization and Heuristics

Objective-driven and goal oriented inventory, supply and production optimization, combining heuristics and machine learning capabilities with proven numeric solvers



#### **Continuous Plan Repair**

Respond to plan changes and local execution updates by contextual corrections of the plan

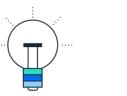


Increase Productivity with a Planner-Centricity approach





Deliver one seamless and tailored experience to the *Planner* 



Let the system do the heavy lifting, so the *Planner* can focus on **exceptions** 

A personalized Planning UI is the One-stop-shop for the Planner

Self-solving Alerts notify users, calculate business impact, and simulate potential solutions



Let's speak the Planner's (natural) language

Let's talk to Joule



Facilitate **Collaboration** between *Planners* for whenever help is needed

Collaborative Tasks, Workflows, and Collaboration Tool Integration

#### Increase autonomous planning with a data-driven approach



Leverage and share data from a variety of internal and external sources

#### **Data Driven**

**Data as strategic asset** for planning and decision making





• ·····

Augment Data

*Always on* with real-time operational integration with SAP ERP systems

Out-of-the-box and extensible connectivity to non-SAP data (e.g. external risks) via SAP Datasphere and SAP Integration Suite



**Data Products** 

Consume and share relevant enterprise and planning data as harmonized data products



Reliable Master Data

Enrich and govern your data with intelligence (e.g. AI-based cleansing)

## Autonomous response to risks and opportunities maintains the resilience in your supply chain

#### Resilient

Enable companies to **anticipate and respond** quickly to risks and opportunities





#### **Network Planning**

Collaborate with your ecosystem creating digital connections with all partners



Prepare for the unknown by incorporating internal and external risks in planning





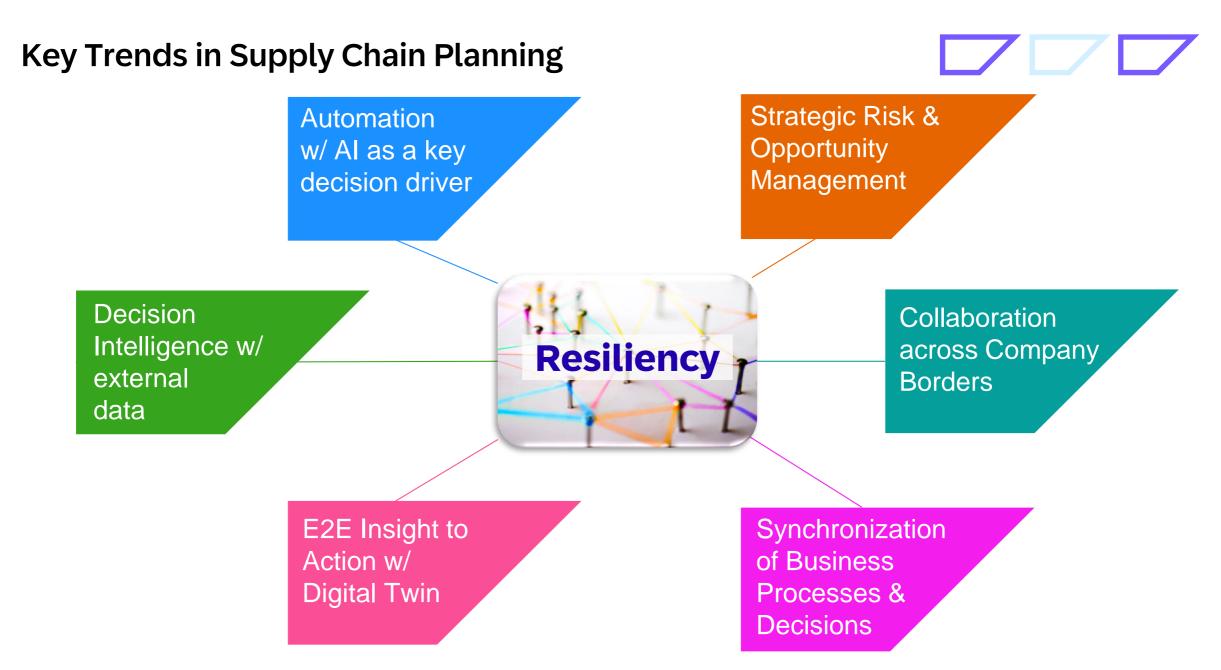
Probabilistic Planning

Intelligent Impact Analysis & Response Plan with the unknown and embrace the uncertainty and range of available options

Sense, orchestrate and respond intelligently to short-term disruption events

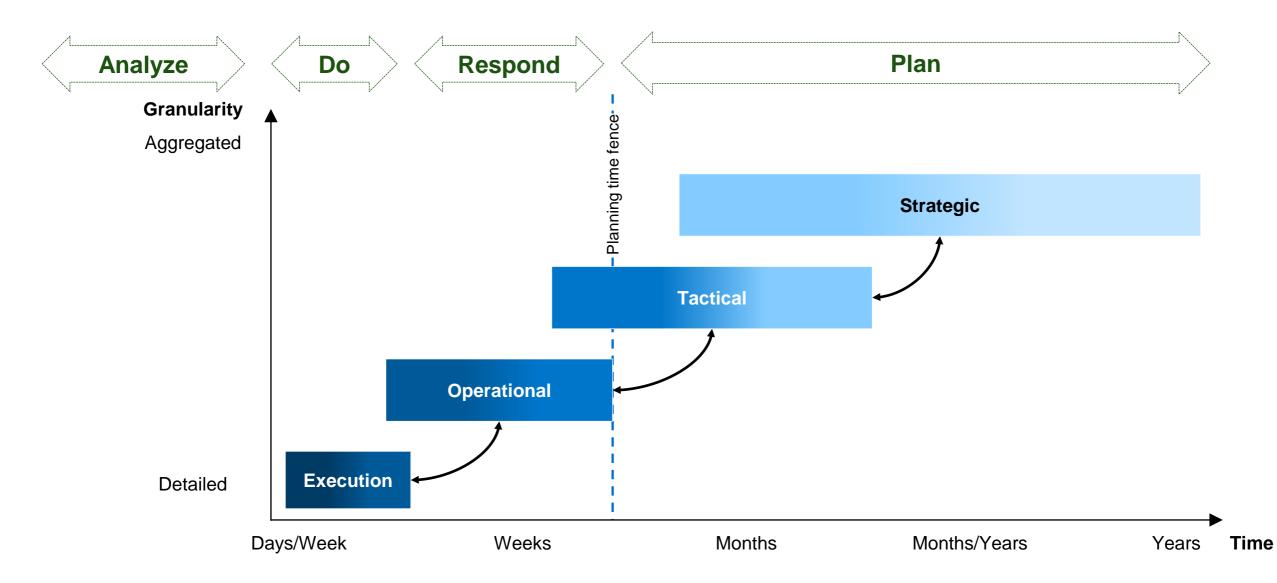
# "Never let a good crisis go to waste"

Winston Churchill



#### Planning requires integration across horizons





#### What could this look like? **Business Role Executive visibility and KPIs** 9hh **Executive** Financial and value-based assessments Analytics **Data Scientists** Synchronized planning Value Simulations & planning analysis Stream **Recommendations & triggers** IBP Planner **Planning-relevant data Real time insights** ≙⊡ Domain Domain-specific visibility and alerting **Expert Real-time data** Manufacturing Logistics & Supply Sales Execution **Asset Management**

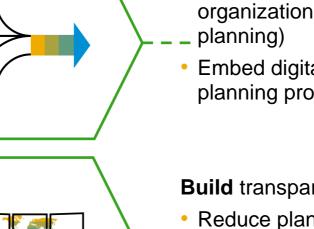
#### Major companies focus on change and agility Learnings from various industries

#### **Involve** the broader ecosystem:

- Bring in the external network and make it an integral part of the enterprise planning
- Data visibility across borders
- Build relationships get x-tiers on the journey

**Invest** in organizational change:

- High focus on standards, harmonization, and skillset
- Adoption to make right decisions on all levels
- Connected planning processes on local & global scale



#### Synchronize internal silos:

- Include feedback loops within the organization (e.g., from execution to
- Embed digital collaboration in planning processes

#### **Build** transparent plans:

- Reduce planning cycle using automation (workflow, AI, ML, etc)
- Value based decisions, using range of outcomes
- Risk Scores: e.g. Confidence intervals for deliveries/ shipments, multi sourcing
- Simplify BOM by harmonization of ingredients and optimize portfolio

#### The potential benefits are significant

## 

Tangible Benefits*	% impact
Revenue	
Top line revenue growth	1-2%
In-stock % improvement	20-30%
Service level increase	5-10%
Operating cost	
Improved planner productivity	20-30%
Order fulfillment lead time reduction	10-20%
Inventory carrying cost reduction	5-10%
Asset Utilization/Working capital	
Reduction in inventory levels	5-15%
Inventory turns increase	5-10%
Cash-to-Cash cycle time reduction	5-10%

\* IBM, Aberdeen & Gartner Case Studies & Benchmarks from SAP Value Engineering

## Join IBP Communities

Extend the Experience, engage with your Peers

• VNSG SCM Focus Group

• LinkedIn: SAP IBP Benelux Customer Group (Customer Only)









# Thank you.

Contact information:

Claus Jensen Director, SAP Global COE, Digital Supply Chain <u>claus.jensen@sap.com</u>

