



How AI helps e2e Supply Chain Orchestration

ALEXIS ROTENBERG

VP MANUFACTURING PRACTICE

KINAXIS[®]

Your Speaker today: Alexis Rotenberg

Global Vice President Industry Practices at Kinaxis



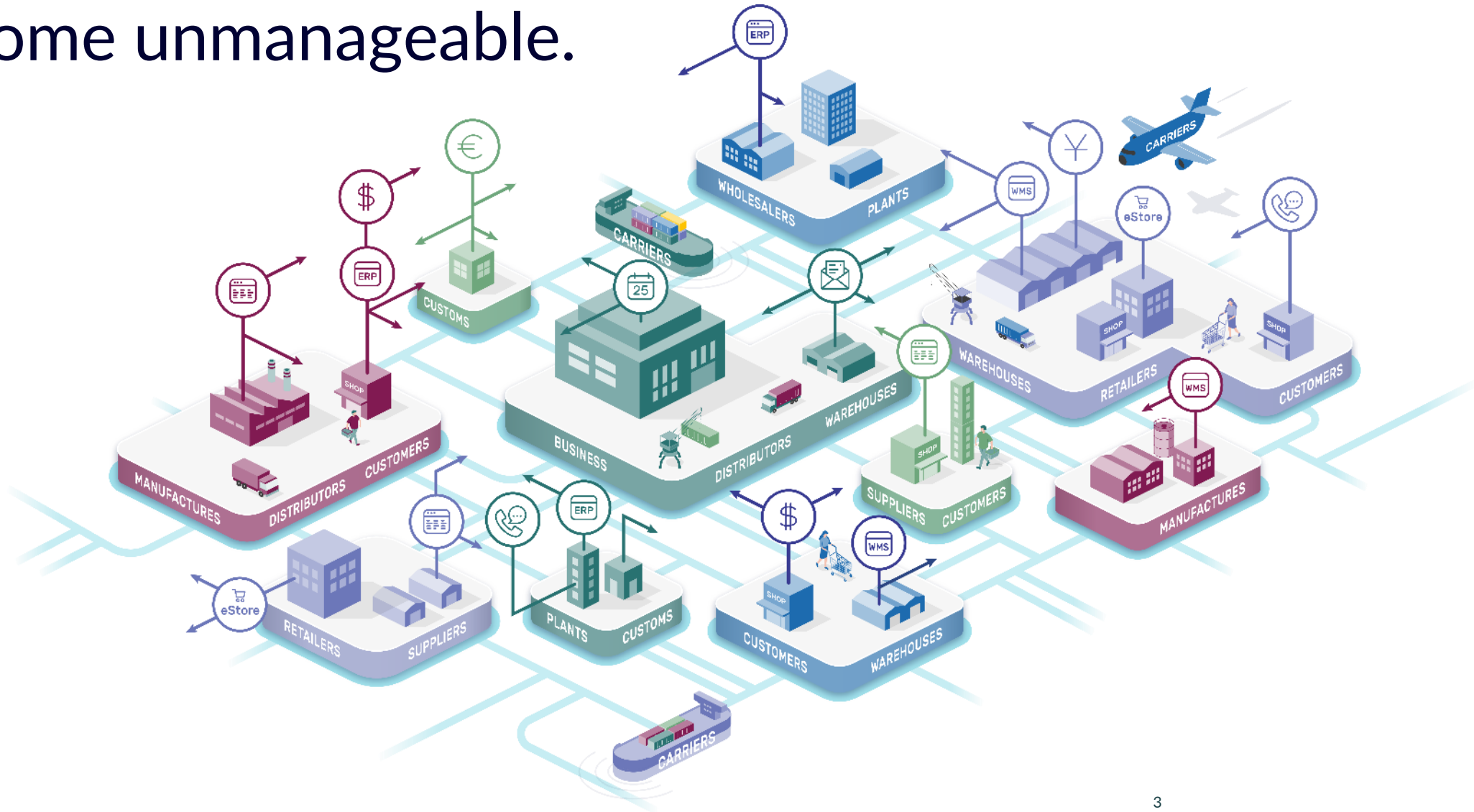
Agenda

- 01 | Welcome to the future of Intelligent Decision-making
- 02 | Critical AI Capabilities for a Volatile, Unpredictable and Changing world
- 03 | How Maestro enables Orchestration
- 04 | The Power of AI Fusion for today and tomorrow
- 05 | Where to start
- 06 | Value you can expect from embracing AI fusion



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Supply chain complexity has become unmanageable.



Causing supply chains to firefight daily



Unable to see,
coordinate, or
act in time



Hindered by
manual and
siloed processes



High costs
and poor
service levels





Agility & Resilience

Sustainability & Circular Economy

Customer Experience

Operational Excellence

Risk Management

Cost Control

M&A Impact

Talent War

Digital Transformation

Network Complexity

— Survival requires
investing into
**tomorrow's
opportunities.**
Not firefighting
yesterday's issues.

An aerial view of a person walking a tightrope over a dense forest. The person is wearing a dark t-shirt, shorts, and red gloves. The forest below is a mix of green and autumn-colored trees. A thin blue line is visible on the tightrope to the right of the person.

This is your reality

KINAXIS[®]

Old approaches are not designed for **today's challenges**



“ The techniques and processes that we’ve relied on for the past 30 years will not survive the next three. ”

ROGERIO BRANCO,
CHIEF SUPPLY CHAIN OFFICER, EATON CORPORATION

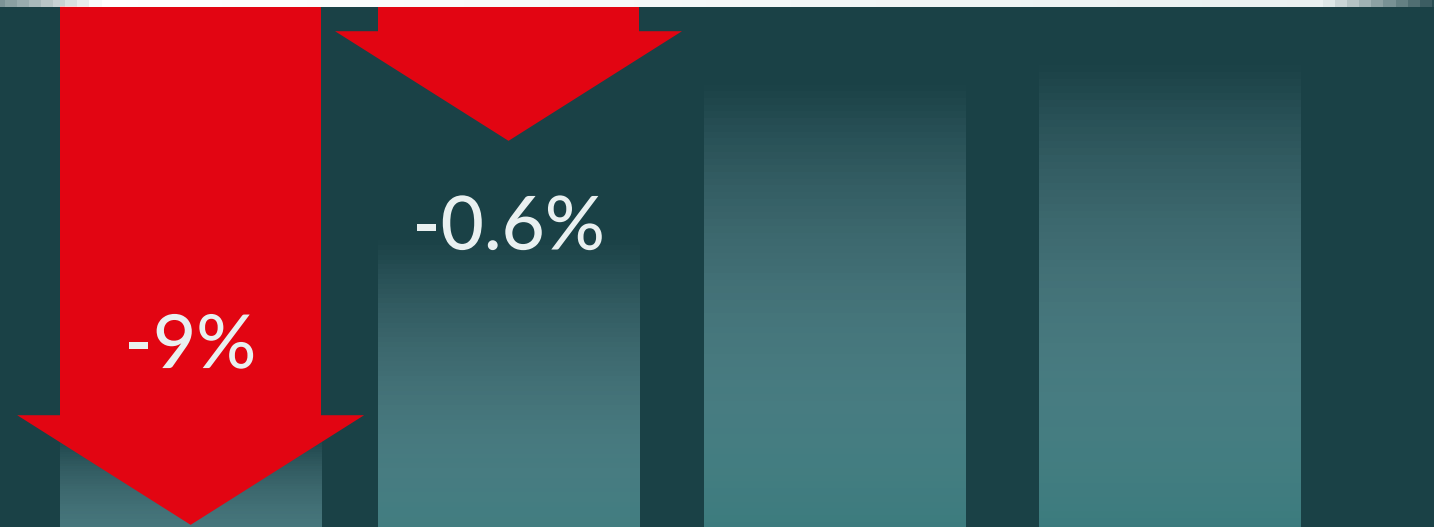
It's costing you significantly

LOWER REVENUES

LOWER RETURN ON ASSETS

HIGHER COGS

HIGHER INVENTORY LEVELS



-9%

-0.6%

+1.3%

+6%

You shouldn't have to choose...



Operational Excellence

OR



Customer Experience



You can
have it all

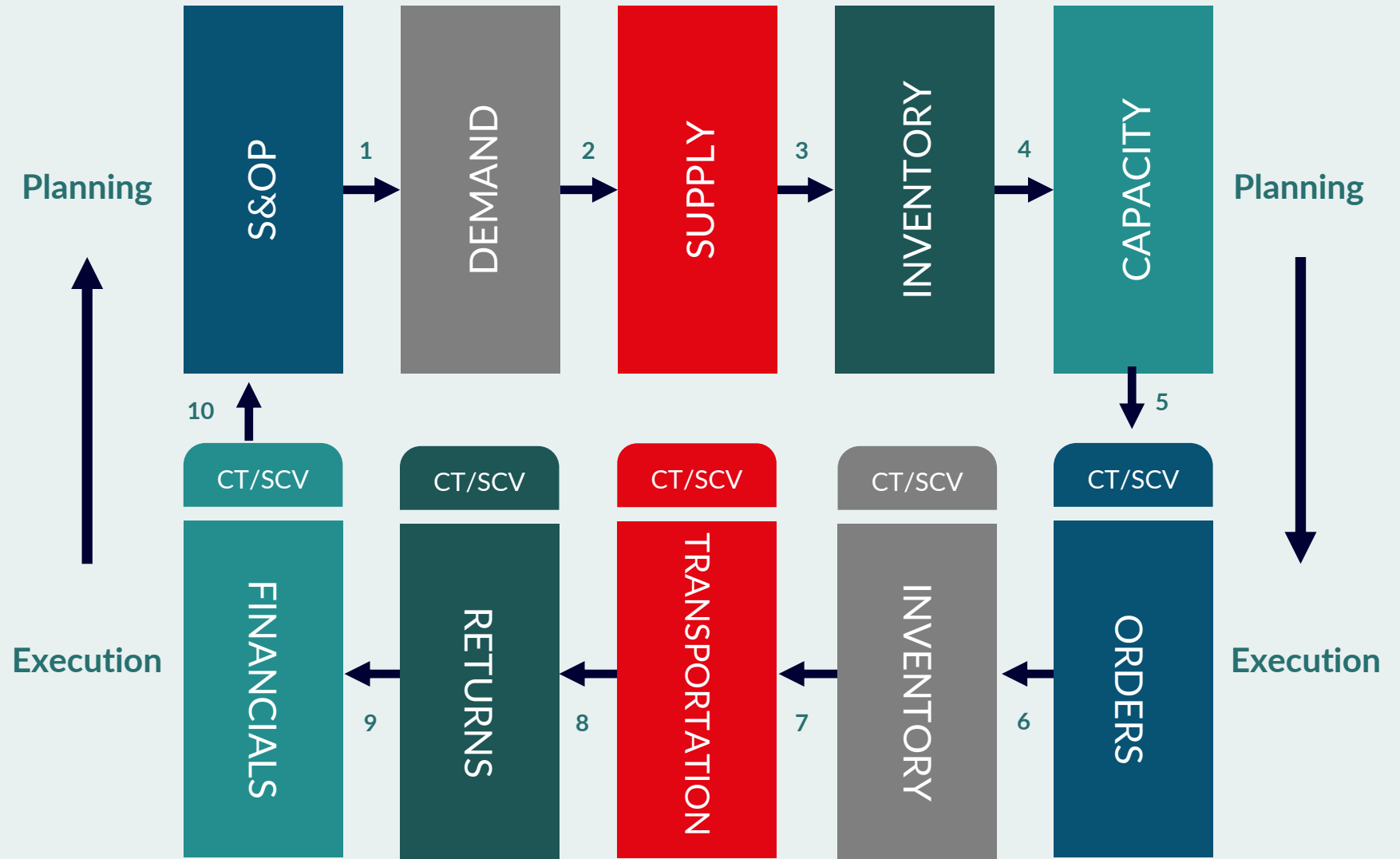
KINAXIS®

Orchestrate your supply chain in complete harmony



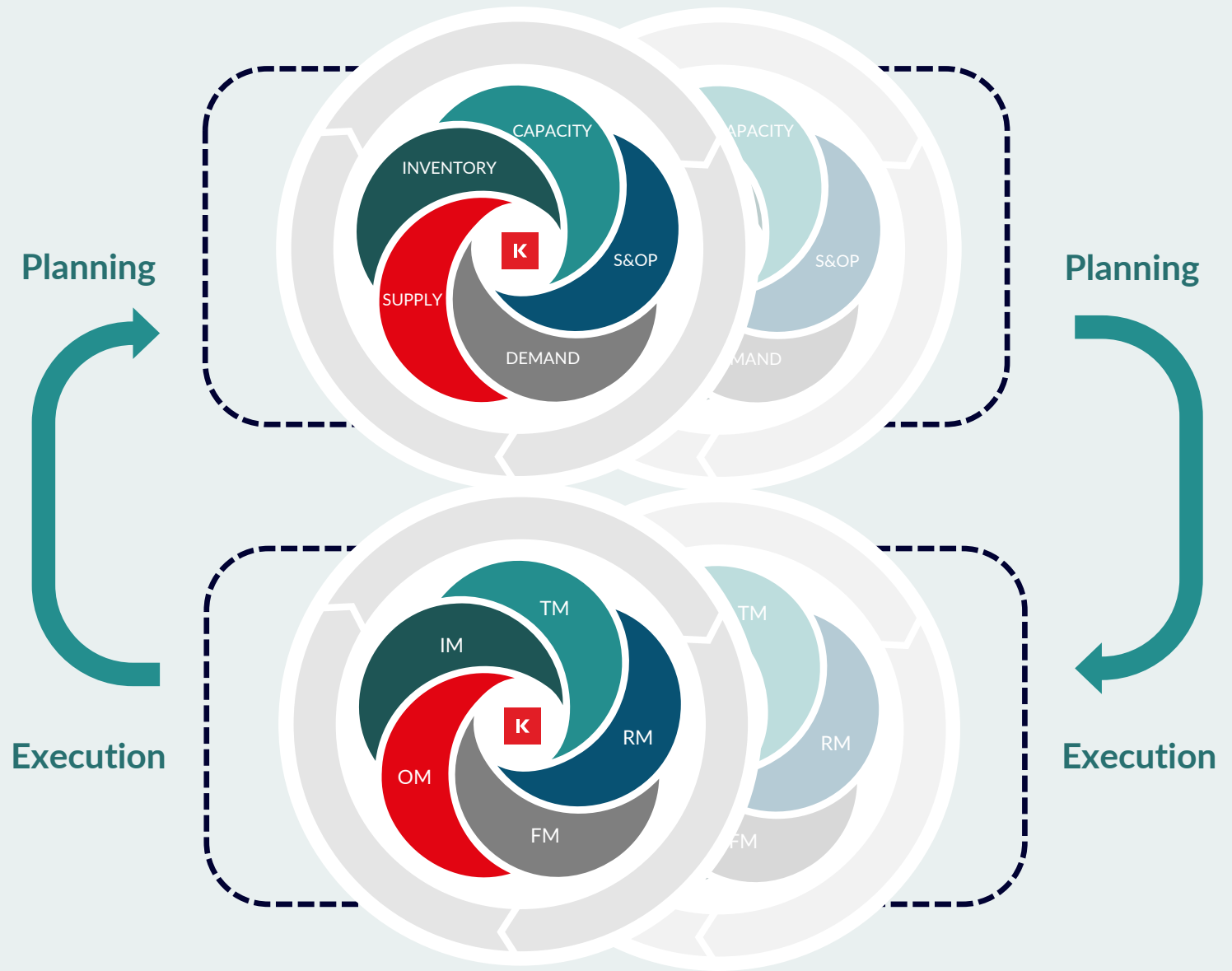
Traditional Planning & Execution

From Silo to Silo.
Lethargy!



Concurrent Planning and Execution

Improved Agility



Concurrent Supply Chain Orchestration

Hyper Agility!

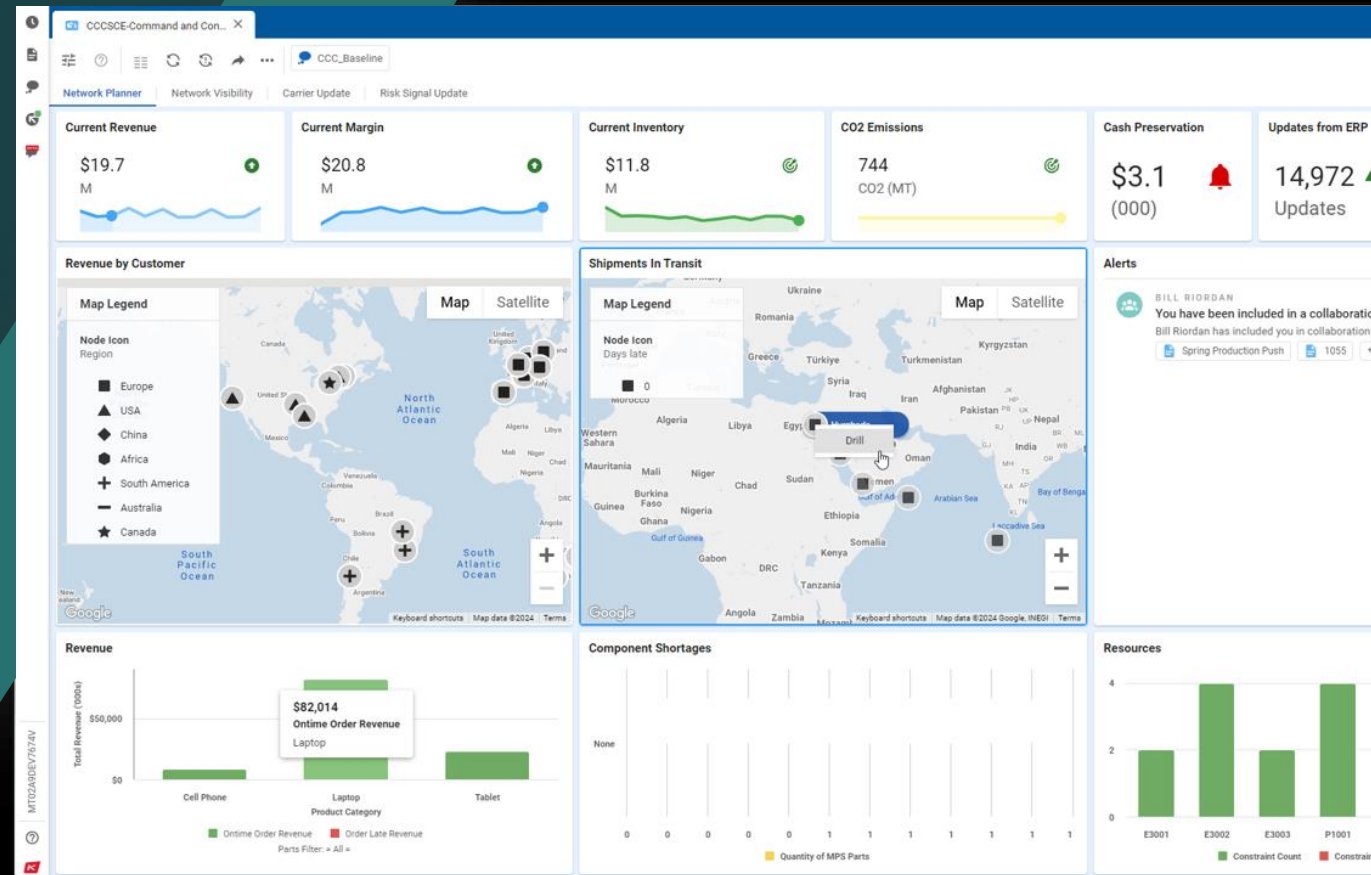


Orchestration made easy ...

with



maestro
by KINAXIS®



Ensure the best service levels at the lowest costs.

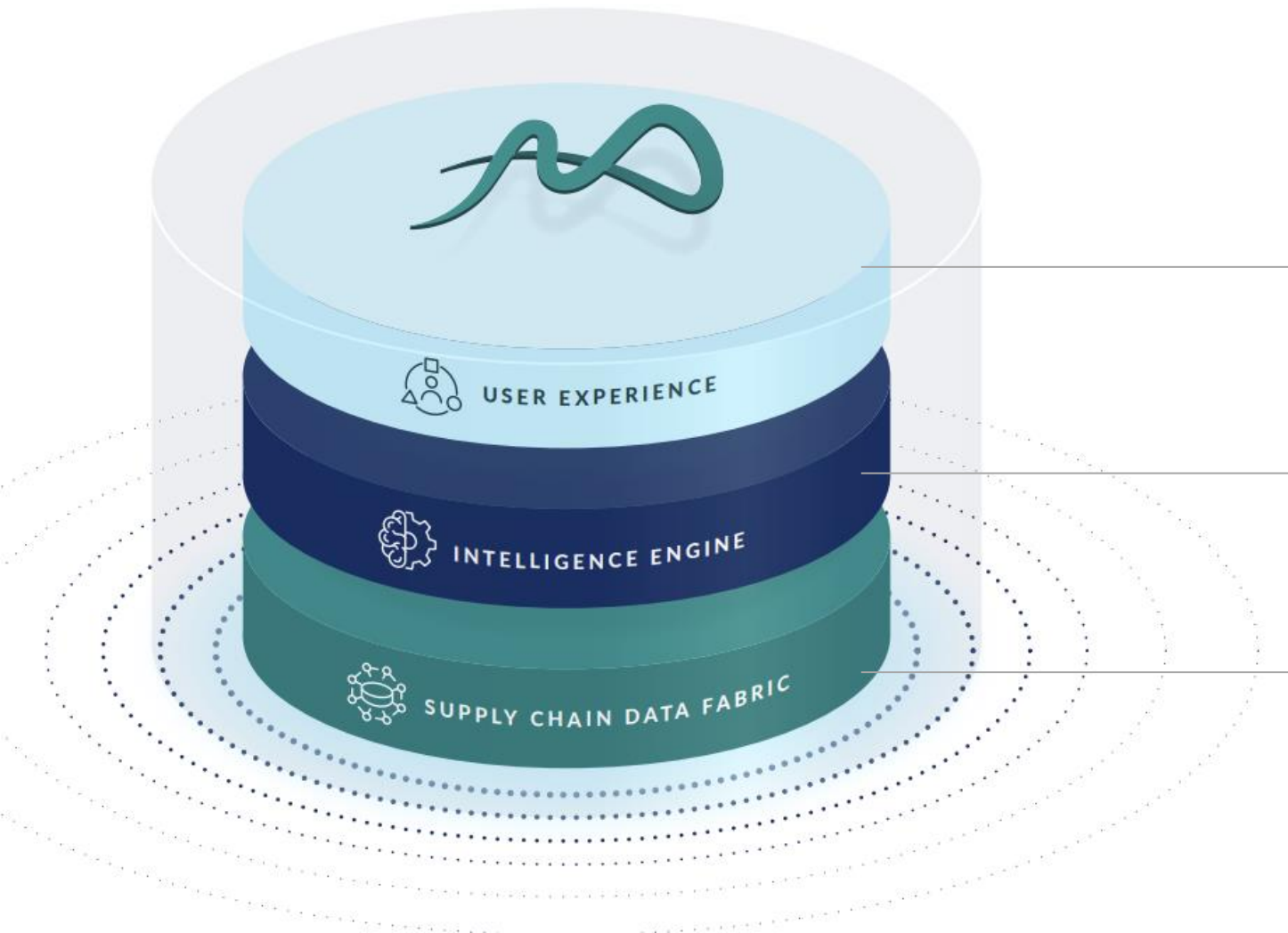


Synchronization of demand, supply, inventory, order and transportation management to optimally orchestrate plans and orders of all types (purchase, sales, returns, transfers) across the full planning and order lifecycles.

Planning & Execution under One Roof



Orchestration Platform – Technology Imperatives



USER EXPERIENCE

Seamless and intuitive user interface makes conversation and collaboration simple no matter your role.

INTELLIGENCE ENGINE

Always-on computational engine delivers real-time insights and adaptive solutions with speed and efficiency.

SUPPLY CHAIN DATA FABRIC

Connects and contextualizes internal and external data sources into a single source of truth and makes it accessible by all.

2024 Gartner® Magic Quadrant™ for Supply Chain Planning Solutions

Kinaxis Named a Leader for
the 10th Consecutive Year
and Positioned Highest on
Ability to Execute





Machine Learning

Optimization

Genetic Algorithms

Robotic Process Automation

Generative AI

Deep Learning

Decision Management

What is AI?

AI is the science of computers mimicking human intelligence to solve problems.

This science encompasses many disciplines to improve speed, precision and elegance in decision making by finding patterns in enormous volumes of data.

Machine Learning

Optimization

Genetic Algorithms

Robotic Process Automation

Deep Learning

Generative AI

Decision Management

What can AI do?

1. Generate recommendations
2. Predict and surface insights
3. Provide speed and scale
4. Automate processes
5. Enhance productivity

Challenges for supply chains that only AI can solve



Resilience

- Disruptions are happening more often with a global scope



Agility

- Pressure has increased to accelerate faster with short lead times



Big Data

- More data is available – and required - to make the “right” decision



Scale

- A holistic perspective is required to scale the business



Quality of decisions

- Better decisions with transparency behind them is paramount for trust

Challenge

AI Capabilities

- Effectively identify changes and disruptions, providing visibility never seen before to make informed decisions

- Automate processes faster than any other technique, offering the speed that will keep your business a leader

- Consider a vast amount of data in a record time, delivering otherwise hard-to-see information that would be lost

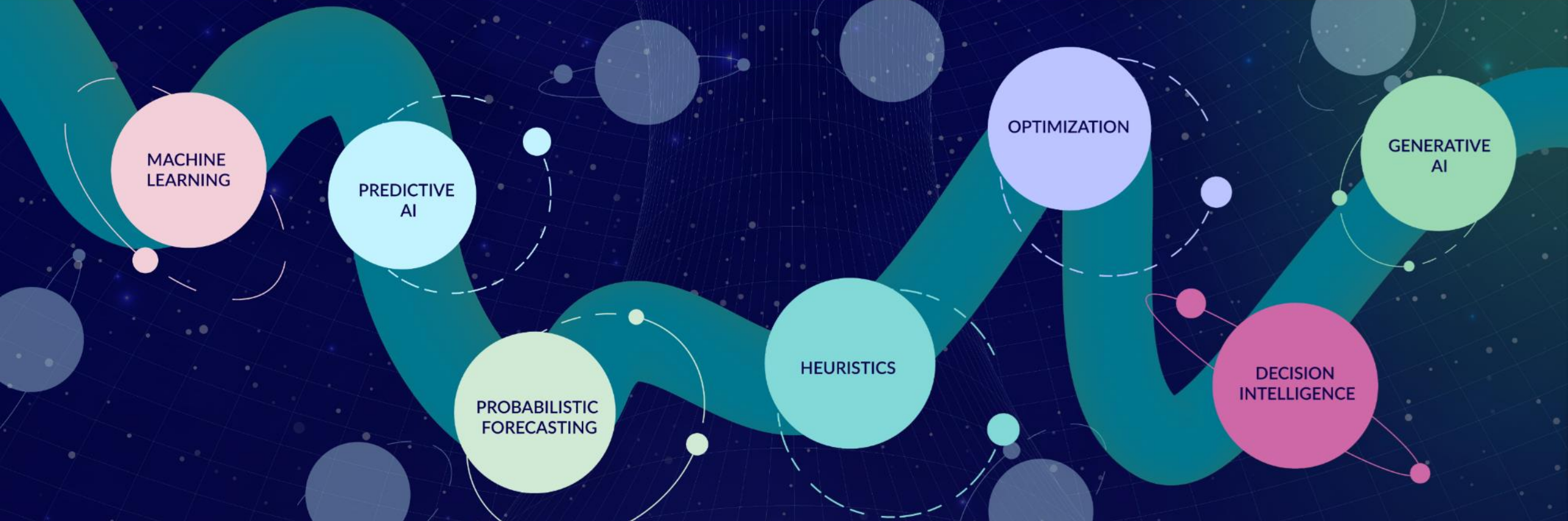
- Utilize record volumes of the most granular data to offer simultaneous information across your organization

- Learn from past choices to optimize the quality of decision-making over time

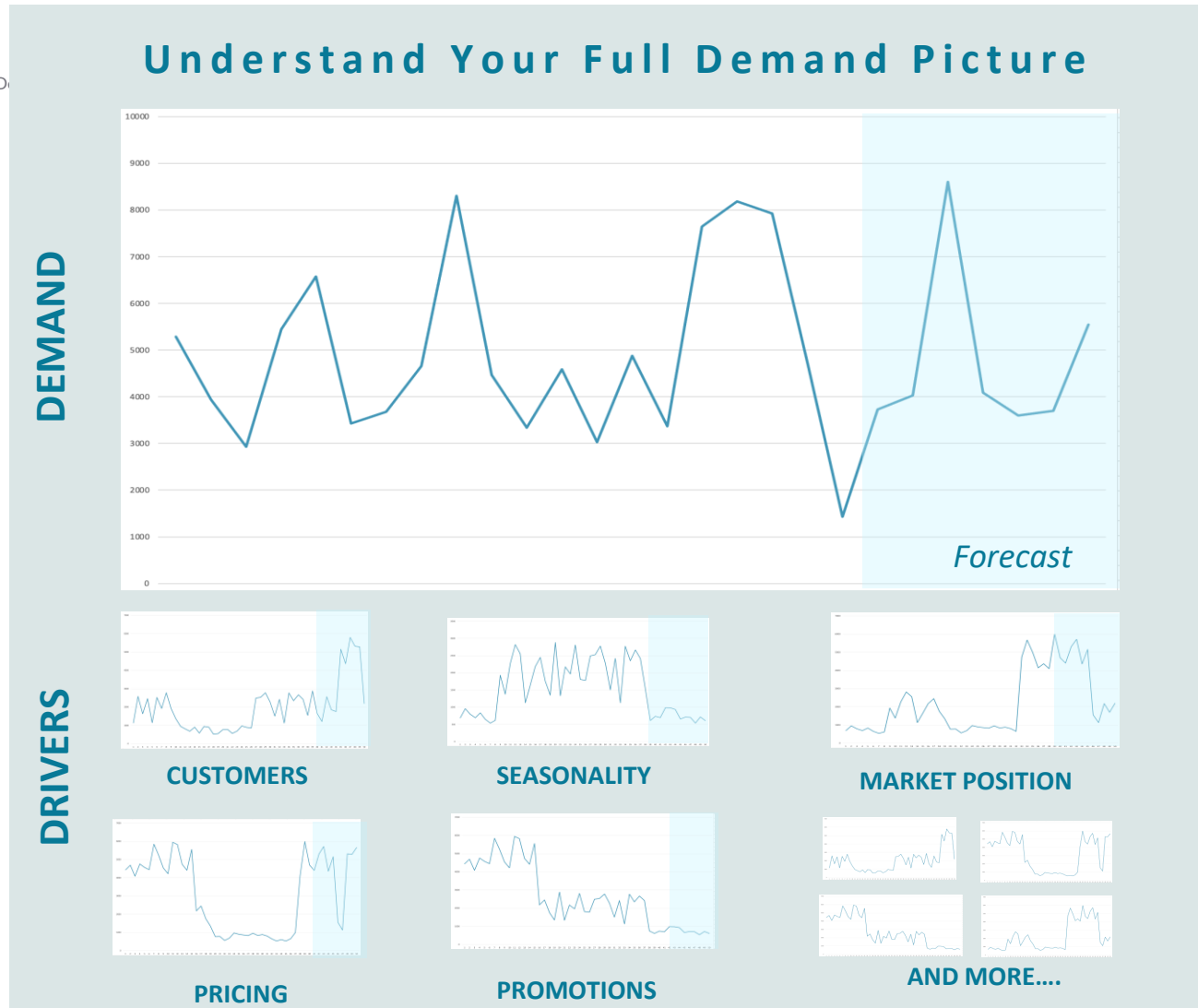
Applications of AI in the supply chain



Fusion of AI for solving supply chain problems



The power of AI fusion – Demand Sensing



Accuracy

Best-in-class forecasting techniques, augmented with analytics and heuristics



Flexibility

Flexible data internal and external data



Workflow

Fully integrated into your RapidResponse workflow



Insights and explainability

Understand forecast and business drivers

The power of AI fusion – Demand Sensing

ASK

How should I address any impact from Taylor Swift?

SENSE

Historical demand

Social sentiment

Concert dates/locations

LEARN

Machine Learning

Statistics

Genetic Algorithms

Robotic Process Automation

Heuristics

Deep Learning

Decision Management

Optimization

Generative AI

AUTOMATE

1

GenAI interprets the question

2

Sense social sentiment and adjust forecast

3

Shape order patterns into short-term forecast

AI-driven forecasting is about more than accuracy

TYPICAL RESULTS

10%

increase in accuracy

7%

reduction in bias

50%

increase in productivity

EXCEPTIONAL INNOVATION

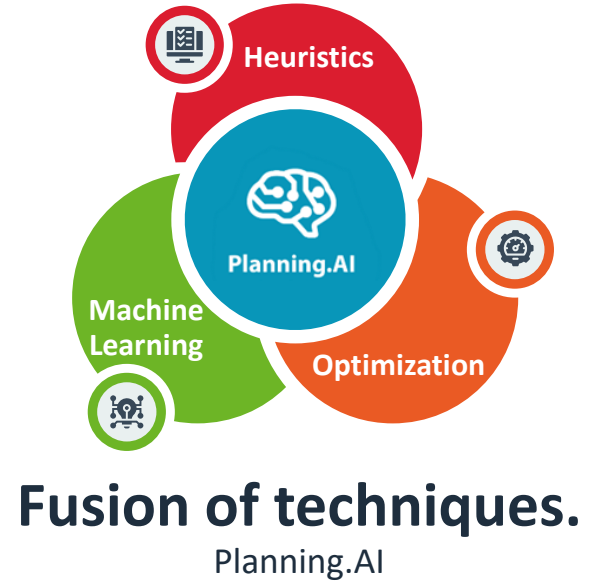
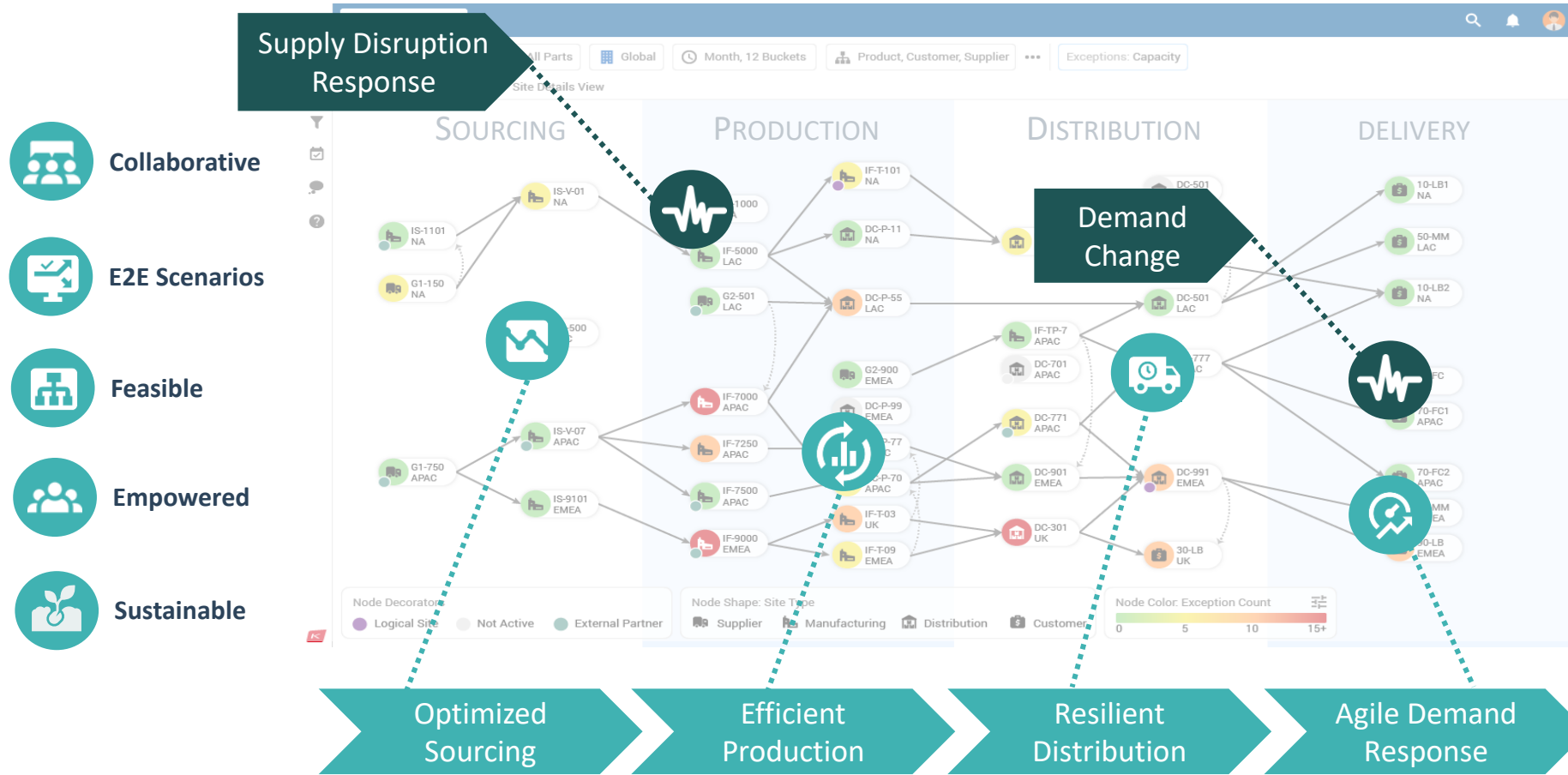
Integrating AI with concurrency allows for faster, more accurate forecasts that are instantly translated across your end-to-end supply chain—all in a packaged solution that eliminates complexity and confusion.



KEY
TAKEAWAY

It's not only about the math or models.
It's the right context that counts.

The power AI fusion – Supply Planning



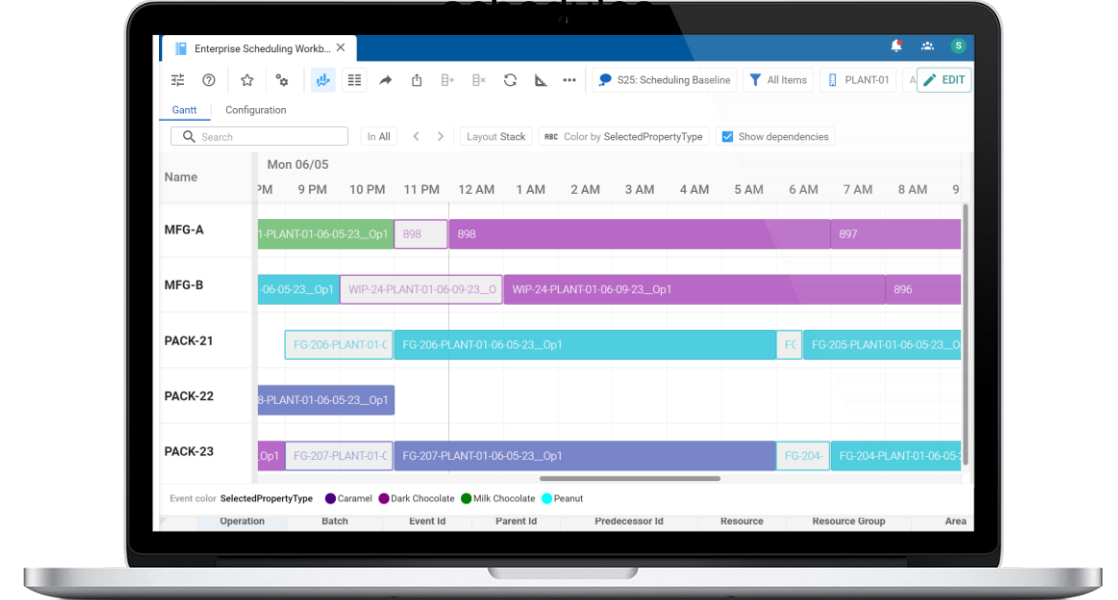
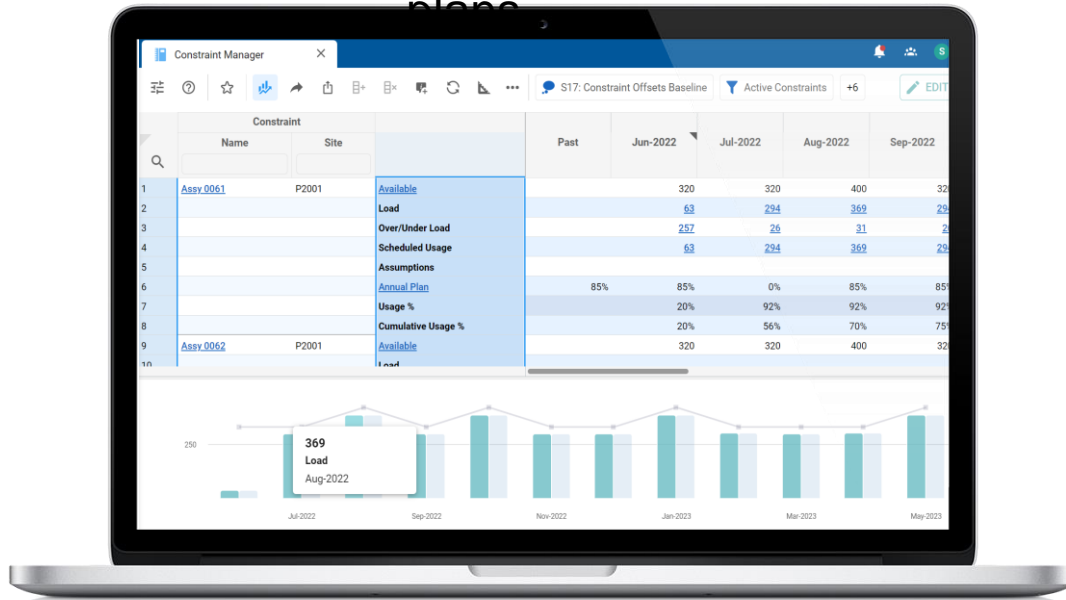
Plan anything.

The Cognitive Network Graph

The power AI fusion – Supply Planning

From monthly constrained production plans

...to minute by minute production



One Platform. One Truth. Unlimited Scenarios.

Simulate any change.
Unlimited what-if scenarios

Cognitive Network Graph
powered by Kinaxis RapidResponse®

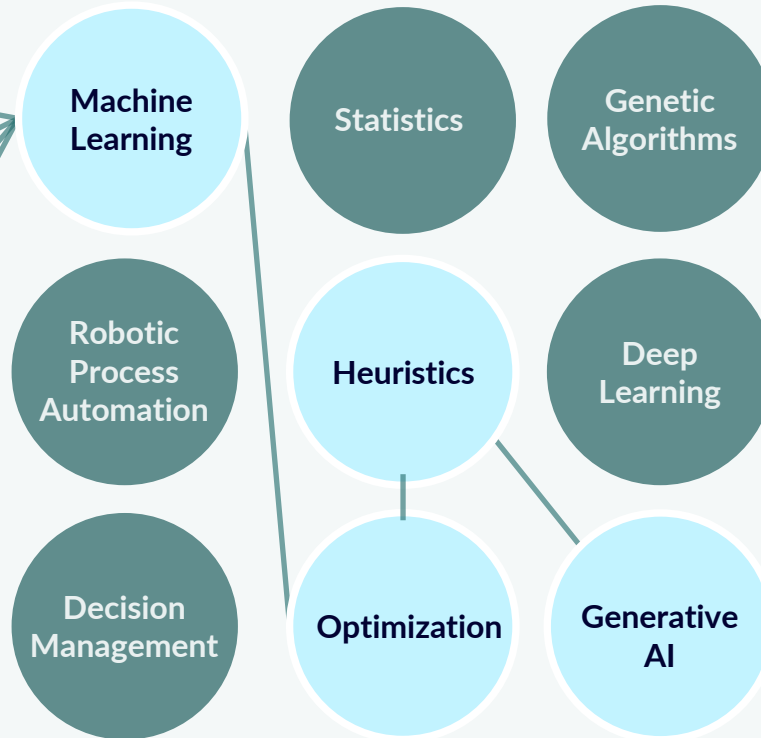
Plan for any outcome.
Align to key objectives

The power AI fusion – Supply Planning

SENSE

- Historical optimized plans
- Inventory & safety stock
- Sourcing costs across network
- Production capacity

LEARN



AUTOMATE

- 1 Machine learning enhances performance from past solves
- 2 Optimization analyzes efficient trade-off choices
- 3 Heuristics provide fast detailed final decisions

REPLY

Demand will increase 27% over the next 18 weeks in the Northeast region of the US. You need 100K more units within 48 hours to satisfy it. That inventory can be reallocated from the Midwest. To reduce the risk of stocking out in the Midwest we can bring forward production at minimal cost that's within my approved tolerance level. Do you want me to proceed?

Optimization doesn't have to be slow

TYPICAL RESULTS

8%

Increase in profit margin
with 3% increase in
capacity utilization

18%

reduction in inventory
while maintaining
customer services levels

EXCEPTIONAL INNOVATION

Warm-starting optimization using heuristics and ML allows for the same level of accuracy as pure optimization, but in a fraction of the time—even when optimizing for multiple factors like cost and service.



KEY
TAKEAWAY

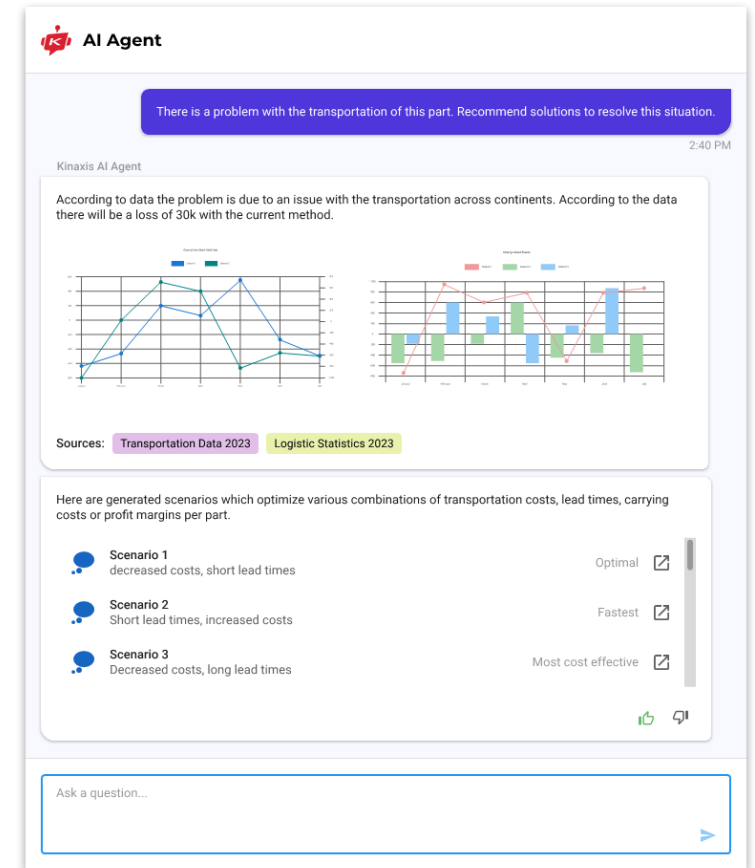
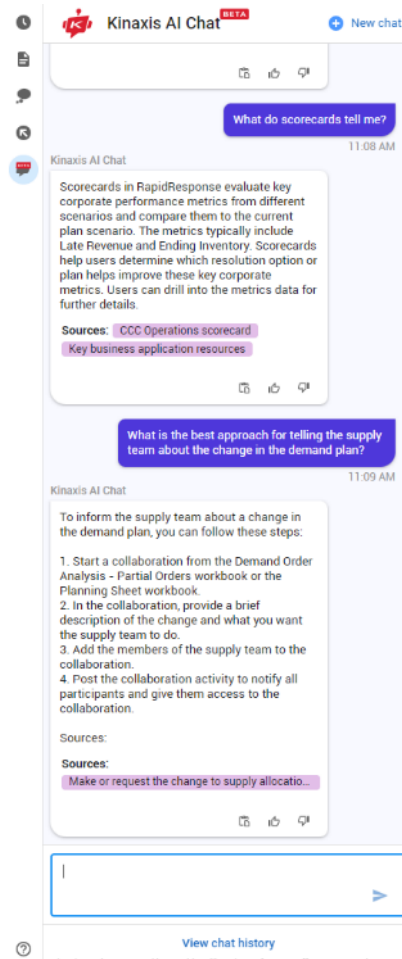
Optimizing one link in the chain won't
optimize the whole.

GenAI's potential is more than skin deep

“From the moment our team deployed Kinaxis chat it was clear it would be a gamechanger, enabling us to gain a quicker handle on how we to solve our most pressing supply chain challenges.”

ED SCOTT ,
CHIEF PROGRAM MANAGER,
NATIONAL INSTRUMENTS

CONFIDENTIAL

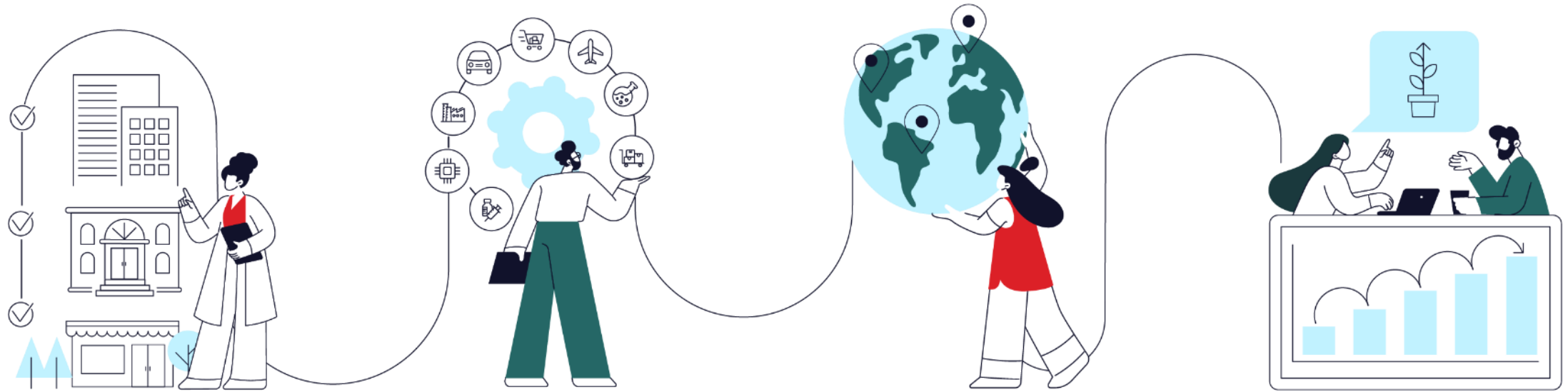


KEY
TAKEAWAY

Combining classical and generative AI is the key to innovation.

Supply Chain Orchestration infused with AI

Providing the foundation for your future



ANY SIZE

ANY INDUSTRY

ANY GEOGRAPHY

ANY MATURITY LEVEL

Leading companies are reaping the rewards

AGILITY

Synchronizing over 1K global suppliers to produce one car every 45 seconds.

V O L V O

TRANSPARENCY

Integrating disconnected systems to coordinate across dynamic networks and ensure customers get the best service at the best cost.

DSV

COLLABORATION

Breaking down siloes across a digitally connected supply chain of 20K suppliers, 160 factories, and 80 DCs globally.

Schneider
Electric

TRUST

Harnessing ML to sense and mitigate seasonal fluctuation and risk to ensure consistent supply to >13,000 QSR sites.

 **HAVI**

Trusted to power the world's most admired supply chains

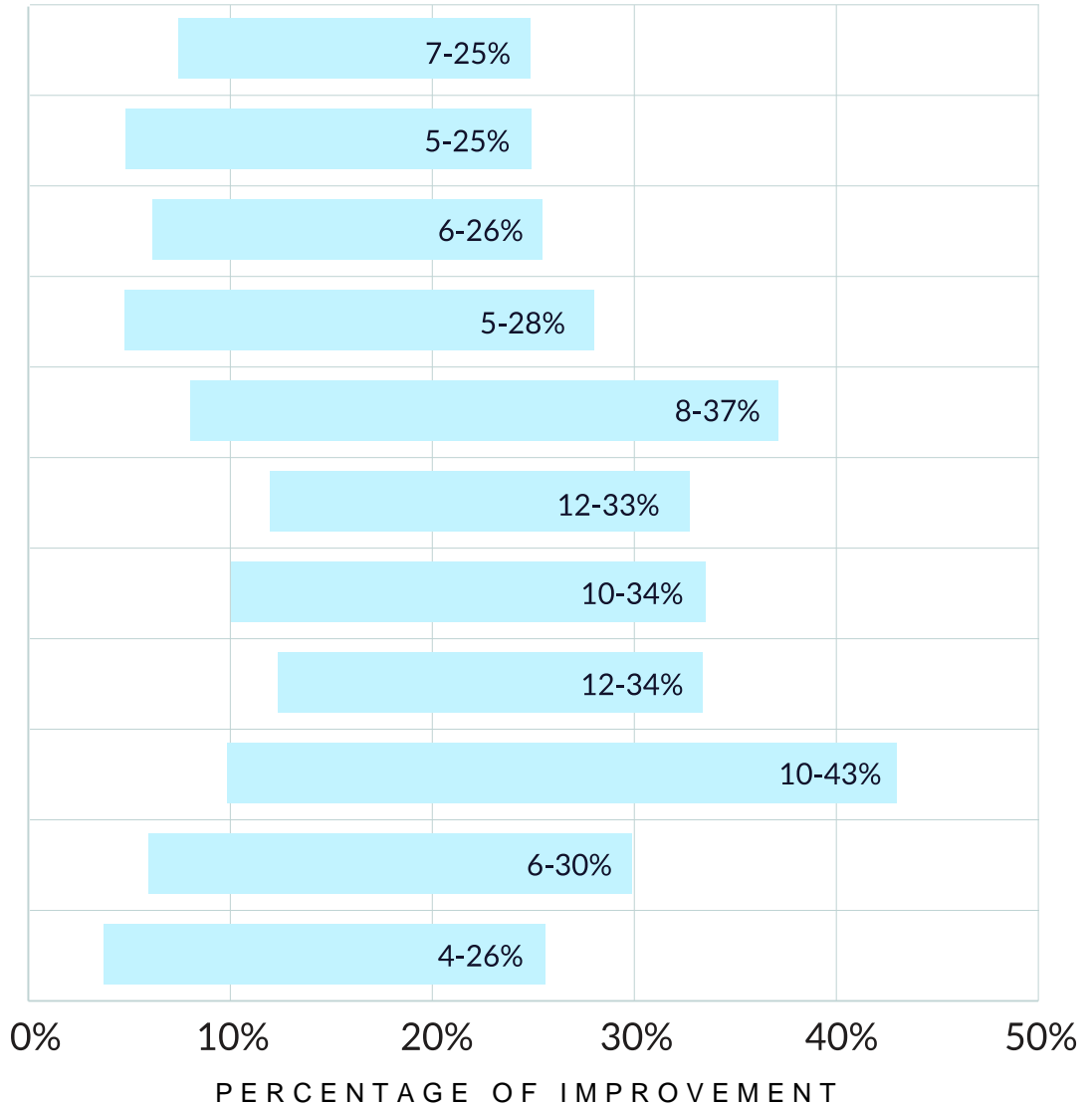


Achieve accelerated value



70% of companies saw significant KPI improvement within first 12 months

- Improvement in forecast accuracy (item/location level)
- Decrease in total inventory
- Decrease in obsolescence
- Reduction in expediting costs
- Improvement in customer service (e.g. OTIF, line fill, CLT)
- Increase in capacity utilization (e.g. OEE)
- Reduction in direct material costs
- Reduction in labor costs (e.g. production, planning, IT, order management)
- Reduced S&OP cycle time (bi-monthly, weekly, daily, ad hoc)
- Increase in number of SKUs managed by demand/supply planners
- Dollar value of systems eliminated as a percentage of IT spend



MORGAN SWINK, PHD
 EXEC. DIRECTOR AND PROFESSOR CENTER FOR SUPPLY CHAIN INNOVATION

KINAXIS[®]



Powering the world's supply chains

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