logility

A Digital Transformation Guide for Supply Chain Disruptions

Supply Chain Disruptions Happen!

And ERP and Spreadsheets are NOT the answer!

Use these eight tips to review your supply chain planning strategies to bounce back faster and prepare for the future.

Tip 1 Adopt Advanced Supply Chain Capabilities Now

Plan for the unexpected, be flexible, and be ready to adjust quickly.

Strengthen decision–making capabilities to function within high–pressure environments.

Digitally transform now. Supply chain visibility, combined with advanced analytics and artificial intelligence is key to quickly sensing and optimally responding to supply chain disruptions.

Growth in nominal EBT (indexed 2007=100)

Sources: S&P Capital IQ; Bain Sustained Value Creator analysis, winners (n=415) losers (n=3,449)
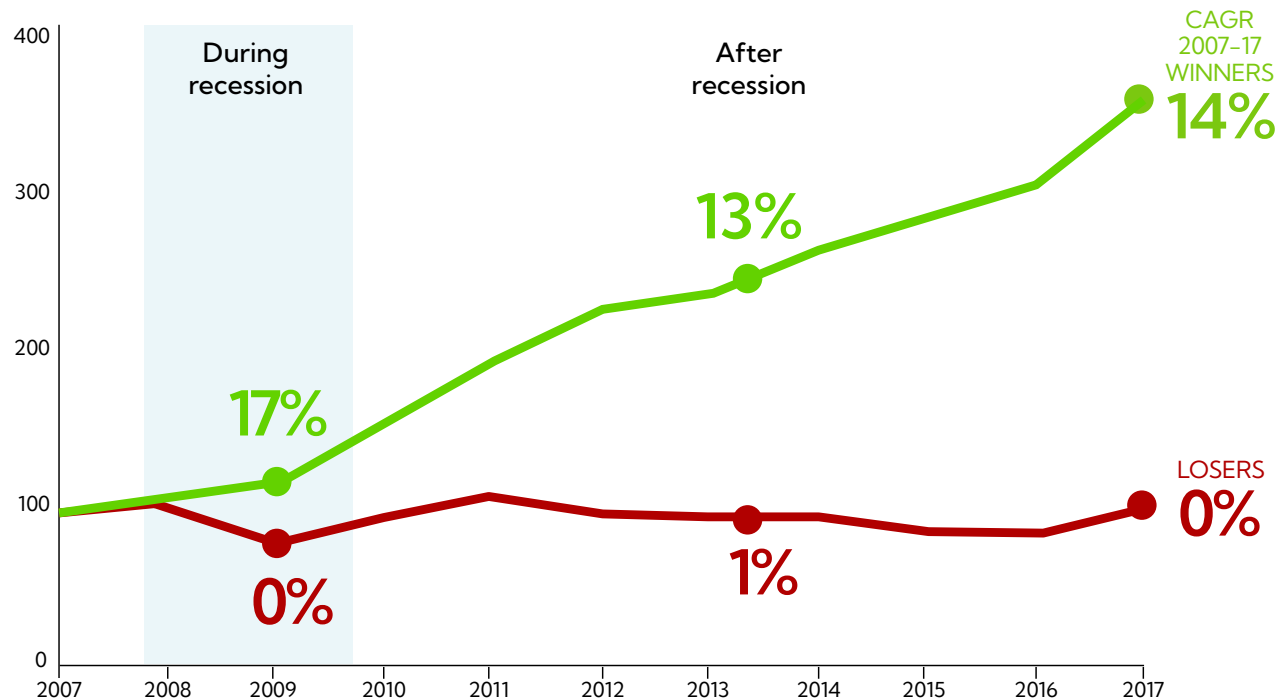
Tip 2 Strengthen Supply Chain Data Management Abilities

Supply chain operations thrive on digital data, but data dimension is often overlooked and underfunded. According to a recent study across North America and Europe*, 55% of supply chain data practitioners reported that data is out of date by the time it is used, with almost 40% noting that this precludes access to timely insights.

To develop insights and make timely decisions, supply chain data on customers, products, locations, lanes, vendors, suppliers, and orders needs to be clean, consistent, comprehensive and current. The supply chain team needs to own its development and sustainability.

463 EB

of data will be created every day by 2025

DEMYSTIFYING DATA UNITS

From the more familiar 'bit' or 'megabyte', larger units of measurement are more frequently being used to explain the masses of data

Unit		Value	Size
b	bit	0 or 1	1/8 of a byte
B	byte	8 bits	1 byte
KB	kilobyte	1,000 bytes	1,000 bytes
MB	megabyte	$1,000^2$ bytes	1,000,000 bytes
GB	gigabyte	$1,000^3$ bytes	1,000,000,000 bytes
TB	terabyte	$1,000^4$ bytes	1,000,000,000,000 bytes
PB	petabyte	$1,000^5$ bytes	1,000,000,000,000,000 bytes
EB	exabyte	$1,000^6$ bytes	1,000,000,000,000,000,000 bytes
ZB	zettabyte	$1,000^7$ bytes	1,000,000,000,000,000,000,000 bytes
YB	yottabyte	$1,000^8$ bytes	1,000,000,000,000,000,000,000,000 bytes

*A lowercase "b" is used as an abbreviation for bits, while an uppercase "B" represents bytes.

* Source: S&P Global and Immuta, 2021

# Tip 3 Digitize Supply Chain for Visibility and Decision Making

The supply chain is no longer linear but a multidimensional matrix. Supply chain information travels between points in the matrix as needed to get the right products to the right place at the right time. Visibility to near real-time, end-to-end supply chain data is necessary to make optimal decisions quickly. Digitization of supply chain data is essential to achieving the required data visibility. Fortunately, digital data can be used to graphically represent your supply chain both numerically and graphically. Use a supply chain digital twin, built from granular supply chain data that is updated in near real time, to create plans, analyze tradeoffs, conduct 'what-if' scenarios and make informed decisions quickly.
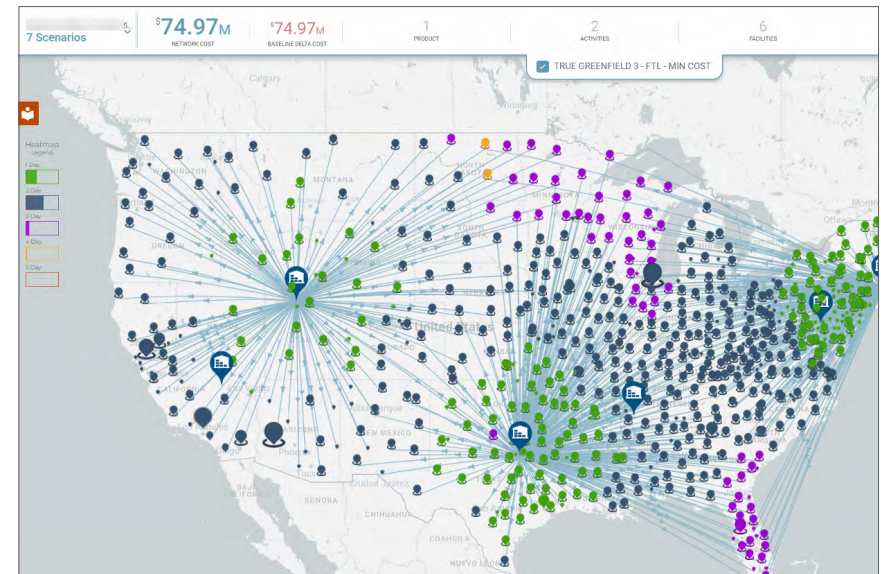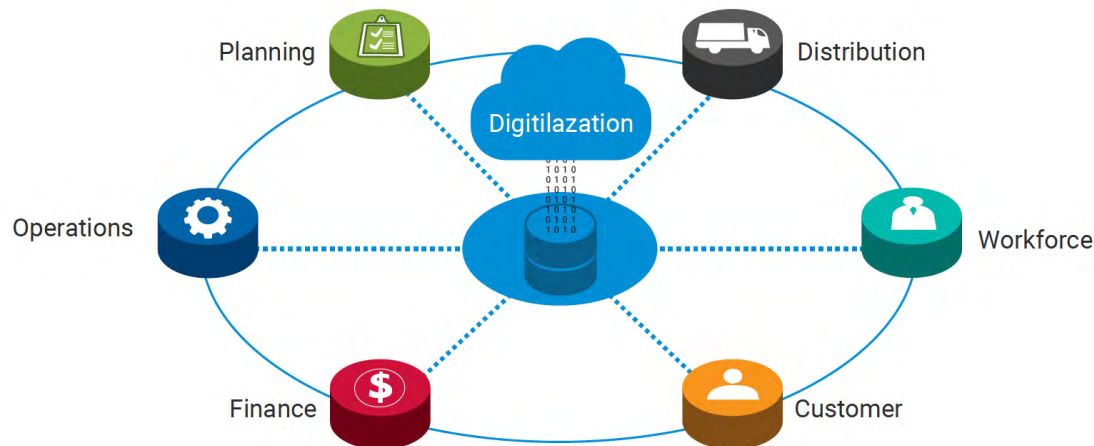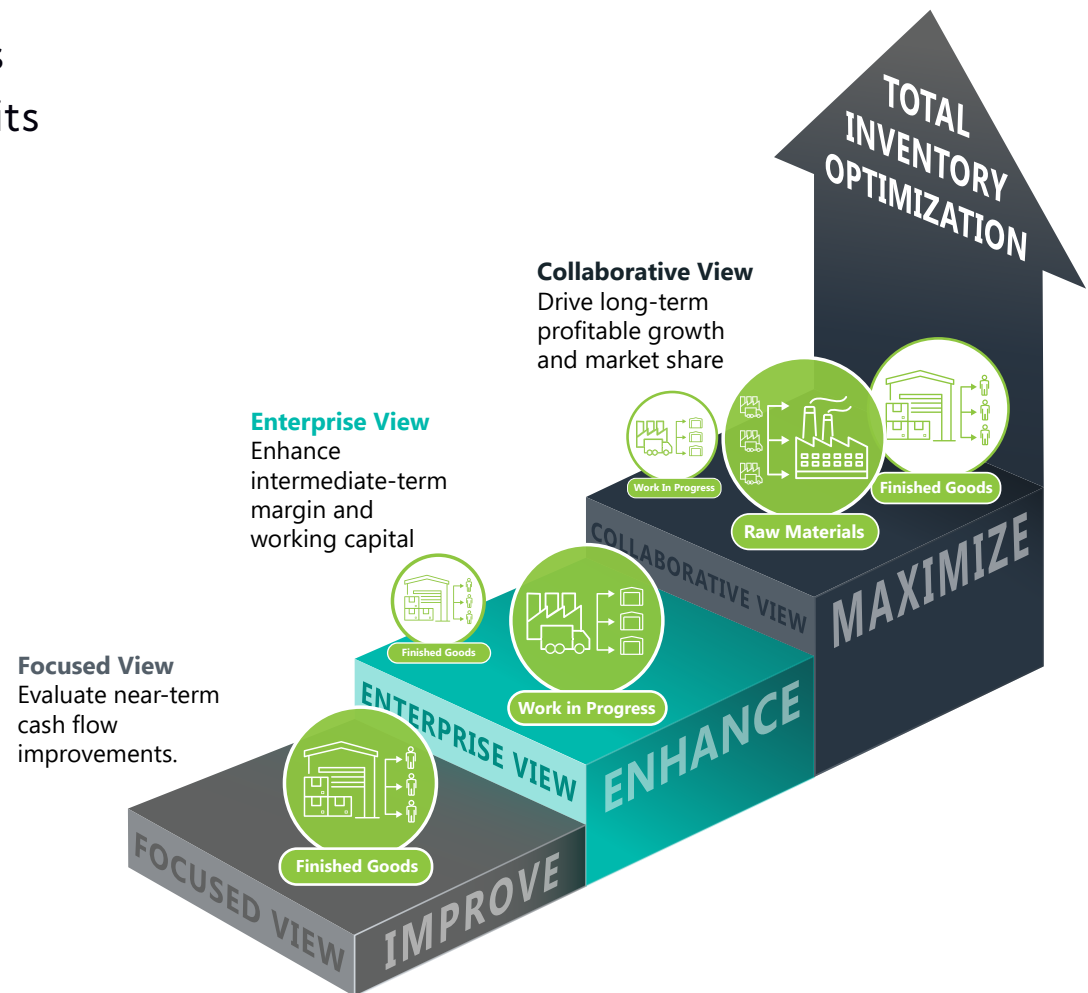

Supply Chain Digital Twin

Tip 4 Accurately Predict Demand

With a disruption like a recession or a pandemic, consumers drastically change their purchase behaviors—requiring major changes to purchasing, manufacturing, distribution, and transportation operations. Demand sensing using AI-first forecasting technology can enhance your company's ability to respond to a disruption by gaining near real time visibility to consumer demand at the speed of the market. It gives you the ability to optimize replenishment and provides a means to improve both short and long-term demand forecasting. Even a one percent improvement in demand forecast accuracy can lead to a significant improvement in fill-rates and a tangible reduction in inventory, purchasing and manufacturing costs.
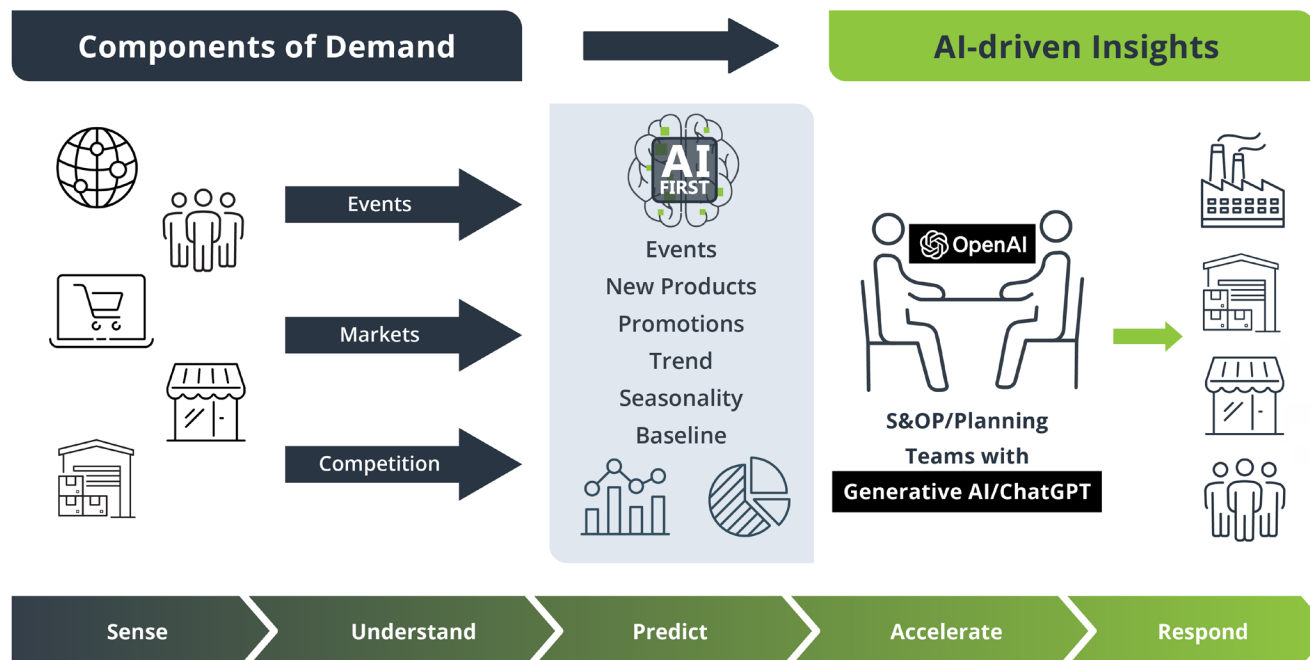
Tip 5 Optimize Inventory Type, Levels and Placement

A **Total Inventory Optimization** approach lets planners quickly analyze the trade–offs between cost and service to maximize profits and boost working capital while minimizing risk. It goes beyond traditional inventory optimization by considering the stock locations and amounts across all nodes in a supply chain network. CSCOs can consider unique strategies for positioning inventory at earlier stages of the manufacturing and distribution process. Whereas traditional inventory optimization only considers finished products, Total Inventory Optimization factors work–in–progress, materials, components, and subassemblies. This offers supply chain leaders far more options and flexibility to optimally identify alternate inventory strategies throughout the supply chain network.

Collaborative View
Drive long-term profitable growth and market share

Enterprise View
Enhance intermediate-term margin and working capital

Focused View
Evaluate near-term cash flow improvements.

TOTAL INVENTORY OPTIMIZATION

Work In Progress
Raw Materials
Finished Goods
COLLABORATIVE VIEW
MAXIMIZE

Finished Goods
Work in Progress
ENTERPRISE VIEW
ENHANCE

Finished Goods
FOCUSED VIEW
IMPROVE

Tip 6 Organize for Agility

Smart companies know how to maximize agility by appropriately leveraging both human and technology capabilities. By allowing technology to do what it does best—rapid identification of disruptions and opportunities, fast generalization of the best alternatives and quick response to maximize company benefits—you can move away from managing and manipulating data and focus on driving more business value.

Humans excel at:

Common sense

Generalization

Creativity

Dilemmas

Subjective Action

Abstraction

DIGITAL

SUPPLY CHAIN
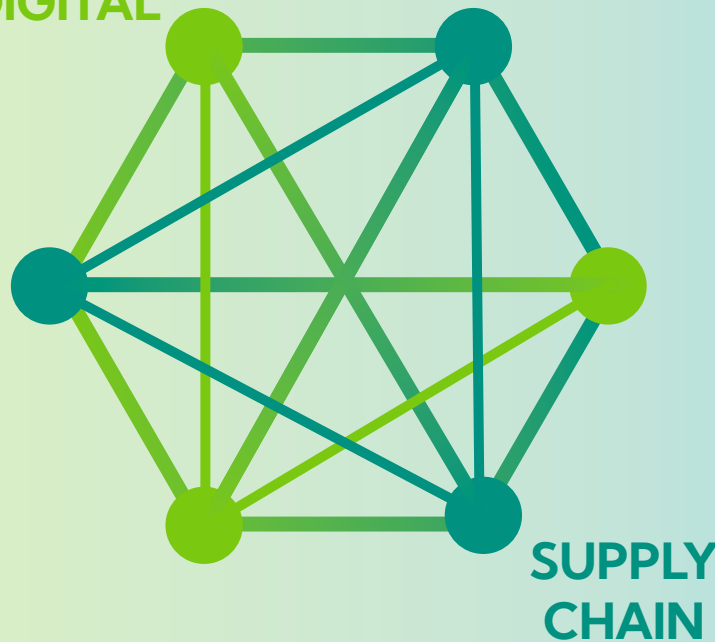
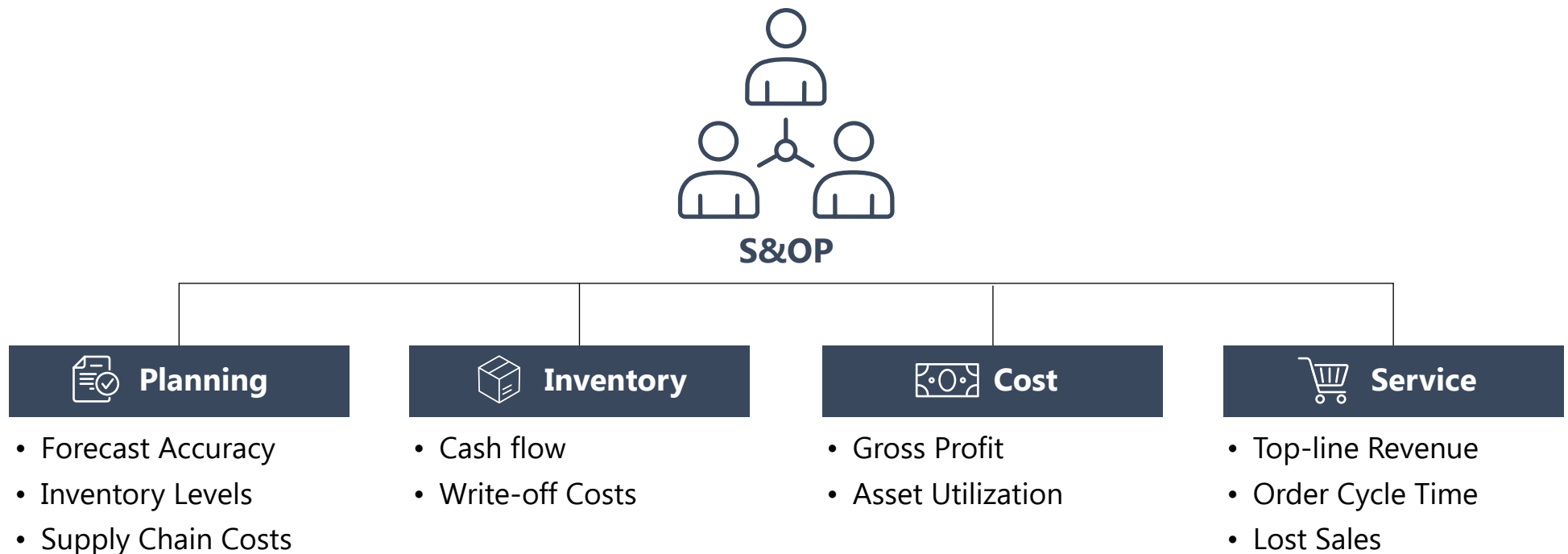**Cognitive Systems excel at:**

Locating Knowledge

Machine Learning

Algorithmic Planning

Eliminating Bias

Time Compression

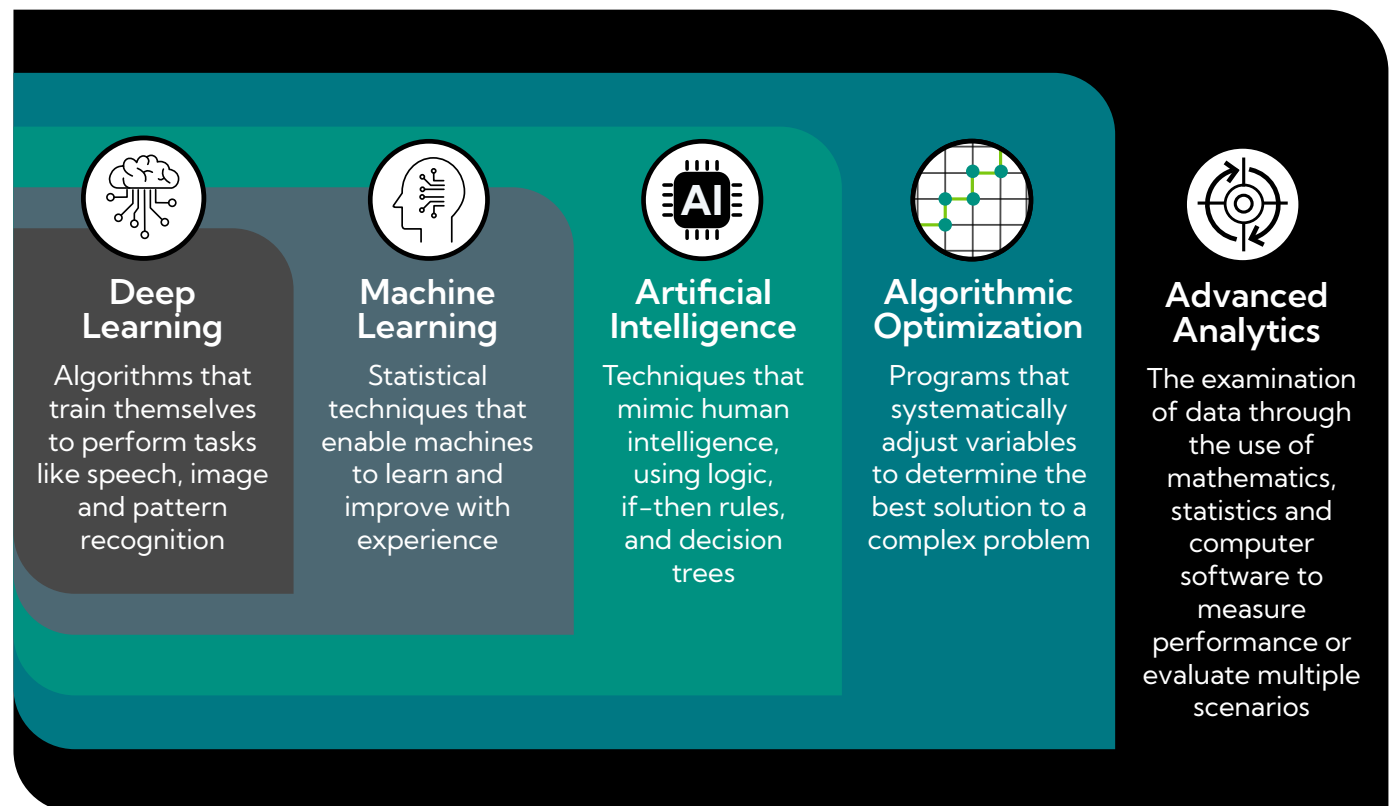# Tip 7 Move to Multi-Horizon Integrated Business Planning

Integrated Business Planning (IBP) promotes one integrated multi-horizon planning process that fosters closer teamwork and builds trust across the organization, enabling more accurate and reliable decision-making faster. McKinsey & Co. found that companies with a mature IBP process improve service levels by up to 20% as well as reducing the amount of missed sales and customer delivery penalties by up to 50%.*

S&OP

Planning	Inventory	Cost	Service
• Forecast Accuracy • Inventory Levels • Supply Chain Costs	• Cash flow • Write-off Costs	• Gross Profit • Asset Utilization	• Top-line Revenue • Order Cycle Time • Lost Sales

Tip 8 — Automate for Speed and Efficiency

Use artificial intelligence and machine learning in supply chain planning to propel your business forward. Harnessing automation, evaluate multiple scenario outcomes and speed up your ability to make good decisions, take advantage of purpose–built cognitive planning and more. Artificial intelligence and machine learning capabilities add value in several ways:

- Automate manual data efforts and processes

- Make better business decisions

- Detect problems earlier and proactively respond to potential disruptions

- Improve forecast accuracy

Deep Learning
Algorithms that train themselves to perform tasks like speech, image and pattern recognition

Machine Learning
Statistical techniques that enable machines to learn and improve with experience

Artificial Intelligence
Techniques that mimic human intelligence, using logic, if–then rules, and decision trees

Algorithmic Optimization
Programs that systematically adjust variables to determine the best solution to a complex problem

Advanced Analytics
The examination of data through the use of mathematics, statistics and computer software to measure performance or evaluate multiple scenarios

The Next Disruption is Coming
Is Your Supply Chain Ready?

Supply chain disruptions, like those caused by pandemics and recessions, will continue to take place in today's complex, global supply chains.

Will you be ready?

- Do you have access to comprehensive, clean, consistent, current, and convenient supply chain data from your supplier's supplier to your customer's consumer?

- Do you have a plan for adopting advanced analytics, artificial intelligence, and machine learning in your supply chain operations?

- Do you have the ability to run multiple 'what–if' scenarios to analyze how your supply chain will be affected by different types of disruptions and to develop mitigation plans for those that are more likely to occur?

- Can you quickly sense a disruption in your extended supply chain, analyze options to mitigate the disruption and execute the best response?

REIMAGINE SUPPLY CHAIN

About Logility

Logility is a market-leading provider of AI-first supply chain management solutions engineered to help organizations build sustainable digital supply chains that improve people's lives and the world we live in. The company's approach is designed to reimagine supply chain planning by shifting away from traditional "what happened" processes to an AI-driven strategy that combines the power of humans and machines to predict and be ready for what's coming. Logility's fully integrated, end-to-end platform helps clients know faster, turn uncertainty into opportunity, and transform the supply chain from a cost center to an engine for growth. With over 500 clients in 80 countries, the company is headquartered in Atlanta, GA. (NASDAQ: LGTY). Learn more at www.logility.com.

logility