

A planner's guide to surviving supply chain disruptions



Introduction



This guide is designed to enlighten manufacturing leaders of the supply chain planning capabilities necessary to thrive in an ever-evolving global landscape. In recent years, supply chains have faced unprecedented challenges, from the COVID-19 pandemic to geopolitical tensions and economic fluctuations. These disruptions have underscored the need for agility, resilience, and innovation in supply chain management.

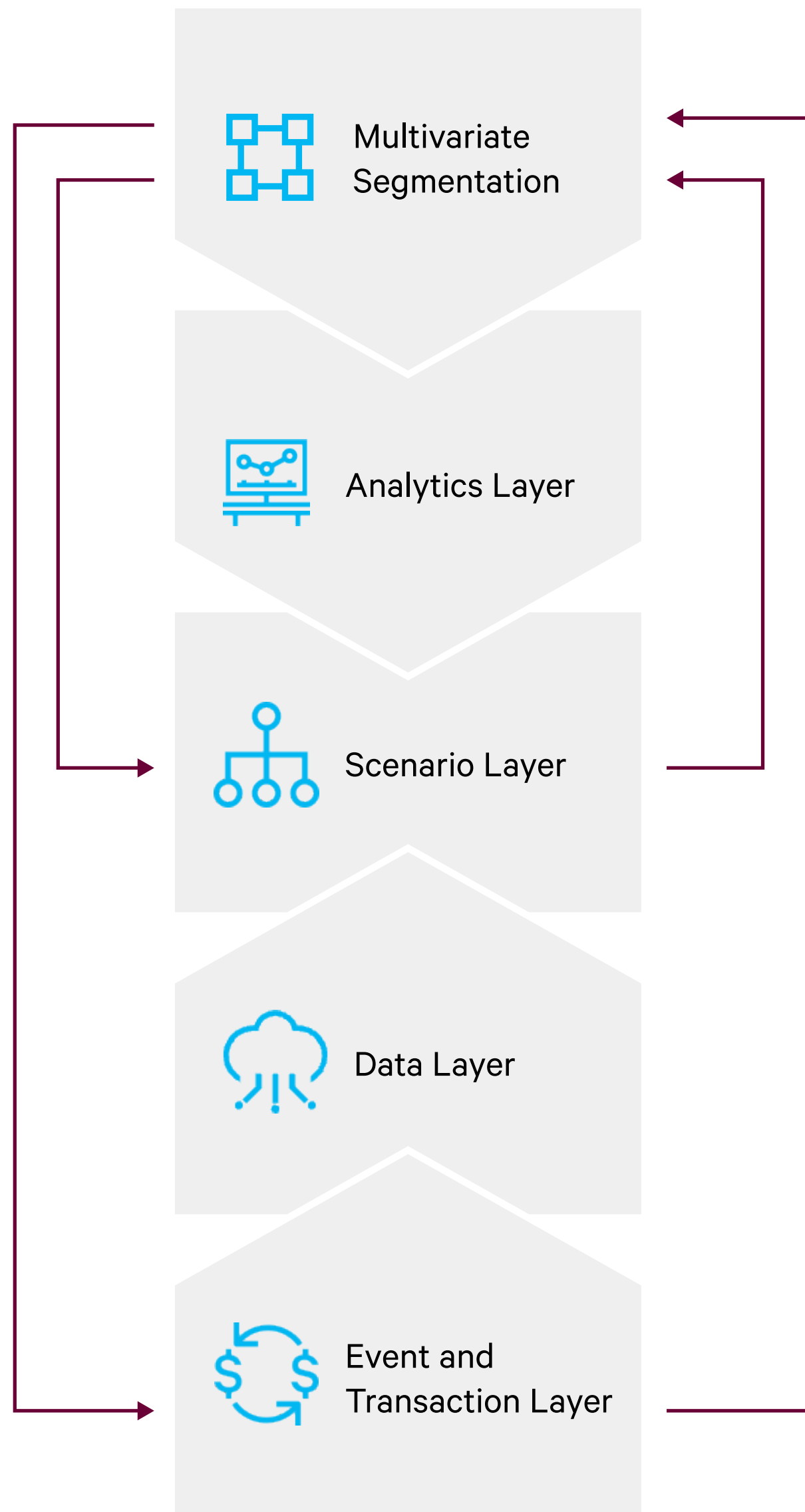
This ebook explores key strategies that enable organizations to navigate these complexities effectively. From embracing digital transformation and leveraging AI-driven analytics to enhancing decision-making capabilities and optimizing inventory, each chapter provides insights into building a robust supply chain that can withstand and adapt to disruptions.

Whether you're a seasoned supply chain professional or new to the field, this guide offers valuable perspectives on preparing for the unexpected, making informed decisions under pressure, and transforming your operations for enhanced visibility and responsiveness. By implementing these strategies, businesses can not only survive but thrive in the face of uncertainty, turning challenges into opportunities for growth and success.

Join us as we delve into the essential components of a resilient supply chain, ensuring your organization is ready to meet the demands of today's dynamic market environment.



Maximize financial impact with inventory optimization



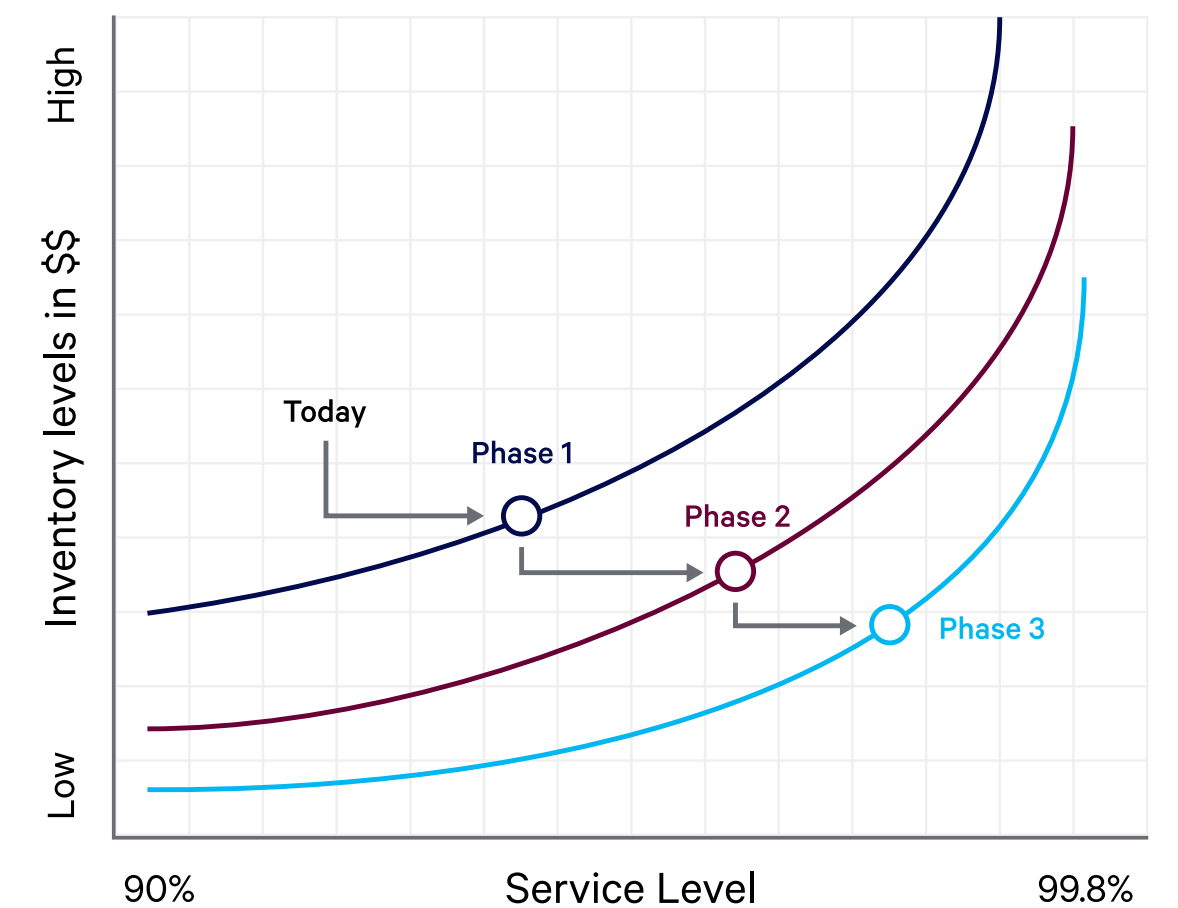
- 1 Model**
Build model with current and historical data
- 2 Stratify**
Segment products, demand patterns and buying behavior
- 3 Optimize**
 - Compose what-if scenarios
 - Attach sensitivity experiments
 - Optimize scenarios
- 4 Analyze**
 - Review results
 - Analyze sensitivity
 - Validate and achieve consensus
- 5 Implement**
Business rules and control policies
- 6 Monitor**
 - Identify and track relevant events
 - Regularly review targets
 - Monitor inventory/service performance
- 7 Learn**
 - Map events to symptoms and root causes
 - Segment events
 - Revise assumptions and policies
 - Change supply chain design

The concept of the Efficient Inventory Frontier illustrates that achieving higher service levels typically incurs higher costs. However, by implementing phased inventory optimization (IO) initiatives, businesses can shift this status quo, creating new curves that offer desired service levels at reduced costs compared to previous states.

IO plays a crucial role in enhancing financial performance by freeing up working capital and improving service levels. It strategically determines the quantity, type, and location of inventory needed to meet service goals while adhering to specific inventory policies.

IO serves as a powerful tool for informed decision-making, providing a comprehensive knowledge platform. It enables organizations to leverage inventory strategically, allowing them to respond

effectively to supply chain disruptions and maintain operational efficiency. By optimizing inventory, businesses can achieve financial benefits and enhance their ability to navigate challenges in the supply chain landscape.



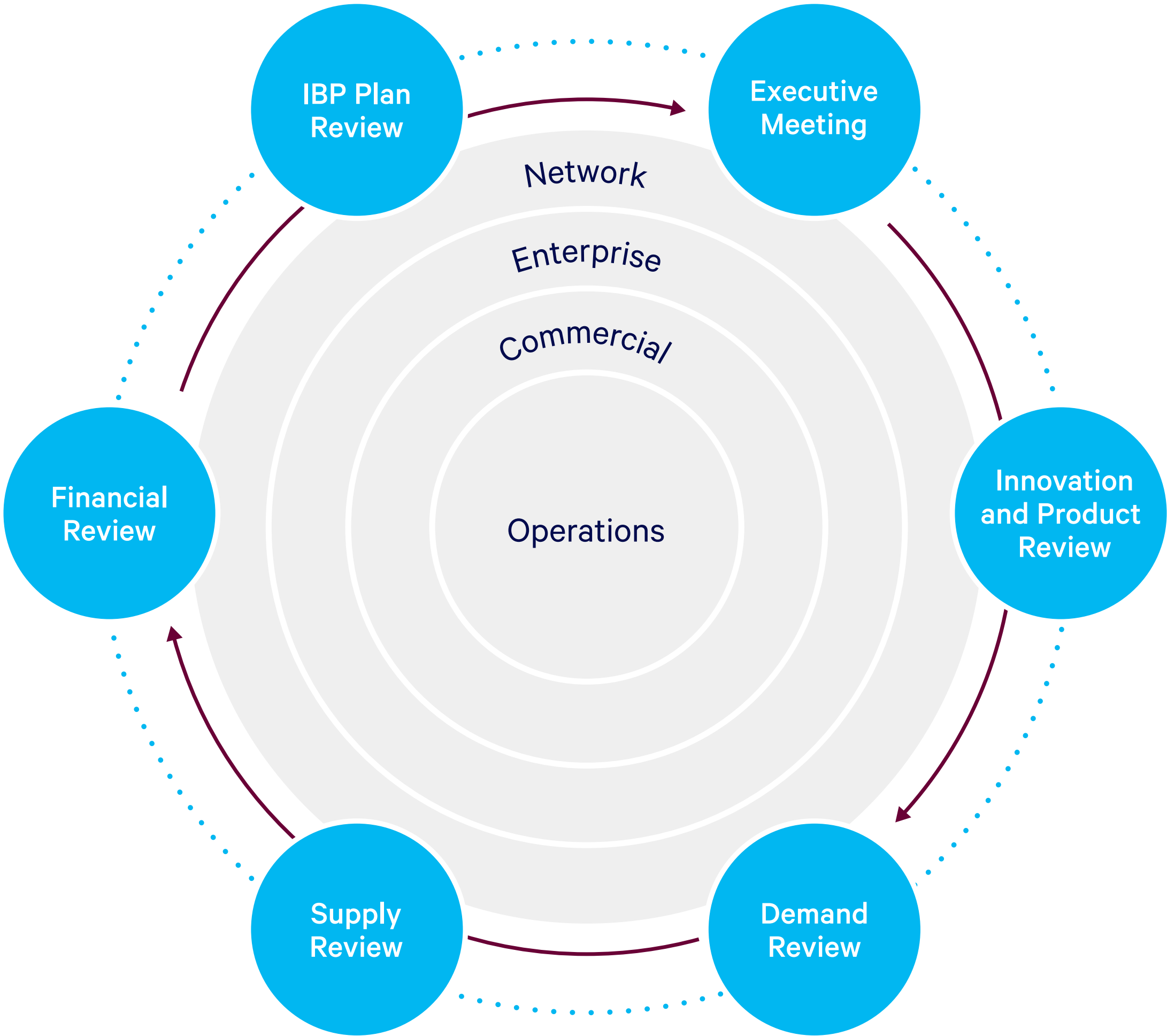
Transform with integrated business planning

In today’s fast-paced digital and global economy, agile and resilient supply chains are key to corporate success and brand reputation. Traditional S&OP software often falls short, being siloed and slow, which hinders precise decision-making and limits adaptability.

Blue Yonder’s Integrated Business Planning (IBP) solution addresses these challenges by fostering collaboration across diverse teams, enabling alignment and reconciliation of differing priorities. Blue Yonder’s IBP solution redefines strategic planning by emphasizing collaborative, real-time decision-making, essential for capitalizing on opportunities and ensuring compliance with

economic, social, and governance standards. Blue Yonder’s IBP cloud-native SaaS solution enhances decision-making with advanced features like embedded risk and opportunity assessments, intelligent insights, and dynamic scenario planning. Operating on the Blue Yonder Platform, which integrates end-to-end supply chain solutions, our IBP solution leverages enterprise-scale AI for real-time visibility and collaboration.

Our IBP solution empowers businesses to make optimized decisions swiftly, maintaining competitiveness and responsiveness to win the race in a dynamic market environment.



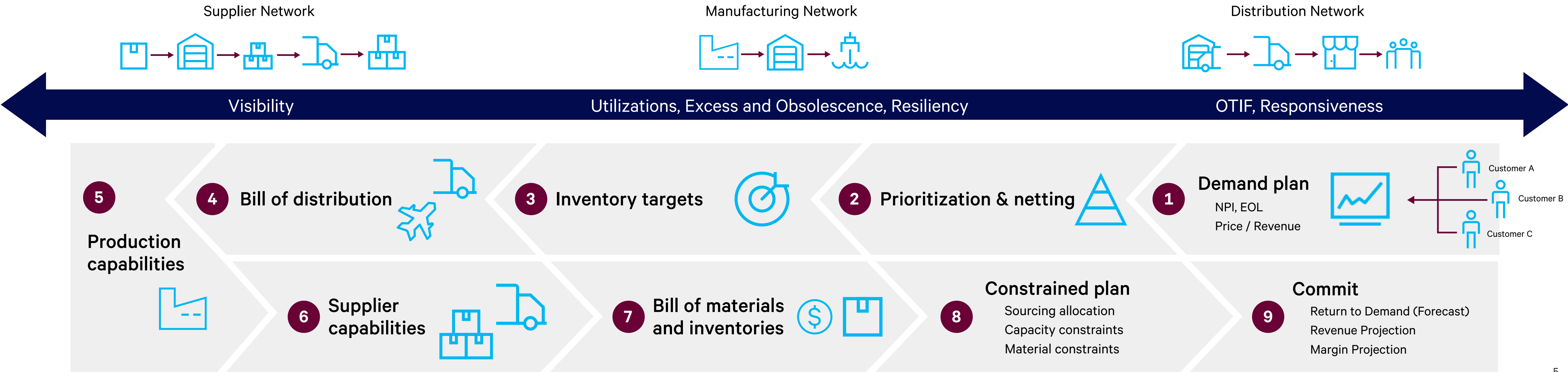
Navigate disruptions with demand and supply planning

In a recent survey by Blue Yonder, 84% of executives reported experiencing supply chain disruptions, ranging from route changes and extreme weather to geopolitical unrest. These disruptions complicate planning, impacting everything from production capacity to delivery schedules, transportation costs, and inventory management. Planners face three major challenges: overwhelming data, shifting supply and demand patterns, and siloed operations that hinder holistic planning.

Blue Yonder’s AI-powered Demand and Supply Planning solution addresses these challenges, empowering planners to quickly model and optimize a comprehensive 360-degree view of their supply chain. This enables them to capitalize on opportunities and mitigate risks before disruptions occur. The solution seamlessly combines demand and supply with inventory optimization, turning risks into opportunities through the Blue Yonder Platform.

Designed for today’s disrupted supply chain landscape, our solution connects top-level business goals with raw materials, inventory targets, and contract commitments, offering an end-to-end approach to planning. Powered by AI, machine learning, a single data layer, and advanced data science, it supports what-if analysis and scenario generation, recommending holistic course corrections that benefit the entire business.

With evolving supply chain conditions, companies must adapt swiftly to avoid production delays, stockouts, and customer dissatisfaction. Blue Yonder Demand and Supply Planning provides a low-touch, optimal way to address disruptions, enhancing agility and resilience for a competitive edge.



Enhance manufacturing efficiency with production planning



Production planning and scheduling are essential for manufacturers aiming to boost competitiveness. Yet, planners often lack the insights needed to align decisions with real-time factory performance.

Blue Yonder’s Production Planning and Scheduling solution, powered by Constraint Anchored Optimization (CAO) technology, transforms production planning by supporting master production planning, scheduling, material and capacity requirements planning, and dynamic finite scheduling. This solution enables rapid what-if analysis and interactive problem-solving, leveraging efficient heuristic optimization algorithms.

Core features:

- Forecast & Demand Readiness: Reserve capacity and materials for forecasted or custom orders before demand is firm.
- Material & Resource Sync: Keep supply aligned with production through smart expedite, de-expedite, and cancel actions.
- Order Allocation & Sequencing: Assign orders to the right lines and sequence them to cut changeovers and boost throughput.

- Interactive Scheduling & Simulation: Adjust schedules on the fly and test scenarios to stay resilient under any conditions.

Benefits:

- Minimize changeovers, reduce idle time, and maximize resource utilization for higher efficiency and throughput.
- Rapidly adjust to demand shifts, supply disruptions, or capacity changes for greater agility and resilience.
- Deliver on-time with confidence while reducing costs from excess inventory, overtime, and expedites for improved service and margins.

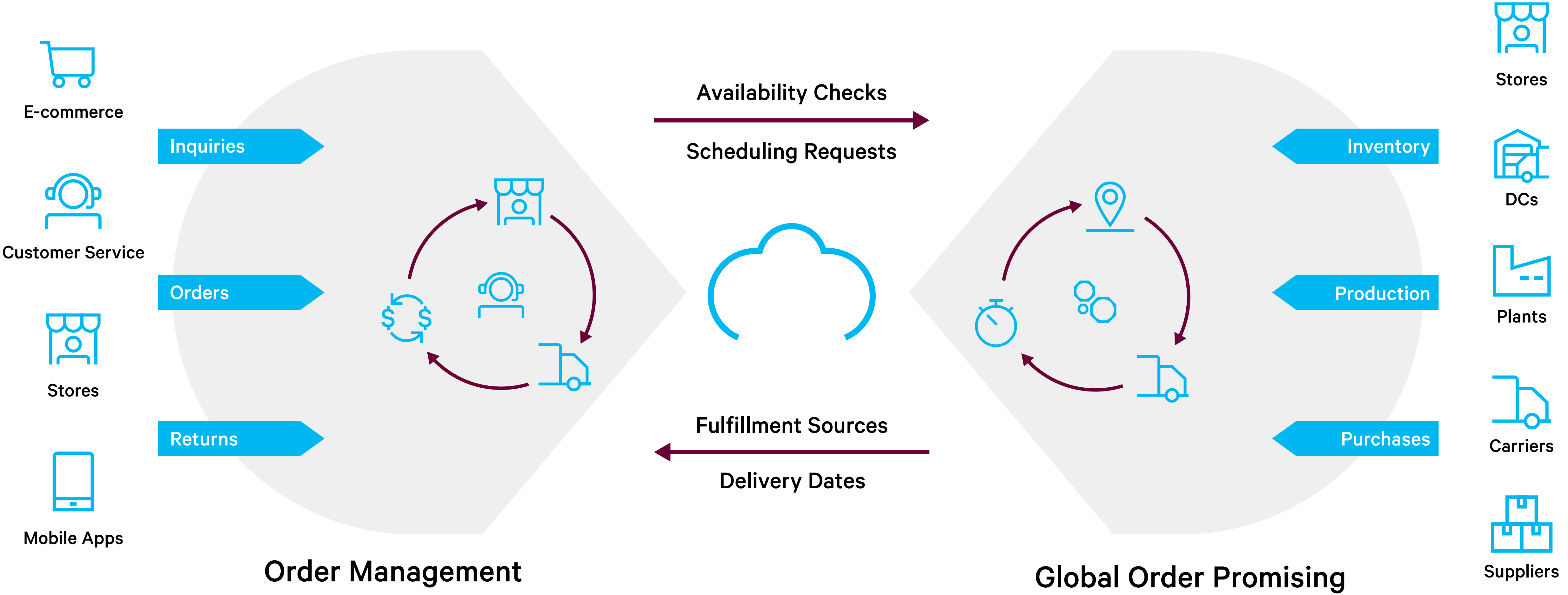
Impact:

- Improve on-time deliveries by up to 20%
- Reduce inventory by up to 30%
- Increase planner productivity by 40-50%
- Enhance asset utilization by 10-20%

THE BLUE YONDER PRODUCTION PLANNING AND SCHEDULING SOLUTION OPTIMIZES MANUFACTURING OPERATIONS, PROVIDING A COMPETITIVE EDGE IN EFFICIENCY AND PRODUCTIVITY.

Navigate disruptions with advanced order promising

In the face of supply chain disruptions, effective order promising becomes crucial for maintaining customer satisfaction and operational efficiency. Order promising involves committing to delivery dates based on real-time visibility into inventory, production capacity, and supply chain constraints. It ensures that customer expectations are met while optimizing resources and minimizing risks.





Key aspects of order promising:

- **Real-time visibility:** Leveraging advanced technologies, order promising provides up-to-date information on inventory levels, production schedules, and supplier capabilities. This visibility allows businesses to make informed commitments and adjust to disruptions swiftly.
- **Dynamic optimization:** Order promising solutions dynamically assess constraints and opportunities within the supply chain. They optimize order fulfillment by balancing demand with available resources, ensuring that commitments are realistic and achievable.
- **Enhanced customer experience:** By accurately predicting delivery dates and managing expectations, order promising enhances customer satisfaction. It builds trust and loyalty, even in challenging times, by providing transparency and reliability.
- **Risk mitigation:** Effective order promising helps identify potential bottlenecks and risks in the supply chain. By proactively addressing these issues, businesses can reduce delays and avoid costly disruptions.

Strategic implications:

Incorporating robust order promising capabilities is essential for businesses aiming to survive and thrive amid supply chain disruptions. It transforms how commitments are made, ensuring alignment with strategic goals and customer needs.

Integration with order management:

With the Blue Yonder Platform, The Blue Yonder Order Promising solution is seamlessly integrated with order management systems, enabling a cohesive approach to handling customer orders. Solutions like Blue Yonder's offer comprehensive tools to optimize order fulfillment and enhance supply chain resilience.

Conclusion:

Order promising is a vital component of navigating supply chain disruptions. By providing real-time visibility, dynamic optimization, and enhanced customer experience, it ensures that businesses can meet commitments even in uncertain times. As supply chains continue to face challenges, effective order promising will be key to maintaining operational excellence and customer trust.

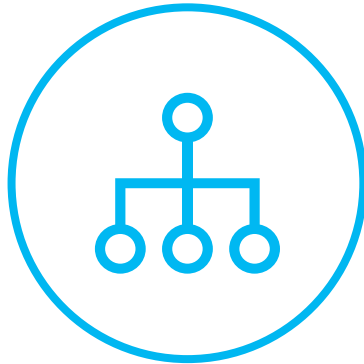
Enhance supply chain planning with AI and machine learning

Integrating artificial intelligence (AI) and machine learning into supply chain planning can significantly enhance your business by automating processes, evaluating multiple scenarios, and accelerating decision-making. Leveraging cognitive capabilities within Blue Yonder’s leading supply chain platform empowers organizations to build AI expertise and facilitates the rapid adoption of process automation.

The benefits of AI and machine learning include:

- **Insight-Driven Scenarios:** By streamlining manual data tasks and processes, organizations can free up analysts to focus on more valuable activities. This efficiency improvement is essential in today’s competitive labor market.
- **Unified Decision-Making:** AI helps uncover valuable insights that can lead to substantial advancements in business operations.
- **Disruption Mitigation:** Early detection of potential issues allows businesses to proactively manage disruptions, providing a significant competitive edge.
- **Improved Forecast Accuracy:** Enhanced understanding of customer sentiment leads to better predictions, ultimately boosting revenue and improving customer service quality.

By embracing AI and machine learning, businesses can optimize their supply chain operations, resulting in increased efficiency, enhanced decision-making, and greater resilience against disruptions. With Blue Yonder’s Cognitive Solutions, organizations are well-equipped to navigate the complexities of modern supply chains and achieve sustainable growth.



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



Blue Yonder is the world leader in end-to-end digital supply chain transformation. With a unified, AI-driven platform and multi-tier network, Blue Yonder empowers businesses to operate sustainably, scale profitably, and delight their customers — all at machine speed. A pioneer in applying AI solutions to the most complicated supply chain challenges, Blue Yonder’s modern innovations and unmatched industry expertise help more than 3,000 retailers, manufacturers, and logistics service providers confidently navigate supply chain complexity and disruption.

**Learn how Blue Yonder can help you achieve
your supply chain priorities at blueyonder.com**

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