NUCLEUS RESEARCH

SUPPLY CHAIN PLANNING TECHNOLOGY VALUE MATRIX 2023

ANALYST
Isaac Gould

THE BOTTOM LINE

While technology spend tightens, there has been a surge in first-time buyers for Supply Chain Planning (SCP) technology, particularly from small-to-midsized businesses (SMBs). Cloud proliferation, maturing data capture practices, and tiered product bundles has made SCP solutions accessible down market. SMBs can now join large enterprises in leveraging technology to address a volatile supply chain environment caused by large demand swings and lead time fluctuations. With a focus on integrated business planning, Nucleus has observed SCP adoption as a driver of new business opportunities and M&A.

Supply Chain Planning
Value Matrix | March 2023

NUCLEUS RESEARCH

FACILITATOR | LEADER

Greater Usability ▶

Better Functionality ▶

CORE PROVIDER | EXPERT

John Galt Solutions
Wolters Kluwer CCH Tagetik
Anaplan
Board
MPO
Infor
Blue Yonder
Logility
Blue Ridge
GAINSystems
Kinaxis
One Network
ToolsGroup
E2open
Smart Software
Valizant
Coupa
Alloy
o9 Solutions
QAD
Manhattan Associates

OVERVIEW

With a looming recession, Nucleus has observed a tightening of technology spending across the board, except for Supply Chain Planning (SCP), where there has been an influx of first-time buyers over the last year. Nucleus has observed that these buyers are typically small-to-midsized businesses (SMBs) migrating off Excel, but there also exists a contingent

of large enterprises, usually a division or business line within the organization, retiring legacy solutions for modern SCP functionality. We attribute this spike in demand to a volatile supply chain environment, where organizations must contend with large demand swings and fluctuations in supply lead times and pricing.

A few short years ago, SCP technology was primarily reserved for mid-sized to large enterprises with the cash and bandwidth to entertain long-tailed projects. Now SMBs make up most of new SCP solution sales. In these greenfield opportunities, buyers prioritize a manageable total cost of ownership, fast time-to-value, and ease of use and administration. A combination of cloud proliferation, maturing data capture practices, and tiered product bundles have made SCP technology accessible down market.

Another factor driving SCP solution adoption is the need for supply chain and planning agility to pursue new business opportunities, spur demand, and support mergers and acquisitions. Multiple customers adopted an SCP solution to implement integrated business planning (IBP) strategies to support new product introduction, promotions, or customer segmentation opportunities. Organizations engaging in M&A noted that their SCP solution enabled the integration of the subsidiary to the larger operational ecosystem to help with supply planning, allowing the parent company to negotiate better rates with suppliers as opposed to individual business units; the same organizations could also roll in the acquired companies' factories and distribution centers into the larger supply chain network.

Considering the new buying persona, many SCP vendors have geared product development and service to capture the SMB market. For example, vendors that typically service large enterprises have made an effort to reduce complexity and accelerate implementations with pre-built industry or use-case-specific templates and workflows. Nucleus has observed a shortening of implementations from over nine months to under six for demand planning and inventory optimization. Vendors also offer modular deployments that allow customers to address outstanding pain points before implementing more complex functionality, such as AI/ML-enabled forecasting or prescriptive analytics, accelerating time-to-value. Other notable differentiators that SCP vendors are focusing on include model explainability to drive AI/ML adoption, IBP, S&OP, or SI&OP modules, and supply chain management platform breadth.

The Nucleus Research Supply Chain Planning Technology Value Matrix provides an assessment of the market based on how vendors deliver value to customers through the usability and functionality of their solutions (Nucleus Research v67 – Understanding the Value Matrix, April 2021). The research is intended to deliver a relevant snapshot of the Supply Chain Planning technology market, rather than serve as an empirical ranking of the vendors. The arrows indicate each vendor's perceived momentum and are informed through conversations with end users, recently released capabilities, features, and other areas of investment.

LEADERS

Leaders in the Value Matrix include Blue Yonder, GAINSystems, Infor, John Galt Solutions, Kinaxis, One Network Enterprises, and Wolters Kluwer CCH Tagetik.

BLUE YONDER

Blue Yonder is recognized as a leader in this year's SCP Technology Value Matrix for its Luminate Planning solution. Blue Yonder's supply chain planning solution provides integrated capabilities for demand, supply, inventory, and manufacturing planning, supported by over 40 patents since 2021. Luminate Planning uses real-time data to enable end-to-end supply chain synchronization, helping organizations make timely and informed business decisions. Blue Yonder's solutions can be extended to include custom data models, AI/ML algorithms, and analytics in addition to out-of-the-box capabilities and pre-packaged use cases and workflows that enable faster response to market forces. Blue Yonder's end-to-end supply chain management solutions, including Supply Chain Planning, Control Tower, Transportation Management, Warehouse Management, Workforce Management, Order Management, Category Management, and Retail Merchandise Management, is often cited as a key value driver during the selection process.

Recent product updates and announcements include:

- Blue Yonder continues momentum toward the cloud through investment and expansion of its cloud-native, multi-tenant SaaS supply chain suite based on a microservices architecture.

- Blue Yonder introduced N-dimensional Modeling with Semantic Network Architect to create more accurate plans and informed decisions that capture real-world complexities and factors such as CO_2 emissions, lead times, and external events.

- Blue Yonder has productized industry ML models with more than 200 causal factors and patented supervised learning techniques to predict future volumes that can be run in real-time to assess impacts, leading to better demand sensing and shaping.

- Blue Yonder combines productized ML, statistical algorithms, and customer-created ML models for better accuracy and personalization to meet unique business requirements with its new Mix & Match capabilities.

- Blue Yonder's new sub-setting service removes unconnected and unimpacted parts of the supply chain, boosting the speed, quality, and effectiveness of planning by allowing the replanning of impacted networks.

- Blue Yonder's new Digital Risk & Opportunity Framework to digitally record assumptions for use in simulations and scenario planning, improving the quality of decision-making for supply chain planners.

- Blue Yonder's new AI/ML-enabled Scenario automation creates and evaluates hundreds of scenarios automatically, providing insights and recommendations to increase speed and reduce potential biases.

- Blue Yonder's new Integrated Demand & Supply Planning provides configurable workflows and use cases for specific manufacturing and retail industries, improving time to value, lowering risk, and increasing flexibility.

GAINSYSTEMS

GAINSystems (GAINS) is recognized as a leader in this year's SCP Technology Value Matrix. The vendor focuses on providing SCP solutions to the manufacturing, retail, distribution, and service parts industries. GAINS offers built-in analytics capabilities to optimize and manage supply chain interdependencies through the vendor's proprietary Proven Path-to-Performance (P3) implementation methodology. GAINS SCP platform consolidates various capabilities, including demand planning and forecasting, inventory optimization, replenishment and procurement automation, supply and production optimization, and sales and operations planning (S&OP) capabilities into a single unified cloud platform. The platform notifies users of demand and supply variances. GAINS' AI-based Multi-Echelon Inventory Optimization (MEIO) approach enables organizations to automatically detect and respond to changes, improve service levels, and reduce inventory and supply chain costs. Moreover, organizations can optimize their inventories by considering network-wide bill-of-materials (BOM) requirements and setting optimal service levels for each SKU by location. The SCP platform provides executives with a birds-eye vantage point, consolidating operational, financial, and sales data into a single version of the truth and enabling informed decision-making. Management can evaluate business plans based on financial and volumetric measures and track their team's activity on a single dashboard.

Recent product updates and enhancements include:

- GAINS X was launched at the annual GAINS Summit in September 2022 with a new UX design, visual cues, and redesigned action-oriented workflows to better connect supply chain professionals. The new UX was developed in partnership with customers to facilitate faster and simpler decision-making for end users.

- GAINS announced it will offer new supply chain design capabilities and solutions for customer and supplier collaboration, aligning with the vendor's supply chain Design Planning and Execution (DP&E) approach.

- GAINS reported immediate plans to enhance the user experience of its platform, including improving self-service capabilities and enhancing partner community growth to improve the quality of customers' plans and supply chain performance monitoring and root cause analysis.

INFOR

Infor is a leader in this year's SCP Technology Value Matrix. Infor supports various verticals, including food and beverage, chemical, life science, automotive, distribution and manufacturing, and can scale to large and complex global enterprises. Infor SCP is a comprehensive solution for supply chain planning that provides a wide range of features, including demand prediction and planning, sales and operations planning, supply planning, inventory optimization, capacity management, and scheduling functionalities. Infor SCP can function as an independent solution or integrate seamlessly with a larger Infor ecosystem, aligning with the company's manufacturing, operations, and execution functions.

Native connectivity with Infor Nexus and Manufacturing Execution System such as Infor Lighthouse, Infor SCP offers organizations a complete view of their order processing and status, supply and demand, and financials across various supply chain tiers. With the availability of real-time data, users can rapidly create forecasts and contingency plans while retaining the flexibility to handle unforeseen disruptions as they arise. Infor SCP also has native connectivity with Infor CloudSuite ERP, integrating demand, marketing, and merchandise data to extend planning across sales, operations, and productions. Furthermore, clients have the flexibility to customize Infor SCP to emphasize metrics that meet their specific needs, and it can integrate seamlessly with various third-party applications.

Recent product updates in the past 12 months:

- In the April 2022 product release, Infor extended its scope with LN and DP integration, the data scope was extended to include generic items in forecasting and import item supersession data.

- In Q2 2022, organizations now attach notes to the planning engine to improve user collaboration and usability when reviewing.

- Added prediction intervals to increase predictability for volatile demand.

- Demand Planning uses Machine Learning to combine and select optimal algorithms.

- Supply Planning is now capable of tailoring the Supply Chain Optimization model or Forecast Consumption model to specific industry conditions.

- Infor updates its production scheduling by allowing customers to modify details of a Product Batch, such as Batch Status, Start Inflow, End Outflow, and Notes.

Customers can now split batches over multiple resources to select more orders to increase the plant's productivity.

JOHN GALT SOLUTIONS

John Galt Solutions is a leader in the 2023 SCP Value Matrix. John Galt Solutions serves organizations in the food and beverage, consumer goods, industrial manufacturing, retail, apparel, life sciences, high-tech, wholesale distribution, and chemical industries. John Galt Solutions is recognized for its Atlas Planning Platform, which offers a SaaS infrastructure for rapid and configurable application deployment through a low-code/no-code model. Atlas provides end-to-end supply chain planning solutions that synchronize, automate, and optimize processes, linking together finance, planning, and execution. Atlas' integrated end-to-end supply chain planning platform offers various capabilities, including sales and operations planning (S&OP), demand, supply, inventory, replenishment, transportation planning and optimization, and manufacturing and scheduling capabilities. By connecting internal and external data from multiple systems and sources across the supply chain ecosystem in real-time, the Atlas Planning Platform models real-world operations, thus delivering continuous intelligence, improving visibility across the supply chain, enabling automation over operations, and supporting data-driven decision-making through AI/ML models.

Atlas offers a digital twin modeling capability that allows planners to anticipate and investigate alternate scenarios, analyze probabilistic results, and weigh the advantages and disadvantages across capacity, service, and financial considerations while accounting for potential risks and uncertainties. Supply chain models can be tailored to meet an organization's specific supply chain network desired business goals, performance targets, and designs, including profitability, sustainability, and service level performance. Through automation and streamlined workflows, Atlas simplifies business operations and boosts productivity.

Since the 2022 version of the SCP Value Matrix, John Galt Solutions has continued to develop new functionalities to increment end-user value and continued to expand its investments into supply chain and machine learning capabilities:

- In 2022, John Galt Solutions re-architected and containerized Atlas increasing the ability to be flexible and adaptive to the changing market and to quickly deploy at scale to meet increasingly demanding customer requirements.

- Since the last release of the SCP Value Matrix, the software vendor announced enhancements to the Atlas Planning Platform, delivering visualizations and deeper insights into the supply chain network model by revealing the complex and layered

relationships across manufacturers, warehouses, transportation, labor, and multi-enterprise components through a new graph database.

- Over the past year, the organization launched a new UX, including enhanced what-if scenarios and a new integrated planning interface that can be used to build visual dashboards, action workbenches, advanced analytical reports, and to drive executive meetings.

- Other notable enhancements and new functionality include the expansion of optimization algorithms in their master production scheduling application, new advanced pegging capabilities, enhanced master data management capabilities to further flexibly model complex relationships, and expanded machine learning and AI offerings with a focus on improving automation, planner productivity, data quality, and decision-making.

- Since the last year's Value Matrix, John Galt Solutions announced the opening of new offices in Atlanta, United States, London, United Kingdom, and Warsaw, Poland.

KINAXIS

Kinaxis is a leader in this year's SCP Technology Value Matrix. The company's SaaS-based platform offers SCP and execution functionality across various industries, including aerospace and defense, automotive, consumer products, high-tech and electronics, industrial, life sciences, and retail. Inventory planning and optimization, demand sensing and planning, capacity planning, supply and production planning and scheduling, control tower, S&OP, and IBP are all components of the platform, with new functionality available around transportation, order management, reverse logistics, and more through its recent acquisition of MPO. With a breadth of SCP capabilities, users often leverage Kinaxis as the center of planning to inform upstream and downstream execution. Kinaxis also offers what-if scenario modeling tools and AI-generated suggestions to guide decision-making based on internal priorities, which it uses in post-game analysis to improve automated decision-making over time. Customers can use the platform to create and test new algorithms and workbooks, giving them more control and standardization over their supply chain processes. The out-of-the-box functionality and integration with third-party applications help to reduce latency across the supply chain, and Kinaxis' Planning One package accelerates implementations to shorten the time-to-value for new users.

Recent product updates and announcements include:

- Kinaxis has acquired MPO with the goal of integrating the platforms to enable joint customers to connect planning and execution with functionality, including digital order management, transportation management, network inventory management, returns management, and spare parts management. With these capabilities,

customers could streamline operations, optimize routes and delivery, and gain real-time inventory visibility.

- Planning.AI, a new analytical tool, automates the best combination of heuristics, optimization, and machine learning to solve supply chain problems faster and more accurately. Kinaxis customers can use this approach in Supply.AI, which balances trade-offs to reduce costs and emissions, and in Demand.AI, which provides AI-based sensing and forecasting.

- In partnership with Wahupa, Kinaxis offers a probabilistic multi-echelon inventory optimization application that helps companies optimize inventory targets and safety stock settings to reach strategic, financial, and service goals. Additionally, Kinaxis has extended its multi-cloud strategy through partnerships with Google and Microsoft, offering enhanced scalability, flexibility, and efficiency of cloud infrastructure for its customers.

ONE NETWORK ENTERPRISES

One Network Enterprises is placed as a leader in the 2023 SCP Technology Value Matrix as recognized for its NEO Platform. This platform delivers integrated supply chain management capabilities, including but not limited to control tower, sales and operations planning (S&OP), supply planning, demand planning, logistics management, order management, warehouse management, and inventory optimization. All customer organizations and their trading partners are connected via One Network's Digital Supply Chain Network, enabling users to collaborate with an extensive network of upstream and downstream partners, including over 90,000 manufacturers, suppliers, logistics providers, and retailers. Users benefit from the aggregated data streams of the Digital Supply Chain Network to inform the performance of distribution routes and can connect with trading partners without additional integration efforts. The NEO platform is designed for multi-party network ecosystems and supports a variety of multi-tenancy models, including classic multi-tenant and network multi-tenant. The vendor also offers specialized industry cores to fit certain verticals, including automotive & heavy industrials, banking, consumer goods, aerospace, defense & government, high technology, humanitarian aid, restaurants and food service, retail, healthcare & pharmaceuticals, and third-party logistics.

Over the past year, One Network has continued to extend its end-user value with extended collaboration and ongoing development.

- In August 2022, One Network released NEO 3.5, bringing significant advancements to the NEO Platform's supply chain planning capabilities. Two new capabilities include Network BOM Constrained Supply Planning and Field Service optimization. This update also enhanced One Network's "Optimized Execution" capability, which

connects planning with execution by offering smart prescriptions to solve issues caused by supply and demand variation. This capability can also run autonomously and users can define and manage business rules, exceptions, and potential issues in their workbench.

- The Planners' Control Tower has been enhanced to better predict system shocks across multiple tiers by leveraging the full network digitization available in its single data model. Instead of only offering decision support, the Planners' Control Tower is a decision-making solution that offers network-level and subnetwork-level improvements through AI/ML-based prescriptive analytics. Solutions are provided that understand cross-functional interactions and dependencies such as orders, inventory, logistics, capacity, and financials.

- One Network has announced ESG capabilities targeting carbon optimization and risk resilience. For carbon management, this goes beyond merely tracking and report. With its single data model, One Network extends decision criteria with carbon footprint impact in mind. One Network's platform takes into account and works around major issues (e.g., geo-political, weather, etc.) as part of its execution workflows. Since all data is in one data model, along with the open APIs to leverage 3rd-party risk data, the planning engines immediately replan, so companies can stay agile and resilient as global realities change, as well as guide the return to "normal".

- One Network introduced the concept of ScenarioChains and LiveChains, where the what-if capability is extended to incrementally plan a subset of the network, or is used in execution planning. This allows for dynamic adjustments to plans and execution without having to rerun an entire plan. With this capability, companies can determine where to optimize locally and then execute that incrementally updated plan.

- "Bring your own intelligence" (BYOI) was released, enabling companies to leverage insights from elsewhere on the network.

WOLTERS KLUWER CCH TAGETIK

Wolters Kluwer is a leader in this year's SCP Nucleus Value Matrix. CCH Tagetik, the solution by Wolters Kluwer, covers various industries, including food and beverage, consumer packaged goods, manufacturing, automotive, pharmaceutical, and retail. CCH Tagetik Supply Chain Planning is a finance-forward solution that combines operational and financial data to improve organizational visibility and optimization for complex operations. This full-suite platform offers end-to-end planning capabilities across various areas, such as demand, supply, capacity and production planning, multi-echelon inventory optimization, and S&OP. Users across various industries have reported improved inventory optimization,

forecasting accuracy, and operational efficiency due to implementing this platform. The CCH Tagetik solution has AI/ML models that utilize probabilistic predictive intelligence to automatically update forecasts, detect anomalies, and identify new opportunities in real-time, helping organizations optimize efficiencies and improve profitability. The demand planning module can examine various factors such as promotions, advertising, the introduction of new products, seasonal trends, and competitor actions to suggest the best course of action for users. CCH Tagetik platform also offers enterprise-grade data integration and scaling, which enables users to create resilient supply plans for capacity, product introduction, production scheduling, and material requirement planning (MRP). This helps improve inventory turnover, optimize margins, and prevent stock shortages. Users of CCH Tagetik can work together and coordinate critical activities across multiple enterprise networks, ranging from departmental planning to supply chain data to address manufacturing constraints and delivery challenges.

Recent product updates over the past 12 months:

- In 2022, Wolters Kluwer CCH Tagetik released its Integrated Business Planning solution that integrates Supply Chain Planning with Financial and Operational Planning to enable company-wide planning across strategic, financial, and operational plans. By enabling collaboration, CCH Tagetik ensures that Finance, HR, IT, Marketing, Supply Chain, and other Business Operations are aligned to better drive the strategic direction of the enterprise.

- To further enhance its Integrated Business Planning solution, Wolters Kluwer CCH Tagetik released a decoupled Demand Planning function to save approved supply chain plans and real-time dynamic planning. Now organizations can ensure they match and react to approved plans, allowing supply chain plans to be updated in real-time.

- Wolters Kluwer CCH Tagetik added French, German, Italian, Japanese, and Spanish language translations to support its global expansion.

- The organization also enhanced its production planning solution in 2022. Now the platform can handle conflicting capacity planning priorities to help customers who experience frequent changes to their production plans.

EXPERTS

Experts in the Value Matrix include E2open, Manhattan Associates, o9 Solutions, and ToolsGroup.

E2OPEN

E2open is an expert in the 2023 SCP Value Matrix. E2open supports the aerospace and defense, apparel, automotive, consumer goods, food and beverage, high-tech, manufacturing, oil and gas, pharmaceutical, retail, software, telecommunications, and third-party logistics industries. E2open offers a comprehensive range of applications that help organizations effectively manage the planning, execution, and optimization of supply chain processes. These supply chain applications address external challenges such as market volatility, product proliferation, and fluctuating demand. E2open's partner network, E2net, is one of the largest collaborative networks of supply chain partners, with over 420,000 connected enterprises spread across 201 countries. E2net allows users to integrate data flows from their entire operational ecosystem, including immediate neighbors and associated partner networks. A bird's eye view of an operation enables an organization to quickly detect disruptions and improve its delay and shortage warning capabilities. E2open's aggregated approach to supply chain planning has led to the development of an end-to-end solution that offers a wide range of use cases, such as real-time supply chain visualization and shipping optimization to boost productivity and profitability. E2open is particularly suitable for businesses with complex supply chains because its unique network integration and real-time sensing capabilities allow organizations to detect and manage disruptions at virtually any tier or node.

New features released in the last 12 months fall into the categories of forecasting innovation, risk and resilience, agility, and analytics and orchestration.

- New forecast breakdown analytics provides transparency into AI decisions with visibility to factors influencing statistical forecasts in easy-to-understand language, enhancing planner insight, confidence, and trust. New adaptable smoothing provides planners with options to "smooth" forecast peaks into more uniform weekly forecasts that better represent expected requirements for inventory and supply.

- In 2022, e2open launched Single Order Available-to-Promise (ATP), allowing users to plan one or more customer orders by exception on top of existing demand, enabling faster response for commitment dates to the new customer orders.

- Enhanced visuals, charts, and real-time data across a greater spectrum of scenarios enable customers to identify, prioritize, and respond to disruptions and opportunities more quickly.

- In 2022, e2open announced Unlimited Dimensions for analytics. With unlimited dimensions, planners can expand how they model supply chain networks by product, channel, and other variations through slicing, dicing, and data adjustments across the data dimensions in the S&OP process.

- Adding product mix planning to the S&OP process enables planners to review the depth of the product line and define a distribution profile across product hierarchies on-the-fly. This helps set an optimal mix at a customer or channel, resulting in improved product portfolio performance and increased planner productivity.

- The new variable horizon selector tool enables planning teams to evaluate and adjust data and plans based on custom "to" and "from" dates rather than the pre-determined and inflexible time periods that business planning processes normally include.

- New scenario-as-a-service capabilities spread scenario modeling across multiple servers, enabling better decision-making in even shorter timeframes.

MANHATTAN ASSOCIATES

Manhattan Associates is an expert in the 2023 SCP Value Matrix. Manhattan Associates supports the manufacturing, e-commerce, wholesale, pharmaceutical, third-party logistics, and technology industries. The company offers cloud-native Manhattan Active Supply Chain solutions, which include warehouse, labor, and transportation management systems. With Manhattan Active Warehouse Management, users can efficiently carry out workflows and create real-time distribution planning and picking optimization processes. Customers can drive higher levels of employee engagement with Manhattan Active Labor Management functionality, which leverages gamification and AI tools to incentive its workforce and enhance internal productivity. With Manhattan Associates Active Transportation Management functionality, organizations can reduce time spent monitoring and optimizing networks while eliminating boundaries between transportation and distribution, helping improve the overall efficiency of an operation. While customers can purchase solutions individually, Nucleus has found that they can extract the maximum value from their Manhattan deployments when they leverage the entire Manhattan ecosystem. Customers often select Manhattan Associates for its scalability, automated consolidation of external and internal data streams, and real-time data visualizations for modern supply chain orchestration specific to their industry.

Recent product updates relevant to supply chain planning in the past 12 months include:

- On May 18, 2022, Manhattan Associates unveiled its new ESG website to highlight how its technology and community work together to build a more sustainable future. The platform will empower customers to make 'greener' buying decisions, adding efficiencies to warehouse and transportation functions.

O9 SOLUTIONS

o9 Solutions is an expert in this year's SCP Technology Value Matrix. o9 Solutions is a provider of enterprise-scale decision management solutions for a variety of industries. Its platform, the o9 Digital Brain, integrates internal and external data sources with planning and decision-making processes to develop adaptive strategies that optimize demand, inventory, and supply plans. Users often select o9 for its Sales and operations planning, demand sensing and shaping, promotions and merchandise planning, and integrated business planning functionality. o9's Enterprise Knowledge Graph technology enables companies to create a digital twin of their supply chain, including planning and predictive maintenance processes, with high granularity along various hierarchies; then by applying a host of ML algorithms, o9 enables customers to model and create multiple scenarios across demand, supply, inventory, and distribution. Consumer products and goods, high tech, industrial manufacturing, medical devices, oil and gas, pharmaceuticals, and semiconductors are among the industries served by the vendor's solutions.

Recent product announcements and enhancements include:

- o9 Solutions has formed a partnership with PredictHQ, a demand intelligence company, to enhance its clients' access to verified and enriched event data, which drives improved forecasting. Nucleus anticipates that this partnership will increase the efficiency and profitability of staffing, pricing, and inventory management.

- The vendor has announced the launch of Nexprime SCM Mobile, a plug-in application specifically configured for smartphone and tablet displays, bringing the Digital Brain platform to a wider range of users. Developed in collaboration with Samsung SDS, the app integrates all available datasets and best-in-breed functionalities within the platform, beyond the traditional desktop experience.

- o9 Solutions has made the o9 Integration for Dynamics 365 Supply Chain Management available on Microsoft AppSource. The integration brings together o9's cloud-based AI-powered integrated business planning platform and the breadth of solutions offered by the Microsoft Supply Chain Platform, enabling enterprises to make more informed decisions across their end-to-end supply chain.

- The vendor is strengthening its partnership with project44, a leader in supply chain and logistics visibility, to offer an integrated, joint offering that enhances revenue and costs, improves future planning, and makes more informed decisions across end-to-end supply chains. The partnership provides out-of-the-box integrations that connect o9's Supply Chain Control Tower with project44's real-time transportation visibility data, including predictive tracking, real-time ETAs, and granular historical information.

- o9 Solutions has launched Supply Sensing, a solution designed to help companies better predict supply disruptions by localizing the effect of macro-level shocks on their specific supply chain and creating mitigating strategies to avoid any adverse impact on their businesses. The solution monitors internal and external factors, including agricultural yields, weather patterns, transportation disruptions, and employment indices, to map the potential impact of those macro trends to a manufacturer's Tier 1, Tier 2, and Tier 3 suppliers.

- o9 Solutions and Deloitte have launched Smart Planning, an AI-powered, cloud-based digital insights, connectivity, and workflow automation solution that drives strategic and tactical-level supply chain activities across the enterprise value chain. Combining o9's technical scale and solution architecture with Deloitte's production-ready environment and planning-as-a-service capabilities, Smart Planning aims to help companies level up their planning capabilities more rapidly.

- The vendor has joined the AWS Partner Network (APN) to enable businesses to deploy the full suite of o9's cloud-native solutions using the Amazon Web Services (AWS) Cloud. This collaboration aims to help businesses accelerate the digital transformation of their supply chain planning and execution processes.

TOOLSGROUP

ToolsGroup is an expert in this year's SCP Technology Value Matrix. ToolsGroup's inventory planning and optimization platform, Service Optimizer 99+ (SO99+), offers end-to-end modeling at SKU-location combinations to reduce costs while maintaining desired service levels. It combines demand planning, sensing, sales and operations planning (S&OP), allocation and replenishment, promotions planning, and production planning into a single platform that serves industries such as aftermarket parts, manufacturing, retail, distribution, and consumer packaged goods. The platform integrates with third-party ERP, CRM, and BI applications to improve organizational visibility and cross-functional collaboration. The interface allows for the quick addition of new products and the identification of demand factors based on historical data. The vendor also offers solutions specific to the retail industry, such as merchandise financial planning, assortment planning, and pricing and promotions management, to build supply chain resiliency and guide retailers throughout sourcing, production, and fulfillment processes.

Recent product announcements and enhancements include:

- The acquisition of Onera, a company that offers real-time inventory availability and fulfillment software solutions to retailers, has been announced. This combined software offering is expected to provide retailers with enhanced visibility into their

inventory and the necessary tools to optimize planning and fulfillment, which Nucleus expects will facilitate a more flexible and resilient supply chain.

- Planalytics and ToolsGroup have partnered to integrate their analytics solutions, allowing customers to manage the impact of weather on their businesses for more accurate forecasting, optimized inventory, and reduced lost sales due to weather volatility. The integration enables customers to subscribe to Planalytics' weather-driven demand (WDD) models through ToolsGroup's retail planning solutions, providing access to weather impact analytics for different products, categories, stores, and regions. Customers can now capture specific data points relevant to their business, from merchandise class to historical sales data.

FACILITATORS

Facilitators in the Value Matrix include Anaplan, Blue Ridge Global, Board, Logility, and MPO.

ANAPLAN

Anaplan is a facilitator in this year's SCP Technology Value Matrix. The vendor serves consumer goods, retail, manufacturing, healthcare, high-tech, and life sciences organizations. Anaplan provides a comprehensive cloud-native planning, modeling, and forecasting solution that supports business functions in finance, sales, marketing, HR, workforce, IT, and supply chain. With its "Connected Planning" approach, Anaplan aims to improve organizational visibility and decision-making by centralizing operational data from multiple sources. For supply chain planning, the solution encompasses various capabilities, such as supply and demand planning and sales, inventory, and operations (SI&O). Using unique hyper-scale computing, supply chain planners can improve the accuracy of their demand and supply forecasts and balance plans through what-if planning. Moreover, clients can improve their sales and operations planning (S&OP) by promptly adapting to shifts in the supply chain and making essential adjustments to meet demands. Anaplan Predictive Insights can connect enterprise and market data, facilitating large-scale predictive modeling and presenting practical planning insights. Anaplan's product can be flexibly applied across various industries to address challenges in adapting planning to execution reality.

Anaplan's PlanIQ platform integrates with Amazon Web Services Amazon Forecast to provide an intelligent forecasting framework that utilizes machine learning to generate accurate forecasts. Anaplan's Connected Planning solution partners with Google Cloud's Digital Supply Chain Twin to offer improved visibility into execution, real-time dashboards,

and alerts for supply chain disruptions. Anaplan's integrated demand planning platform with Vertex AI from Google enhances forecasting accuracy. Customers can log in to the Anaplan platform through their desktop and mobile devices and leverage Anaplan's collaborative tools to integrate with DocuSign and Slack, enhancing customer interaction. Along with these tools, the Anaplan UX functionality empowers users to generate reports and offer critical insights. Anaplan's Hyperblock technology enables customers to create models to facilitate planning decisions, enabling them to plan multiple scenarios within the specified lead times. Anaplan's CloudWorks feature provides workflow automation and third-party data integration with external cloud-based data and service providers.

Recent product updates in the past 12 months:

- In January 2023, Anaplan and Adobe Workfront partnered to provide a digital transformation solution that gives customers quick visibility to marketing activity performance and help direct investments for organizations to achieve desired revenue, profit, volume, and engagement targets.

- In December 2022, Anaplan announced the strategic acquisition of Vuealta's applications division, including their suite of purpose-built supply chain applications which offer Anaplan customers advanced out-of-the-box capabilities for Demand & Promotions Planning, Supply Planning, Production Planning, and S&OP.

- On September 21, 2022, the Crown Commercial Service awarded Anaplan a place on the latest iteration of the G-Cloud framework, G-Cloud 13. This award enables Anaplan to make its Connected Planning cloud solutions available to all public sector entities in the United Kingdom via a compliant government procurement framework. Users of Anaplan's Connected Planning platform can now easily access the platform through a streamlined procurement process.

- On June 21, 2022, Anaplan's acquisition by Thoma Bravo, a leading software investment firm, was approved by Anaplan stockholders at the Special Meeting of Stockholders. The all-cash transaction, valued at approximately $10.4 billion, was previously announced on March 20, 2022, and completed in June 2022. Users of Anaplan's Connected Planning platform will benefit from the acquisition, as it will provide the company with the resources and support needed to continue developing and improving the platform.

- In June 2022, Anaplan announced the expansion of its strategic relationship with Amazon Web Services (AWS) in Australia, which now hosts Anaplan's platform for enterprise planning in the AWS Asia-Pacific (Sydney) Region. This collaboration expands Anaplan's reach to new customer segments on AWS's world-leading cloud. This will allow the vendor to better serve the Asia-Pacific region.

- In April 2022, Anaplan and Coupa announced a partnership to provide integrated capabilities that connect forward planning and forecasting with ongoing operational spend management. The partnership between Anaplan and Coupa represents an opportunity for users of Anaplan's Connected Planning platform to optimize their planning and forecasting processes through the integration of operational spend management.

BLUE RIDGE GLOBAL

Blue Ridge Global is a facilitator in the 2023 SCP Value Matrix. Blue Ridge serves the distribution, retail, and manufacturing sectors, specializing primarily in verticals such as wine and spirits, food services, furniture, hardware, HVAC, plumbing, and pet supplies. Blue Ridge provides an integrated platform that combines various capabilities, such as integrated business planning (IBP), pricing optimization, AI/ML analytics, demand planning, and segmentation management. Its native cloud delivery, industry-specific pre-configured functionalities, and easy-to-use user interface accelerate the replacement of legacy systems. Blue Ridge facilitates operations and demand planning coordination by integrating with over 40 ERP out-of-the-box and external applications, such as customer relationship management (CRM) and business intelligence (BI) systems. Demand forecasting processes are streamlined by automatically updating prediction models based on identified seasonality, demand variability, and new items. Blue Ridge's pricing feature allows users to adjust prices based on detailed segmentation attributes, including expected margin, revenue, price elasticity, and customer discounts. Blue Ridge applies a data cleansing process to the demand history, eliminating anomalies or inaccuracies such as lost sales caused by out-of-stock situations. By leveraging pattern recognition to categorize products and best-fit forecasting techniques, Blue Ridge customers can effectively manage by exception, using insights derived from data analysis. Furthermore, Blue Ridge utilizes a combination of time series and machine learning models to enhance forecasting accuracy for product inventory based on past demand trends.

Blue Ridge has made significant product enhancements over the last year, including launching the Xpression platform and Dual Manager module.

- In 2022, Blue Ridge launched their Xpression platform. This new platform overhauled the user experience and UI and increased modeling performance. Xpression also offers an ML forecasting solution to enhance seasonality and trend capture for customers.
- Deal Manager is a module within the pricing insights tool for the wine and spirits industry. This pricing engine allows wine and spirits users to create deals and rebates for their retail or wholesale customers. It provides a single source of record for all available deals and analytics to assess and execute a new pricing program or deal.

BOARD

Board is placed as a facilitator in the 2023 Supply Chain Planning Value Matrix, recognized for its Intelligent Planning for Supply Chain solution. This solution gives customers a single source of record for planning activities, offering integrated capabilities for sales and operations planning, demand planning, rough-cut capacity planning, and supply planning. With these tools, customers can create resilient responses to variability in supply and demand and optimize profitability. Additionally, customers can improve responsiveness with access to concurrent supply chain data from across the network. Board Intelligent Planning for Supply Chain places emphasis on Integrated Business Planning, enabling customers to construct workforce and allocation plans to address new product introductions or capture price elasticity for improved margins.

Board has continued to improve its Intelligent Planning for Supply Chain solution throughout the past year.

- The vendor added new REST APIs, allowing organizations to efficiently run integrations with suppliers' and customers' systems and connect workflows inside and outside of the organization.

- Board also expanded its pre-built integrations with over 30 new connectors to ERPs, business applications, cloud, and big data sources. This simplifies integration across systems and provides streamlined connectivity to a transactional system of record.

- The vendor launched new Smart Import Object mapping options, proving greater flexibility for use cases involving unbalanced hierarchies.

- Board released R-connect, enabling users to exchange data with an R-server and AI/ML algorithms to provide users with real-time results.

LOGILITY

Logility is placed as a facilitator in the 2023 SCP Technology Value Matrix, recognized for the Logility Digital Supply Chain Platform. This platform combines various functionalities to support integrated business planning and collaborative S&OP. The platform also features a data management and integration layer, providing data standardization capabilities across geographies and divisions. The vendor also offers AI-based forecasts that automatically sense shifts in demand and enable users to make decisions with a higher degree of precision. Users can leverage Logility for multi-echelon inventory optimization to minimize stockouts and lower costs at all levels of inventory. Users can also drive improved operating performance with smart sourcing strategies, optimized production schedules, and automated vendor management. Furthermore, Logility offers specialized solutions for

various industries, including consumer goods and durables, food and beverage, retail, apparel, packaging, process chemical, and service parts.

Recent product updates and announcements include:

- An acquisition of Starboard Solutions Corp. in June 2022, a Michigan-based organization that provides software to create a digital twin of a customer's physical supply chain.

- New features to reduce time and complexity for various planning and scheduling activities, including a dynamic planning pyramid.

- Enriched product traceability, providing improved ease of use and advanced visualizations.

- Enhanced support for manufacturing planning and optimization for multiple lots and shelf life.

- Improved customer ability to streamline and integrate social and environmental information from various sources to better support ESG initiatives.

MPO

MPO has been named a facilitator in the Supply Chain Planning Value Matrix for its global cloud platform, which provides real-time analytics and supply chain orchestration to a variety of industries, including automotive, high-tech/electronics, retail, healthcare, and industrial manufacturing. For improved collaboration and optimization, the Triple I Planning Engine provides instant, integral, and intelligent supply chain control and visibility across various order types and geographies. Specializing in order fulfillment, MPO provides multi-level order management functionality, enabling users to monitor KPIs across suppliers and customers, control order flows, and automate purchase order management to improve supplier collaboration. MPO's UX functions, such as mobile apps and dynamic visualization, provide high usability scores with customers, improving supply chain visibility. Furthermore, the platform provides real-time sourcing and routing planning of order flows, as well as integral sustainability planning for customers looking to reduce their environmental impact per order. For users seeking optimal supply chain movement, improved supplier collaboration, and customer engagement, MPO's supply chain visibility and control are key value drivers.

Kinaxis purchased MPO for $45 million in Q2 2022. The acquisition is expected to complement Kinaxis' existing offerings in demand, supply, and financial planning, while also expanding its capabilities in logistics, transportation, and order management. This strategic investment is a significant milestone in the development of a comprehensive supply chain management platform for existing users, a platform that aims to support end-to-end

processes and ensure that long-term planning initiatives are aligned with logistics requirements.

CORE PROVIDERS

Core providers in the Value Matrix include Alloy.ai, Coupa, QAD, Smart Software, and Valizant.

ALLOY.AI

Alloy.ai is placed as a core provider in the 2023 Supply Chain Planning Value Matrix, recognized for Alloy Planning, the organization's POS-driven forecasting and planning solution for consumer goods brands. Alloy Planning offers various capabilities to plan based on real-time customer demand, including demand planning, seasonal or year-round allocation planning, sales management, and inventory optimization. These capabilities allow planners to adapt quickly to changing market and supply chain conditions, break down silos between teams and focus on maximizing business opportunities. It offers multiple levels of granularity, enabling users to plan anywhere from the channel level down to individual SKUs. Alloy also uses AI throughout the planning process to align with consumer trends such as promotions and seasonal demand.

Notable announcements from the past year include:

- In Q4 2022, Alloy announced the availability of its Alloy Intelligence application on the SAP Store. SAP Integrated Business Planning (IBP) for Supply Chain users can now deploy and integrate Alloy Intelligence to improve IBP's forecasting capabilities with demand and channel inventory signals.

COUPA

Coupa is placed as a core provider in the 2023 Supply Chain Planning Value Matrix as recognized for Coupa Supply Chain Design & Planning. This platform is largely utilized for its supply chain design capabilities but also includes functionality to support sales and operations planning, inventory optimization, capacity management, and analytics. Coupa also offers digital twin functionality to visualize the current supply chain and model the future with relevant algorithms. Additionally, the vendor offers Sourcing to trigger sourcing events at the best cost and service performance and Supplier Management to flag risky suppliers in the design process and plan for scenarios to address them.

- In December 2022, Coupa entered into a definitive agreement to be acquired by Thoma Bravo for $8 billion. This agreement will make Coupa a private company and is expected to enable cross-sales across Thoma Bravo's existing portfolio.

QAD

QAD has been recognized as a core provider in this year's Supply Chain Planning Value Matrix for its QAD Connected Supply Chain offering that includes QAD Digital Supply Chain Planning (formerly known as QAD DynaSys Digital Supply Chain Planning), QAD Supplier Relationship Management (QAD SRM), QAD Demand and Delivery, QAD EQMS (formerly known as QAD Cebos), and QAD Global Transportation and Execution (formerly known as QAD Precision Software) and QAD Digital Commerce. QAD Connected Supply Chain combines the following SaaS-delivered solutions: supply chain planning, data collection and label printing (QAD Automation Solutions), and global trade and transportation execution functionality. Supported industries include consumer goods, food & beverage, process manufacturing, life sciences, automotive, and high-tech. The QAD Digital Supply Chain Planning (QAD DSCP) platform offers planning capabilities across demand, production, distribution, procurement, S&OP, and financials. Integrated supplier management allows users to exchange real-time data with their suppliers, eliminate manual processes, and reduce the risks associated with supply chain disruptions. It also helps users plan for and manage shipments, screen suppliers, and automate procurement with QAD Automation Solutions, QAD SRM, and QAD Global Trade and Transportation Execution (QAD GTTE). Users often attribute their selection of QAD to its ability to improve supplier and distributor collaboration, track customer orders in real-time, respond to demand and supply fluctuations, and plan for disruption events to reduce service and financial impacts. With QAD's focus on business scenario planning, users can develop supply chain plans that account for cash flow, revenue, margins, costing, resource utilization, and budget adherence for greater alignment between finance and operations.

Recent product announcements include:

- QAD has released the latest version of its QAD DSCP solution, version 2022.1, designed to help customers better navigate global supply chain interruptions. The release features a revamped planner experience with extended use of home pages and dashboards, combined with an embedded supply chain analytics engine to provide instant detection of potential impacts to the current plan. Planners can perform scenario analysis to determine the best course of action within an acceptable risk profile.

- The enhancements in this release also focus on reducing time-to-value and simplifying the experience of buying, deploying, configuring, and owning the QAD

DSCP solution. Version 2022.1 uses wizards to prototype a fully configured planning system based on planner questionnaire responses.

- In addition, QAD DSCP 2022, released in June 2022, offers an advanced planner experience with intuitive homepages providing real-time updates, alerts, and KPIs. It also offers a single control tower and is deployed on the AWS cloud, using native cloud services for artificial intelligence and data access to improve scalability, availability, performance, and security.

SMART SOFTWARE

Smart Software, Inc. (Smart) is a core provider in the 2023 Supply Chain Technology Value Matrix. Smart's flagship product, the Smart Inventory Planning & Optimization (IP&O) platform, combines demand planning, supply planning, inventory optimization, and reporting and analytics solutions that can be deployed through a modular approach. Smart IP&O is multi-tenant, hosted on AWS, and primarily supports the manufacturing, distribution, and service parts industries. Smart currently provides out-of-the-box connectors to Epicor Kinetic and Prophet 21, Microsoft Dynamics 365, NetSuite, and Sage X3 and 300. Customers often choose Smart for its intermittent demand forecasting capabilities and its ability to accurately plan stocking parameters for spare parts and aftermarket products. Smart's probabilistic forecasting engine informs users of the best policies and service level targets while incorporating risk and ranges for demand and lead times. Scenario planning functionality also enables users to simulate lead times as opposed to relying on average lead times based on historical data.

Notable product updates from the past year include:

- Smart launched API integrations to Epicor Prophet 21. Smart is now available as a cross-Epicor platform add-on for both Epicor Kinetic and Epicor Prophet 21.

- Smart and Sage entered a reseller partnership that brings Smart Software to Sage X3 and Sage 300 ERP customers.

- In 2022, Smart became a co-sell partner for Microsoft Dynamics.

- The new Smart Supply Planner (SP) is an automated supply planning and order management solution that predicts on-hand inventory and order schedules integrated with the Smart platform.

- The new Smart Forecasts (SF) is an entry-level cloud forecasting solution available to companies leveraging API integrations for Microsoft Dynamics, NetSuite, Epicor Kinetic and Prophet 21, and Sage X3 and 300. SF supports statistical forecasting and can ingest historical data directly and save forecasts to the mentioned ERP systems to inform order management.

- Smart introduced "Gen 2" probabilistic methods to enable daily forecasting that accounts for the day of the week, week of the month, and month of the year seasonality while also accounting for random lead times, ensuring a more thorough risk assessment when deciding how much to stock.

- Smart ML models can automatically identify the optimal amount of historical data to inform forecasts, eliminating the need to manually determine what history to feed the model for the most accurate results.

- Smart introduced ML-driven cluster analysis that groups products based on similar demand profiles to support group planning and analytics.

- Smart introduced a parts forecasting module to support repairable parts that are sent out for repair or refurbishment as opposed to discarded. It accounts for lead times associated with random repair and returns and random failure to produce accurate demand and supply forecasts and the resulting inventory and replenishment plans.

VALIZANT

Valizant is a core provider in the 2023 SCP Value Matrix. Valizant supply chain planning solutions run on Anaplan's no-code platform, offering customers access to its machine learning capabilities for supply chain optimization, inventory management, demand forecasting, and sales and operations planning. Valizant can be tailored to align with a company's current business processes without requiring any system customizations because it operates on a no-code platform. Valizant is a business-owned and managed technology, allowing users to add or remove rules without needing the assistance of IT or incurring expensive consultant and developer costs. Valizant sets itself apart from other platforms that demand extensive technical expertise and coding skills by providing a user-friendly experience that helps streamline administrative tasks. In addition, Valizant offers its customers the "30/30/3" pledge, promising to deliver a 30 percent performance boost and enhance planner capacity by 30 percent in three months or less.

Recent product updates in the last 12 months:

- Valizant introduced Xentrl in March 2022, a process navigation and agile project management tool that enables real-time collaboration across all supply chain stakeholders and helps businesses in making quicker and more informed decisions. The solution offers a comprehensive method to document, collaborate, and conclude all aspects of the transformation with complete participation, irrespective of the stakeholders' location or time zone.