Blue Yonder is Leader in SPARK Matrix: Retail Forecasting & Replenishment, 2021

Quadrant
Knowledge Solutions

2021
SPARK MATRIX
LEADER

Retail Forecasting &
Replenishment, 2021

An Excerpt from Quadrant Knowledge Solutions
"SPARK Matrix: Retail Forecasting & Replenishment, 2021"

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Retail forecasting and replenishment solution broadly implies key elements including demand planning, inventory management, replenishment planning, allocation, and promotional forecasting. The solution facilitates retailers and supply chain professionals to innovate, expand, and optimize end-to-end supply chain networks by accurately predicting demand patterns and trends spanning customer and product lifecycle. It supports demand-driven item replenishment to manage inventory levels and meet customer and business targets.

The solution leverages artificial intelligence (AI) and machine learning (ML) technologies to diminish inventory levels, enhance customer service performance and maximize revenue. It helps retailers efficiently plan demand based on products and their categories, locations, stores, and warehouses. The solution maximizes the demand planner's productivity by automating the end-to-end demand planning and replenishment process and alleviating the time consumed in the manual process of planning. Organizations can easily manage seasonal demand spikes, new product releases, small quantity products and one-time events. Several retail forecasting and replenishment solution vendors are offering comprehensive capabilities such as allocation and re-allocation, inventory planning, statistical forecasting, management of products having short life cycle, dashboard, analytics, reporting and exception management. However, the solutions' capability to manage and streamline simple and complex supply chains and execute demand shaping actions has generated the need for robust retail forecasting and replenishment solution.

Retail organizations are analyzing supply chain dynamics to effectively manage their inventory, expenditures, and fulfil product demands across various geographical locations. Excess products on the store floor that remains unsold take a huge space which would have been dedicated to other product having huge demand. Organizations are continuously focusing on delicately balancing the sold and unsold goods and ensuring they have the relevant products that customers are hunting for. With changing market dynamics there is also a huge change in demand for particular products and its adoption trend is dramatically changing as well. At times organizations observe a spike in product demand at any given moment. These moments might be linked with seasonality or even deprivation of the product's demand. Organizations are keen on understanding and predicting such product peaks and troughs in the

market before their occurrence. Retailers are striving to better anticipate the right product and its volume that is required in the store and debar circumstances where customers are unable to find the preferred products.

Most of the consumer goods suppliers and existing retailers confront challenges from new entrants and low-cost retailers and also contracting economy regarding essential products. Retail store owners often seek options to curb expenses and optimize their supply chain to obtain a higher margin from their business. Retailers must focus on the products travelling from vendors to a digital or physical e-commerce store to drive profits in form of huge margins. Retailers should contemplate ideal paths for product distribution or allocation of these products to the dedicated store. There should be an integrated allocation process along with the replenishment process to have product purchase at optimal cost and time for the appropriate channel.

Retailers are focusing on leveraging demand forecasting and replenishment solutions to optimize inventory, better anticipate the demand for specific products in the market and execute a better pricing strategy for an item. In addition to inventory management and pricing strategy, organizations are also leveraging demand forecasting and replenishment solutions for assortment planning. Organizations are employing artificial intelligence (AI), machine learning (ML), and advanced analytics to have a responsive, fine-tuned, and efficient supply chain. This is helping organizations to ensure that product deliveries are adjusted based on location-based information or current delivery times.

The demand forecasting and replenishment solution is empowering retailers by enabling them to leverage real-time data for efficiently administering the staff at the store responsible to serve customers and deliver a seamless experience. Retailers seek to assess the traffic data in the store for a specific period by aggregating it with past or present events and weather information. With this, they can better predict the peak hours and replenish the store with relevant products in a considerable volume and also have a dedicated staff for those peak hours.

Retailers are interested in understanding the products that customers admire by analyzing their data about previous purchases, correlations, and more. They are looking at becoming more ardent towards understanding the potential likelihood of services or products. This will help retailers to augment their store performance, customer retention, minimize churn, and onboard customers to a great extent. Supply chain managers are focusing on driving economically

enriching e-commerce businesses by leveraging AI/ML for accurate demand forecasting and making strategic decisions from a buying and assortment standpoint. Moreover, supply chain managers are also harnessing these AI/ML capabilities to gain holistic visibility and enhance the end-to-end supply chain network.

Quadrant Knowledge Solutions' SPARK Matrix: Retail Forecasting & Replenishment, 2021 research includes a detailed analysis of the global market regarding short-term and long-term growth opportunities, emerging technology trends, market trends, and future market outlook. The study provides a comprehensive market forecast analysis of the global market in various geographical regions and the overall market adoption. This research provides strategic information for technology vendors to better understand the market supporting their growth strategies and for users to evaluate different vendors' capabilities, competitive differentiation, and market position.

The research includes detailed competition analysis and vendor evaluation with the proprietary SPARK Matrix analysis. SPARK Matrix includes ranking and positioning of leading Retail Forecasting & Replenishment vendors with a global impact. The SPARK Matrix includes analysis of the leading vendors, including Antuit.ai, Aptos, Blue Yonder, Impact analytics, Kinaxis, Logility, LOGIO, Manhattan Associates, Oracle, RELEX Solutions, Retalon, SAP, SAS, Solvoyo, Symphony RetailAI, ToolsGroup, and Verteego.

Antuit.ai, Aptos, Blue Yonder, Logility, Manhattan Associates, Oracle, SAP, Symphony RetailAI, and ToolsGroup are the top performance and 2021 technology leaders in the global Retail Forecasting and Replenishment. Solvoyo has been positioned as emerging in Retail Forecasting & Replenishment technology leaders.

Kinaxis, RELEX Solutions and SAS are amongst the major challengers in this 2021 SPARK Matrix of the global market. The SPARK Matrix also provides an analysis of the vendors, including LOGIO, Retalon, Impact Analytics, and Verteego.

Market Dynamics and Trends

The following are the key research findings of Quadrant Knowledge Solutions Retail Forecasting & Replenishment:

♦ The retail forecasting and replenishment market is currently in the emerging stage. Several large and medium enterprise organizations are adopting the technology for increased forecast accuracy, optimal planning, omnichannel product availability and optimizing customer purchasing experiences.

♦ Organizations are undergoing a major cultural shift with an increasing focus on inculcating a business and customer-centric culture, and the digital-transformation approach is often considered as an initial step in achieving the same.

♦ Organizations are putting in significant investments to support the omnichannel environment to provide a buy anywhere and return anywhere approach.

♦ Retailers are looking for vendors that are capable to offer a unified commerce environment that can help them to optimize product availability, new product forecasting, seasonal forecasting, and short/Long term forecasting and replenishment.

♦ Retailers are also looking at solutions providers that can automatically capture determining factors including promotion type, price variation, product type, region, in-store display when forecasting for promotion planning.

♦ The organization is focusing to offer AI-driven retail forecasting and replenishment solution that helps retailers efficiently handle fresh food forecasting as well as daily & intra-day product forecasting, replenishment, and allocation.

♦ Organizations are also offering promotional planning capabilities for ideation, brainstorming, and co-creation of accurate future demand planning and allocation.

♦ Continued investments in advanced analytics to gain data-driven, actionable insights to leverage actionable insights into key KPIs in

customer service, inventory, production, and quality to continuously improve and drive informed decision making.

♦ Retail Forecasting & Replenishment solutions providers are significantly investing in improving their artificial intelligence, machine learning and advanced analytics capabilities to support a wide range of existing/new use cases as well as improve the overall supply chain collaboration, real-time forecasting, distributed product availability, dynamic allocation and intelligent replenishment.

Retail forecasting and replenishment solution vendors are emphasizing on strengthening their technology platform capabilities by providing out-of-the-box and self-service integration support, expanding channels for retail execution, supporting diverse supply chain management use cases, end-to-end inventory management, enhancing promotional forecasting capabilities and accuracy, and real-time demand collaboration functionalities. Vendors continue their investments in artificial intelligence and machine learning capabilities to deliver innovative features, augment forecasting models to drive higher forecasting accuracy and real-time insights with rich rata. Vendors are also heavily investing around cloud-based architecture deployments to make their solution offering highly scalable, secure and contemporary. Organizations are consistently looking at demand forecasting and replenishment solution that adapts with their supply chain workflows, and evolving business needs and market dynamics. Moreover, organizations are also looking at a solution that enables them to efficiently design and execute omnichannel retail strategies. As the demand forecasting and replenishment solution market consists of multiple vendors with varying platform capabilities and supporting services, organizations often encounter challenges in understanding the ideal solution for their high-level business critical requirements.

Most of the retail forecasting and replenishment solution may provide all the fundamental functionalities, but the breadth and depth of these functionalities may diverge by different vendors offerings. Prior to any purchase decision, it is recommended for user organizations to carry out an extensive evaluation of several retail forecasting and replenishment solutions and vendors and understand that the solution is aligned with their underlying requirements and processes. Users should also look for retail forecasting and replenishment solution vendors having expertise in large-

scale deployments and meticulously assess existing case studies of those deployments.

SPARK Matrix Analysis of the Retail Forecasting & Replenishment Market

Quadrant Knowledge Solutions conducted an in-depth analysis of the major Retail Forecasting & Replenishment vendors by evaluating their product portfolio, market presence, and customer value proposition. Retail Forecasting & Replenishment market outlook provides competitive analysis and a ranking of the leading vendors in the form of a proprietary SPARK Matrix™. SPARK Matrix analysis provides a snapshot of key market participants and a visual representation of market participants. It provides strategic insights on how each vendor ranks related to their competitors based on their respective technology excellence and customer impact parameters. The evaluation is based on primary research including expert interviews, analysis of use cases, and Quadrant's internal analysis of the overall global market.

Technology Excellence	Weightage
Sophistication of Technology	20%
Competitive Differentiation Strategy	20%
Application Diversity	15%
Scalability	15%
Integration & Interoperability	15%
Vision & Roadmap	15%

Customer Impact	Weightage
Product Strategy & Performance	20%
Market Presence	20%
Proven Record	15%
Ease of Deployment & Use	15%
Customer Service Excellence	15%
Unique Value Proposition	15%

Figure: 2021 SPARK Matrix
(Strategic Performance Assessment and Ranking)
Global Retail Forecasting & Replenishment Market

SPARK Matrix™: Retail Forecasting & Replenishment, 2021
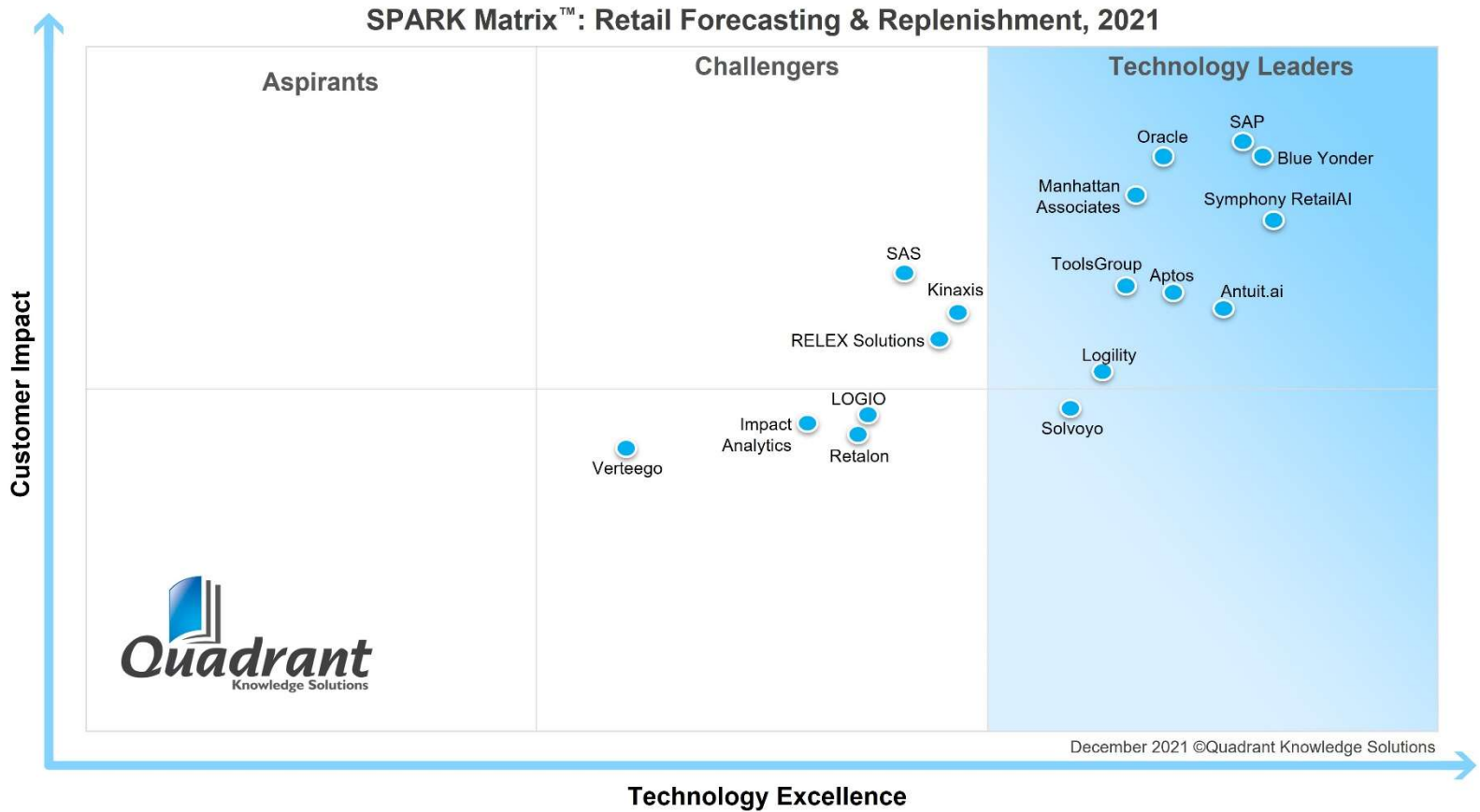
Blue Yonder Capabilities in the Global Retail Forecasting & Replenishment Market

Founded in 1985 and headquartered in Scottsdale, Arizona, Blue Yonder offers end-to-end supply chain management and omnichannel commerce solutions. In September 2021, Panasonic acquired Blue Yonder to offer enhanced end-to-end supply chain solutions and work collaboratively towards its shared vision of Autonomous Supply Chain™ by aggregating IoT and AI/ML technologies. Blue Yonder offers a broad suite of solutions, including supply chain planning, supply chain execution, and omnichannel commerce. Blue Yonder offers the Luminate™ planning platform that leverages digital twin planning for intelligently predicting the problem and opportunities to ensure that the organization's actions are carried out adequately, and production, inventory, and labour are planned intelligently.

The Luminate™ planning platform consists of various solutions, including demand planning, inventory optimization, network design, sales and operation Execution (S&OE), sales & operation planning (S&OP), supply planning & replenishment, production planning, and merchandise financial management. Blue Yonder retail forecasting and replenishment offer comprehensive capabilities, including supply planning & replenishment, inventory availability & order orchestration, inventory optimization, store replenishment, and warehouse replenishment.

Blue Yonder Inventory Planning and Management offers supply planning & replenishment capability that helps retailers optimize proper inventory availability across distribution channels, mitigate stock-out situations, maximize ROI, and enhance customer satisfaction. Supply Planning provides dynamic master planning, scenario planning, root cause analysis, what-if analysis, and allows users to create network resilience. Blue Yonder Inventory Planning and Management's Inventory availability and order orchestration capabilities enable retailers to gain and maintain a competitive advantage by aligning inventory planning, inventory strategy, and inventory execution with their strategic business goals for service, production, and distribution. Through its dynamic segmentation module, the platform creates unique supply chain operations to meet specific customer requirements by strategically and automatically clustering customers with product, location, and customer-specific procurement requirements. The platform also assists supplier planners in providing differentiated service levels based on customer value and business parameters.

The platform also offers the Luminate planning allocation and replenishment tool that maximizes inventory profitability, simplifies product seasonality, and optimizes inventory replenishment. The tool also provides an interactive workbench to assist retailers in assessing the projected impact of allocations and deployments to make informed decisions. The tool also provides a consolidated view that assists retailers in streamlining and optimizing inventory management and combining transportation plans to optimize end-to-end allocation efficiency. The tool also offers intelligent algorithms that are capable of auto-generate inventory plans based on key metrics, including sales history, on-hand inventory, safety stock requirements, and customer orders. Additionally, the Luminate planning platform utilizes leading technologies such as artificial intelligence, machine learning, big data, robust algorithms, and predictive analytics to forecast disruptions such as material shortages and weather events.

Additionally, the platform offers key features and functionalities, including multi-function, multi-flow, multi-industry, multi-channel, multi-party, multi-modal, multi-systems, multi-language and currency support, and continuous micro supply chain optimization across planning, execution, and finance.

The platform enables organizations to seamlessly manage and optimize order management of any type (purchase order, sales order, return order, etc.) through the use of smart functions such as order splitting and consolidation, as well as intelligent routing, and sourcing. The platform also provides advanced shipment notifications to enhance the supply chain visibility as well as standardize and streamline orders & inspection, and efficiently optimize quality assurance. The platform also provides real-time operational and transactional visibility to help organizations minimize overall costs. The platform facilitates multiple order flows through flexible business rule configurations, templates, documents, and pre-requisite steps.

The platform provides real-time analytics support to help organizations comprehensively analyze and manage inventory options and availability. The platform also provides real-time status alerts and in-app exceptions management pertaining to order status, inventory, financial transactions, logistics, suppliers, and KPI's. These alerts facilitate seamless execution of on-time-in full delivery. The platform offers transport management functionality that facilitates multi-leg, multi-mode, and multi-services support to optimize end-to-end transport operations. It also offers intelligent order management functionality that helps organizations to optimize order planning, inventory allocation, optimal order execution through multi-channel support. The

platform provides smart automation support to streamline and optimize returns and advanced replacement order flow and streaming across parties such as B2B, B2C, and D2C.

Analyst Perspective

Following is the analysis of Blue Yonder's capabilities in the global Retail Forecasting and Replenishment systems market:

♦ Blue Yonder's Luminate™ Planning leverages boundaryless planning, luminate user experience, integrated planning & execution, and cognitive planning & skills. With its end-to-end supply chain planning and execution solution, the company offers an enhanced customer ownership experience to large retailers and brand owners. The company also offers various tools to improve personalized customer experience to improve customer engagement and conversion rate. Blue Yonder's Luminate™ platform enables retailers to refocus on inventory, space, pricing, workforce, and store operations to new changes in demand by offering real-time data and intelligent insights.

♦ Blue Yonder's AI/ML-driven Intelligent forecasting module enables organizations to drive intelligent decision making by leveraging internal and external demand signals, corporate strategies for pricing, promotions, markdowns, and service levels, and situational factors (such as seasonality, day of the week, and day of the month) to provide accurate forecasts pertaining to demand fluctuations and dynamic consumer expectations. The collaborative and connected platform of Luminate Planning allows end-to-end exception visualization, prioritization, and machine learning-based resolutions. Additionally, retailers can also view and manage their carrier and supplier networks in real-time, with real-time order, shipment, and inventory status guiding planning decisions. Retailers can also identify potential disruptions and opportunities by developing various situation and testing it in the pilot mode to gain the actual outcomes before implementing or planning strategies.

♦ Blue Yonder is capable of catering to a wide range of user-specific solutions for retail segments. The company serves diverse customer requirements by offering a customizable SaaS-based solution.

♦ From a geographical presence perspective, Blue Yonder has a major presence in North America and Europe, followed by the Asia Pacific, Middle East and Africa, and Australia. From an industry vertical perspective, the company holds a customer base across a range of industry verticals, including retail grocery, retail hardlines, retail soft lines, consumer industries, automotive & industrial, high-tech and semiconductor, and third-party logistics. The company offers an extensive partner ecosystem that enables organizations to leverage the best of breed technologies and tools and drive business value.

♦ Blue Yonder is aware of ongoing prudence and has built its strategy according to the dynamic market. The emerging Supply Chain Planning vendors are successfully gaining significant market traction and are strengthening their market penetration. The primary challenge of Blue Yonder is the growing competition from well-established and emerging business application vendors. These companies are increasingly broadening their solution offerings by developing in-house capabilities, partnerships, and acquiring specialists from the supply chain planning and execution domain. Additionally, the company is also facing challenges in growing its cloud-based revenue compared to its competitors. However, with its strong, diverse geographical customer presence and track record to serve SMB and large and complex markets, especially in the enterprise customer segment, Blue Yonder is expected to continue to grow its revenue across industry segments and geographical regions.

♦ From a technology roadmap perspective, Blue Yonder is cognizant of the upcoming market trends and is focusing on offering an enhanced technology platform. The company continues to help organizations predict supply chain performance by supporting, integrating, orchestrating, and executing action across each mode of the value chain via a core cloud-based digital platform.