

———— **Knowledge Brief** ————
Quadrant Knowledge Solutions

Blue Yonder is a Leader in
SPARK Matrix: Intelligent Retail Pricing and
Promotion Optimization (IRP&PO), 2022



An Excerpt from Quadrant Knowledge Solutions
“SPARK Matrix: : Intelligent Retail Pricing and Promotion Optimization, 2022”

Blue Yonder is Leader in SPARK Matrix: Intelligent Retail Pricing and Promotion Optimization (IRP&PO), 2022

Quadrant Knowledge Solutions defines an Intelligent retail pricing and promotion optimization platform as “software that utilizes historical customer data, predictive analytics, the voice of the customer, as well as artificial intelligence and machine learning to allow retailers to determine optimal price points and manage every aspect of promotions in real-time”.

The platform allows retailers to optimize pricing throughout the entire product lifecycle and across all channels and helps retailers meet their business objectives by increasing profit margins, maintaining price consistency across multiple channels, and reducing excess stock and waste. The platform offers comprehensive AI-powered capabilities for dynamic pricing, managing prices across all channels, and improving markdown pricing. Retail pricing and promotion optimization platforms offer capabilities for initial price optimization, regular price optimization, promotion price optimization, markdown price optimization, and contextualized real-time pricing. These platforms can recognize the various influencing factors, such as demand, sales, and season, among others, and offer real-time pricing suggestions by incorporating AI and ML algorithms.

Optimal pricing of goods or services and delivering unique promotional offers are crucial functions yet key challenges for retail organizations. With growing competition to acquire customers, price is becoming a key factor in sustaining in the fast-paced retail space. Low-cost products have evolved into the main priority for all customers, due to which the emphasis on price optimization is increasing than before. An organization's internal systems capture a large volume of customer data, and this data is becoming a key driver to optimizing pricing and promotional success. Combining this data with emerging technologies such as artificial intelligence and machine learning is helping organizations improve customer experience and increase loyalty. Retail organizations leveraging AI/ML-based pricing and promotion capabilities are gaining a competitive edge and delighting their customer with creative pricing and promotions, whereas organizations who fail to understand the importance of AI/ML are missing huge opportunities that the dynamic retail space offers.

Driven by the customer-centric approach and evolving customer expectations, retailers are constantly focusing on formulating/reformulating their marketing and pricing strategies to stay ahead of the competition. Customers often share their information, and in return, expect retailers to offer more personalized deals. In addition, the global COVID-19 pandemic has triggered tough competition among retailers, which has significantly driven the adoption of event-driven pricing. Retailers are increasingly adopting intelligent retail pricing and optimization software for price optimization, regular price optimization, promotion price optimization, markdown price optimization, and contextualized real-time pricing that facilitates the management of in-store/online product prices for customers. As retailers also seek to increase customer loyalty, they are also increasingly looking at advanced pricing solutions with the ability to fulfill the right price at the right time to the right customer. IRP&PO platform vendors are aware of the market scenario and are concentrating their efforts on helping retailers by capturing information such as past purchases, brand loyalty, purchase frequency, and more, to offer competitive real-time product pricing.

Retailers are also looking at adopting an end-to-end approach to formulate price optimization strategies, gain advanced customer insights, and drive customer engagements in an omnichannel environment. Retailers leverage intelligent price optimization platforms to offer accurate insights accounting for a wide range of influencing factors, such as competition, weather, season warehouse costs, operating costs, etc. and suggest reliable insights. The platform helps retailers formulate their price optimization strategies quickly and efficiently. It allows retailers to gauge the demand and align the initial prices, discounts, and promotions of the product with the organizational goals. With an effective execution strategy, a retail price and promotion optimization platform can provide a reliable price optimization solution that can anticipate customer demands and recommend strategies to set up prices accurately. This helps organizations gain a competitive advantage by proactively identifying customer demand across various stages of the product lifecycle and achieving organizational goals with the right pricing and promotion optimization strategies.

Quadrant Knowledge Solutions conducted an in-depth analysis of major Intelligent retail pricing and promotion optimization vendors by evaluating their products, market presence, and customer value proposition. The evaluation is based on primary research with expert interviews, analysis of use cases, and Quadrant's internal analysis of the overall market.

This study includes an analysis of 24 key vendors, including Aifora, Anuit.ai, Revionics (an Aptos Co.), Blue Yonder, Clear Demand, Competera, Daisy Intelligence, DemandTec, Dunnhumby, Engage3, First Insights, Hypersonix, Intelligence Node, Logility, ToolsGroup, Oracle Retail, Periscope by McKinsey, RELEX Solutions, Retail Express, Retalon, SAP, Solvoyo, SymphonyAI, and Yieldigo.

Blue Yonder, Daisy Intelligence Corporation, Dunnhumby, Engage3, Oracle, Periscope by McKinsey, RELEX Solution, Revionics (an Aptos company), Solvoyo, Symphony RetailAI, and Yieldigo are the top performers and technology leaders in the global IRP&PO market. Leaders in IRP&PO technology continue to invest in offering tightly integrated, unified, and holistic IRP&PO platforms that offer AI-driven robust contextualized pricing feature that also considers various aspects, such as retailer's product range and demand, existing stock levels, and more, to provide optimal price recommendations and automatically change prices without jeopardizing margins. The platforms offer a significant advantage in terms of determining the best price that will help engage consumers, maximize sales, and increase profits across different channels.

The other key vendors captured in the 2022 SPARK Matrix™ include Anuit.ai, Competera, DemandTec by Acoustic, First Insight, Hypersonix, Intelligence Node, Logility, Retail Express, Retalon, SAP, ToolsGroup has positioned as the primary challengers in the global IRP&PO market. These companies provide comprehensive retail pricing and promotion optimization to support companies that support a variety of use cases to optimize dynamic pricing, price benchmarking, master data management, maximize markdown performance tracking, and product lifecycle predictions use cases. These companies are cognizant of the upcoming market trends and have outlined a comprehensive roadmap to tap into future growth opportunities.

Aifora and Clear Demand are strong performers and emerging technology leaders in the global intelligent retail pricing and promotion optimization market.

As per Quadrant's research analysis, the IRP&PO market is in the emerging stage and is quickly moving into the growth stage of the overall product lifecycle maturity model. The overall market, as well as the vendors' positioning, is expected to change significantly during the forecasted years. While a majority of the vendors may provide all the core functionalities, the breadth and depth of the capabilities may differ by different vendors' offerings. Users should evaluate IRP&PO platforms that offer comprehensive capabilities to provide seamless connectivity

with organization-owned tools and platforms, a broad range of out-of-the-box capabilities, scalability & extensibility, unified pricing & promotional visibility, advanced analytics, markdown optimizations, event & campaign management, and such others. Additionally, the vendor's customer value proposition may differ in terms of ease of deployment, ease of use, price/performance ratio, support for a broad range of use cases, global support service, and such others. The supply chain and retail space are continuously transforming, requiring vendors to expand their R&D investments, make continuous enhancements to their software and provide a robust technology value proposition to ensure future customer needs are met. The vendor's ability to accommodate emerging technology trends, such as artificial intelligence and machine learning technologies, as well as their ability to offer a holistic and unified platform, are increasingly becoming key differentiators for selecting IRP&PO platforms. The retail industries are undergoing a rapid transformation, compelling IRP&PO vendors to expand their R&D budget and make continuous enhancements to their software value proposition to serve futuristic customer needs. Users should evaluate vendors that offer a robust technology strategy and roadmap to enhance their software features & functionalities and SaaS strategy aligned with the emerging transformational trends.

Market Dynamics and Trends

The following are the key market drivers as per Quadrant Knowledge Solutions' Intelligent Retail Pricing and Promotion Optimization (IRP&PO) solution strategic research:

- The increase in the number of organizations opting for digital transformation and the consequent rise in investments for the same, as well as the sharp rise in online and mobile shopping following the covid19 pandemi is driving retailers to adopt IRP&PO platforms to deliver competitive pricing and personalized promotional offers in order to stay ahead of the competition
- Retailers are increasingly focusing on AI-driven advanced capabilities for demand forecasting and predictive analysis. These capabilities provide users with a comprehensive understanding of business-critical factors such as demand, turnover, profit per unit, and customer behavior and satisfaction.

- IRP&PO solution vendors focus on leveraging automation across various pricing processes, such as formulating pricing strategies, tracking, and understanding how this strategy impacts performance and enhances ROI.
- The value proposition of AI/ML-driven pricing solutions includes adjusting product prices based on changing market conditions, providing intelligent discounts, optimizing existing data usage, and determining product performance that is driving significant adoption.
- The IRP&PO solutions are able to provide simulation/what-if capability to help organizations formulate and understand the performance of pricing and promotional strategies, especially during uncertainties like the COVID-19 pandemic, changing customer behavior, and a dynamic competitive landscape.
- Retailers are constantly focusing on delivering better customer experiences by providing customers with products based on their needs, preferences, and their feedback through various communications channels
- Retailers are focusing on predictive pricing to segment their market or capture critical business information to make informed decisions. Vendors are leveraging AI/ML to design or enhance their pricing solution to provide fair product pricing based on the current market scenario, seasonality, and competition.
- AI-driven advanced capabilities for demand forecasting and predictive analysis will continue to provide users with a comprehensive understanding of business-critical factors such as demand, turnover, profit per unit, and customer behavior & satisfaction.

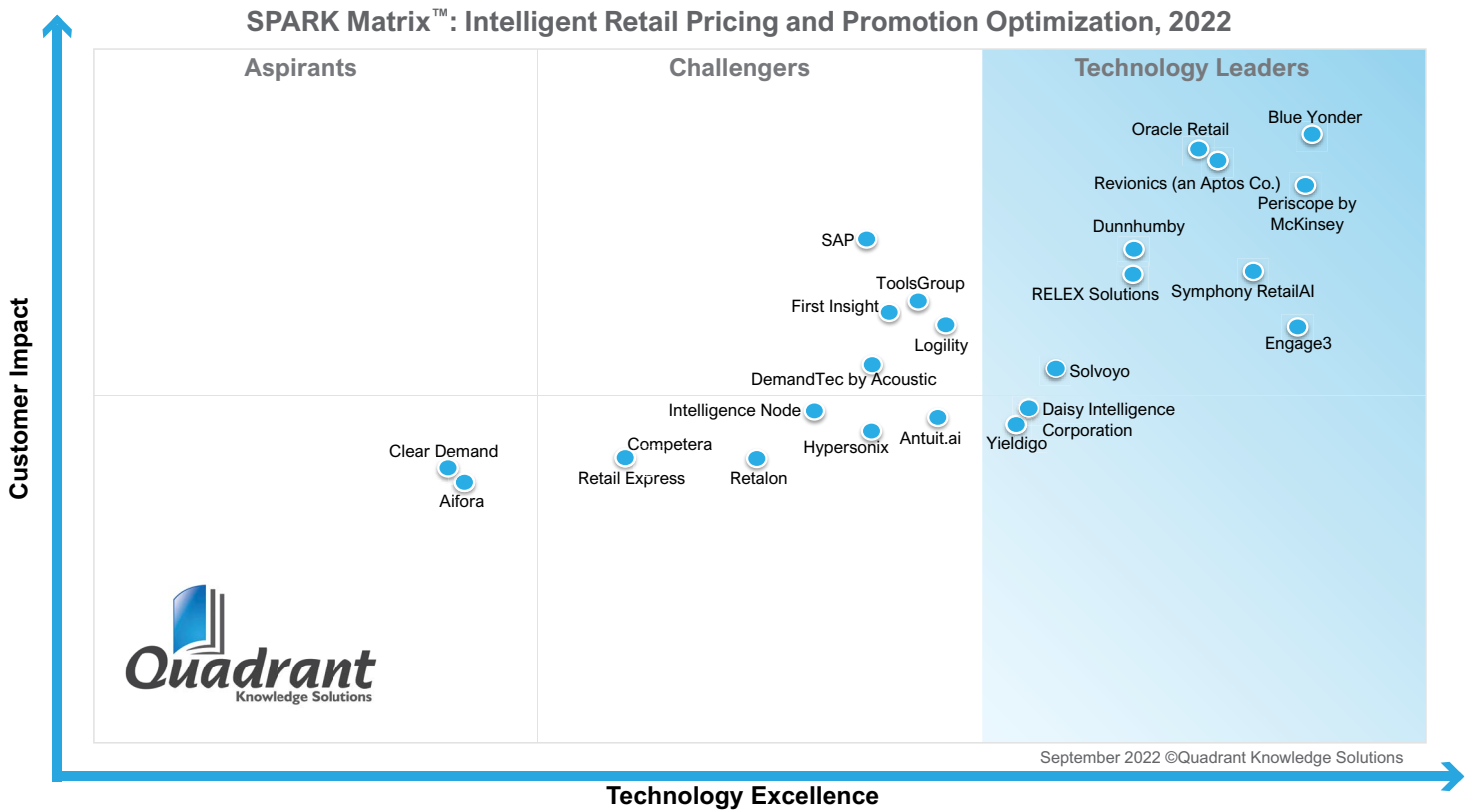
SPARK Matrix Analysis of the Intelligent Retail Pricing and Promotion Optimization (IRP&PO) Market

[Quadrant Knowledge Solutions](#) conducted an in-depth analysis of the major Intelligent retail pricing and promotion optimization vendors by evaluating their product portfolio, market presence, and customer value proposition. Intelligent retail pricing and promotion optimization (IRP&PO) 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 IRP&PO market.

Technology Excellence	Weightage	Customer Impact	Weightage
Sophistication of Technology	20%	Product Strategy & Performance	20%
Competitive Differentiation Strategy	20%	Market Presence	20%
Application Diversity	15%	Proven Record	15%
Scalability	15%	Ease of Deployment & Use	15%
Integration & Interoperability	15%	Customer Service Excellence	15%
Vision & Roadmap	15%	Unique Value Proposition	15%

According to the SPARK Matrix analysis of the global Intelligent Retail Pricing and Promotion Optimization market, “Blue Yonder’s Luminate pricing and promotion platform provides a retail-specific calculation engine that allows users to generate goals and assortment by category-relevant attributes for the product. The platform also enables retailers to easily configure business rules to suit their fulfillment decisions, optimize prices, and drive customer value based on localized consumer preferences and market trends. Blue Yonder also provides technology integration, consulting, training, maintenance, and support, and managed & system enhancement services to its customers. Blue Yonder, with its expertise in retail solutions, tailored service offerings, cloud-native & mobile-native approach, and robust technology platform, comprehensive roadmap, and vision, has been positioned among the technology leaders in the 2022 SPARK Matrix of the Intelligent Retail Pricing and Promotion Optimization market.”

Figure: 2022 SPARK Matrix™
 (Strategic Performance Assessment and Ranking)
 Global Intelligent Retail Pricing and Promotion Optimization (IRP&PO) Market



Blue Yonder in the Global Intelligent Retail Pricing and Promotion Optimization (IRP&PO) Market

Founded in 1985 and headquartered in Scottsdale, Arizona, United States, Blue Yonder offers end-to-end supply chain management and omnichannel commerce solutions. On April 23, 2021, Panasonic Corporation announced its intention to acquire Blue Yonder with the acquisition anticipated to close later this year. The company's Luminare™ Platform offers supply chain planning and management capabilities, alongside workforce optimization, assortment and space management, pricing & promotions, and omnichannel fulfillment. These capabilities enable retailers to deliver personalized fulfillment experiences to consumers. The platform's pricing and promotions capability enables retailers to make intelligent pricing and promotion decisions across the product lifecycle.

Analyst Perspective

Following is the analysis of Blue Yonder's capabilities in the Intelligent Retail Pricing and Promotion Optimization market:

- Blue Yonder's Luminare platform helps retailers to refocus on inventory, space, pricing, workforce, and store operations to new changes in demand by offering real-time data and intelligent insights. The retail pricing and promotion platform use a retail-specific calculation engine to generate goals and assortments by category-relevant attributes for the product. The platform offers integrated planning and management product that delivers supply chain forecast. The Platform help retailer enhances profitability from market launches through markdown, provide cross-channel price consistency, reduce excess stock and eliminate waste.
- Blue yonder's Luminare platform provides a connected, fluid ecosystem that synchronizes solutions across planning, execution, labor, commerce, and delivery. It uses artificial intelligence (AI), and machine learning (ML) capabilities, workflow-driven user experience, and real-time connection to help predict optimally, prevent, and resolve disruptions across the entire pricing lifecycle. Luminare lifecycle

pricing capabilities connect merchandisers with supply chain, digital teams, and operations.

- Luminare™ platform offers capabilities for retailers to optimize prices across an item's lifecycle, from initial price to clearance, across channels, using solutions designed to achieve specific outcomes at different points over a product's lifecycle.
- The Luminare platform's pricing and promotion offer capabilities include Clearance pricing, promotion optimizations, real-time markdown, and price execution. Luminare Clearance Price facilitates markdowns based on real-time demand data segmented by item color, size, shop location, and other fine parameters, The solution's algorithms facilitate better-estimated demand and markdowns. Blue Yonder's AI-enabled solutions allow the replacement of permanent markdowns with short-term promotional prices that maximize all outcomes by capturing real-time demand data and merging it with data on current inventory levels and profit targets.
- Luminare promotion optimization enables retailers to determine the type of items to be promoted in various regions and helps achieve the most promoted price to maximize profit and target market and financial goals. The solution facilitates complete end-to-end promotion planning and execution and helps retailers create a promotional pricing strategy at any level of the product hierarchy, including and/or excluding product attributes. The solution supports 'What-If' research scenarios to choose the optimal mix of products, marketing techniques, and pricing to satisfy business needs. It guarantees the transmission back of calculated lift for a promotion into the forecast, resulting in an end-to-end seamless integration system to support the full price & promotion planning and execution process for businesses of all sizes.
- The solution allows retailers to manage inventory, eliminate waste, and avoid wasteful markdowns to recommend the proper goods distribution down to size. Retailers can match their product placement with Blue Yonder's allocation, automate distributions, and restock to boost productivity. The solution integrates seamlessly with other retail planning systems to maximize profitability. Luminare real-time

pricing improves the performance of various fresh food markdowns in every aspect. Through its proprietary AI, it calculates store-specific item pricing elasticities alongside numerous demand factors such as inventory level, weather, and events and distributes them to stores in real-time without re-engineering existing processes. All markdown prices' costs and effects are analyzed and considered along with predicted consumer behaviors, product master data, and other data streams. The solution facilitates the autonomous calculation of markdown prices and delivers it to an in-store markdown tool at a convenient time. Luminate real-time for fresh food markdown, the advanced analytics designed to clear seasonal inventory that focused on intra-day fresh food clearance. Luminate Pricing Real-Time allows in-store colleagues to generate store/item markdown prices at a time that suits the store's schedule and contributes to fewer but more profitable markdowns.

- Blue Yonder's Luminate Market Pricing offers optimized prices for every channel and product based on predicted consumer demand, brand loyalty, and local and changing market conditions. The platform leverages AI/ML-based algorithms to offer dynamic pricing for online and brick-and-mortar stores. The solution's key features include strategic optimization, predicting price elasticities, demand forecasting, optimizing business strategies & decisions, and simplified automated pricing. The platform's automated price update process facilitates daily pricing and frees up resources to focus on strategic assortment planning tasks. Luminate Market Price recommends intelligent prices based on learnings from current and historical data to reflect the organization's business goals, catering to pricing strategies that optimize for revenue, margin, or a mix of approaches.
- The platform's key technological differentiators include SaaS delivery on Microsoft Azure for Agility, modern UX, learnings from current and historical data, 'What-If' analysis for product mix, seamless integration, and real-time demand data.
- The company supports various use cases such as short code markdown for real-time item-store-specific price markdown, what-if analysis to understand different outcomes during the optimization process, price reduction for an in-season discount using store-

specific pricing, reducing inventory costs by clearing stock more efficiently, improving staff productivity and help retailers in improving customers' shopping experience by meeting their merchandise and pricing expectations.

- From a geographical presence perspective, Blue Yonder has a major presence in North America and Europe, followed by the Asia Pacific, Middle East, 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 & semiconductor, and third-party logistics.
- Blue Yonder faces competition from well-established and emerging and niche players in the retail price optimization platform market. However, with its comprehensive and sophisticated range of retail planning and optimization solutions coupled with AI/ML insights, real-time data, predictive visibility, and AI-backed recommendations, Blue Yonder will continue to hold a strong position in the intelligent retail price and promotion optimization market.
- Concerning product strategy & roadmap, Blue Yonder plans to continue enhancing its solutions by adding retail capabilities to its solutions. The company has recently partnered with UST for extended capabilities from their existing practices, including innovation labs, test automation factories, AI practices, cloud, etc. The company has responded well to the pandemic situation by integrating live data from the CDC data and providing retailers with real-time visibility into the impact of the pandemic on their businesses. The company plans to consistently enhance its products to tackle future uncertainties.