The POS/mPOS Market - 2025

An IHL Retail Executive Advisory Program Research Study

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HARD DATA, SMART DECISIONS

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Executive Summary

The 2025 POS and mPOS report evaluates 16 top vendors—Aptos, Cegid, Diebold Nixdorf, Epicor, Flooid, GK Software, Jesta I. S. , Jumpmind, KWI, MI9 Retail, NCR Voyix, NewStore, Oracle, Salesforce, Teamwork Commerce, and Toshiba—on criteria spanning AI/ML, architecture, functionality, hardware and installation, payment and security, omnichannel, reporting, and more. These platforms serve a wide range of retail verticals and emphasize cloud-native, mobile-first, and highly integrated omnichannel commerce, unifying transactions, inventory, and customer data across fixed and mobile touchpoints.

A clear industry direction emerges: API-driven architectures, modular deployment, and robust support for multiple form factors—fixed lanes, tablets, and smartphones—most with both iOS and Android. Most vendors deploy microservices and offer private or multi-tenant SaaS, zero-downtime upgrades, elastic scaling, strong offline modes, and certifications like PCI DSS, SOC 2, and GDPR. Security, audit logging, and continuous monitoring are now baseline requirements.

Modern solutions deliver complete POS and mPOS with resilient offline capabilities, extensive payment and tender options, and seamless mobile selling, including line busting and Tap-to-Pay. Omnichannel is universal: all vendors support workflows like BOPIS, BORIS, and ship-from-store, with near real-time inventory visibility, robust fulfillment logic, and tight e-commerce or OMS integrations. Store-level mobility and automated workflows for inventory, replenishment, and order routing are common, while advanced vendors provide intelligent routing and dynamic allocation.

All platforms enable rich customer profile capture and omnichannel loyalty or clienteling. Approaches vary between native loyalty stacks and deep integrations with enterprise CDPs, but all stress instant visibility into customer history, balances, and offers. Central price and promotion management ensures consistency, while the most advanced products feature unified commerce—combining POS, OMS, analytics, and sometimes e-commerce, with carts and journeys moving fluidly between in-store and online.

Analytics and reporting are increasingly embedded, offering dashboards, exception management, and executive KPIs, while mature solutions embed or integrate customer analytics and segmentation. AI capabilities (recommendations, forecasting, intelligent routing) are growing but uneven; most vendors highlight AI, generative, and agentic features on their near-term roadmaps alongside international expansion and deeper extensibility.

Professional service models are established, with structured rollouts, robust training, and 24x7 support. Integration complexity and organizational change remain the key implementation challenges, addressed by pre-built connectors, best practices, and structured change management. Most solutions target mid-market to enterprise retailers, with some focused on vertical specialization or handling global complexity. Collectively, these offerings showcase a mature, resilient, and innovation-focused POS landscape, with differentiation centered on omnichannel execution, flexibility, and the breadth of ecosystem and platform.

IHL's Evaluation of the Retail POS/mPOS Software Market

Market Observations

The surveyed vendor base demonstrates a clear convergence toward cloud-native, API-first architectures that emphasize resilience, scalability, and enterprise-grade security. Platform providers are implementing microservices-based infrastructure with managed services delivery models, enabling large-scale retailers to achieve global consistency while maintaining local flexibility. This architectural convergence reflects industry maturation around containerization, orchestration via Kubernetes, and leveraging cloud providers—primarily AWS, Google Cloud Platform (GCP), and Azure—to support automatic scaling and high availability. Notably, enterprise-focused solutions now typically guarantee 99%+ uptime with sub-second transaction processing, supporting 300+ transactions per second, and enabling offline-first capabilities that queue transactions during connectivity loss for seamless reconciliation upon restoration.

Market Architecture and Technical Evolution

The technical foundation of modern POS solutions has shifted from monolithic, on-premise systems toward distributed, cloud-native architectures. The surveyed vendor landscape shows near-universal adoption of microservices patterns, with independent scaling of components such as checkout, inventory management, order processing, and customer engagement. Infrastructure-as-Code (IaC) tooling including Terraform, Ansible, and Helm enables reproducible deployments across customer instances and geographies, while containerization via Docker and orchestration through Kubernetes has become standard practice for managing complexity across global deployments.

Performance benchmarks across the enterprise vendor segment show remarkable consistency: platforms delivering 99th percentile API latency under 200-500ms (depending on geography) are now the norm, supporting sustained transaction processing of 300+ transactions per second with peaks exceeding 450, and maintaining 99. 85-99. 95% uptime targets. These capabilities enable retailers to consolidate multiple legacy systems onto unified platforms while scaling to support global operations. The shift toward managed services and Platform-as-a-Service (PaaS) delivery models has also accelerated innovation velocity, allowing vendors to deploy updates every 2-4 weeks.

Omnichannel and Unified Commerce Capabilities

Omnichannel and unified commerce are now mandatory capabilities, with vendors universally supporting BOPIS (Buy Online, Pick Up In Store), BORIS (Buy Online, Return In Store), ship-from-store, and endless aisle workflows through tight integration with order management systems (OMS), customer relationship management (CRM), and e-commerce platforms. Leading platforms highlight real-time inventory visibility across all channels, unified customer profiles that create a 360-degree view of customer behavior, and single pricing engines that enforce consistency across all touchpoints, though the depth and native scope of these capabilities vary significantly by vendor.

Solutions explicitly positioned as unified commerce suites embed OMS, inventory management, and CRM into a single data model and corporate database, enabling faster implementation and reduced integration complexity compared to platforms that rely more heavily on external system connectors and third-party APIs. This architectural choice directly impacts time-to-value, operational complexity, and the ability to execute rapid iteration on business logic and processes. Cross-channel fulfillment optimization, including intelligent order routing, split shipments, and curbside/contactless workflows, has become a competitive differentiator, with vendors increasingly providing geofencing, mobile notification, and staff workflow optimization as native or integrated capabilities to support evolving consumer expectations around convenience and safety.

Mobile-First and Device-Agnostic Strategies

The market has shifted decisively toward mobile-first or device-agnostic approaches, providing extensive support for tablets, smartphones, and self-service hardware. This evolution reflects dual pressures: first, the need for associate-driven selling through mobile point-of-sale (mPOS) tools that enable line-busting, pop-up events, and assisted selling workflows, and second, consumer demand for self-checkout, mobile payments, and contactless experiences. Support for iOS and Android is now largely native across the board, with some vendors leveraging progressive web technologies or Apache Cordova frameworks to ensure consistent experiences across devices without requiring separate native codebases.

Hardware certification and compatibility have become critical differentiators, with vendors certifying against leading payment terminal manufacturers—Verifone, Ingenico, PAX—and increasingly supporting emerging form factors including Tap to Pay on iPhone and Android, biometric authentication, and IoT integrations such as smart scales, weight-based pricing, and connected

shelf management. This approach has also democratized access to advanced POS capabilities across retail segments by reducing upfront infrastructure costs.

Payment Processing and Fraud Prevention

Payment processing capabilities have become increasingly sophisticated, with platforms supporting a broadening array of payment methods including contactless transactions, mobile wallets (Apple Pay, Google Pay, WeChat, Alipay), BNPL solutions (Klarna), cryptocurrency where applicable, and local payment schemes (SEPA, Girocard, iDEAL). Split-tender transactions, multi-currency and real-time foreign exchange conversion, and VAT handling including EU ViDA compliance are now standard features to support international expansion.

Fraud prevention approaches vary substantially across vendors. Some have invested in native loss prevention rules engines, behavioral analytics, and video linkage for post-transaction investigation, while others emphasize integration with specialized fraud detection partners such as Adyen, Worldline, and niche third-party providers. Payment tokenization and point-to-point encryption (P2PE) are now standard across all enterprise vendors, with the industry increasingly moving toward decoupled payment architectures that separate the POS from payment service providers (PSPs) through gateway abstraction. This decoupling reduces PCI scope significantly and enables provider switching without requiring POS modifications, a critical capability for retailers seeking flexibility and competitive pricing in payment processing.

Compliance certifications including PCI DSS Level 1, GDPR, CCPA, and SOC 2 Type II are table stakes across the enterprise segment, with many vendors holding ISO 27001 accreditation and undergoing annual third-party security audits by recognized auditors. The maturity of compliance posture across vendors suggests that regulatory requirements are now fully baked into product architecture rather than treated as add-ons, reducing implementation risk for international retailers.

Implementation Methodologies and Professional Services

Enterprise implementation timelines have contracted modestly over the past 3-5 years, with vendors frequently citing 8-16 weeks for average deployments versus the 6-12 month timelines that characterized earlier POS platform migrations. This improvement reflects standardized methodologies, pre-built connectors to common enterprise systems and reduced custom development requirements. Vendors emphasize structured phased approaches (typically spanning discovery, design, build, test, deploy, close phases) with formal gating controls to manage risk, though complexity factors including data cleansing, legacy system integration, and organizational change management continue to drive substantial variation between simple and complex deployments.

Data migration capabilities have matured substantially across the vendor landscape, with platforms generally offering robust legacy system support, automated deduplication and validation, detailed rollback procedures, and comprehensive parallel testing frameworks. Professional services delivery models increasingly emphasize configuration over customization, train-the-trainer approaches to accelerate knowledge transfer, and proactive change management coaching to drive adoption.

Emerging AI and Predictive Capabilities

Artificial intelligence and machine learning are becoming more prevalent across the vendor landscape, though implementation approaches and maturity levels vary substantially. Native capabilities tend to focus on inventory optimization, demand forecasting, and labor scheduling, while more advanced AI-driven personalization, recommendation engines, and predictive maintenance tend to require third-party integrations. Vendors have invested in AI-powered loss prevention, including image recognition for detecting ticket switches and non-scans, behavior pattern detection for identifying associate anomalies, and facial recognition for age verification automation.

Some vendors emphasize their API-first architecture's ability to integrate with best-in-class AI solutions, including generative AI for associate support and agentic AI for autonomous workflows, positioning this flexibility as preferable to native capabilities that may lag proprietary solutions in performance or feature maturity. Several vendors have announced or are actively developing agentic AI roadmaps to support autonomous decision-making in areas including inventory optimization, order routing, and operational exception handling. Computer vision and edge AI remain emerging capabilities with limited production deployments, though several vendors identify these as near-term roadmap items that will drive competitive advantage in loss prevention and operational efficiency.

Analytics, Reporting, and Business Intelligence

Real-time analytics and reporting are now core functionality rather than premium add-ons, with platforms offering customizable dashboards, mobile access, and executive-level KPI tracking. Approaches vary between vendors offering embedded business

intelligence (Epicor leveraging Domo, Flooid leveraging Insights, MI9 offering MI9 Intelligence as an optional add-on) and those emphasizing openness to third-party BI platforms via clean data APIs and data lake access. Out-of-the-box reporting libraries typically span 30-100+ pre-built reports covering sales analysis, inventory performance, employee productivity metrics, and detailed financial analysis, with many platforms supporting drag-and-drop report customization for business users without requiring technical expertise.

Internationalization and Regulatory Compliance

The international scope of the surveyed vendor base reflects both global consolidation in the POS market and the significant complexity of regulatory requirements across diverse geographies. Vendors range from predominantly North American operations (Epicor Propello focused on North American mid-market, some horizontal vendors) to global enterprises operating in 50+ countries (Cegid, Diebold, GK Software, Oracle, Toshiba). Multi-entity and franchise support, including localized customization, currency handling, and consolidated reporting across regions, has become a critical capability for retailers expanding internationally and managing complex corporate hierarchies.

Fiscalization compliance—including e-invoice capabilities and country-specific tax reporting requirements—is now supported across major markets including France, Germany, Italy, Spain, and other EU nations, typically through dedicated fiscal modules and partnerships with specialized fiscal service. Data localization and privacy regulations, including GDPR compliance and regional data residency requirements (e.g., hosting in EU or China-specific regions), have significantly influenced architectural decisions around cloud provider selection and the choice between single-tenant versus multi-tenant deployment models. The trend toward hybrid support—where vendors maintain managed cloud deployments for new implementations while pragmatically continuing to support on-premise and hybrid models for existing customers—reflects mature, customer-centric approaches to managing legacy installed bases while driving gradual migration to cloud-native architectures.

Market Positioning and Customer Satisfaction

The surveyed vendor base spans distinct market segments and retailer sizes, with enterprise-focused vendors typically targeting retailers with $50M+ annual revenue and 20+ locations, mid-market solutions addressing the $10-100M revenue segments, and specialized players focusing on vertical-specific requirements (e.g., hardware retail, specialty retail, food and beverage, lodging). Customer satisfaction metrics across vendors indicate a mature market, with vendors reporting Net Promoter Score (NPS) ratings in the 40-80+ range and customer retention rates exceeding 90%, reflecting both product stability and deep, long-standing vendor-retailer relationships.

New customer acquisition rates and detailed win/loss analysis suggest intense competition at the enterprise level, with vendors consistently competing against 5-10 other platforms in pursuit of significant deals. Notably, win factors correlate strongly with solutions' ability to address inherited complexity through native omnichannel and data unification capabilities, often outweighing pure technical functionality or pricing considerations. The depth of professional services capacity and the organizational ability to execute phased, risk-managed implementations continue to differentiate vendors, particularly in markets with high integration complexity or significant organizational change management requirements.

Conclusion

The POS and mPOS market has evolved from a fragmented landscape of monolithic, on-premise systems to a consolidated set of cloud-native, API-first platforms characterized by unified commerce, advanced analytics, and sophisticated AI integration. This transformation reflects both technological maturation and changing retailer requirements around agility, omnichannel capability, and rapid innovation velocity. Enterprise retailers now expect cloud-native architectures, 99%+ uptime, sub-second transaction processing, and the ability to integrate with best-in-class solutions across inventory, payments, CRM, and analytics. The competitive intensity in this segment suggests that differentiation is increasingly driven by implementation excellence, professional services capability, and the ability to navigate complex organizational change, rather than raw technical features. Future evolution is likely to emphasize agentic AI capabilities, edge computing for resilience, and deeper integration across the broader retail technology ecosystem.

Retailer Key POS/mPOS Selection Questions

Selecting a POS/mPOS solution represents one of the most significant technological decisions a retail or hospitality enterprise can make. The choice impacts daily store operations, customer experience, employee productivity, financial performance, and long-term competitive positioning. This guide reframes the most important POS capabilities into 15 strategic questions that retail executives and procurement teams should ask prospective vendors during the evaluation process.

These questions are designed to:

- Uncover vendor capabilities in areas critical to modern retail success
- Assess strategic alignment between vendor roadmap and retailer vision
- Evaluate implementation risk and vendor stability
- Understand total cost of ownership and partnership value
- Identify competitive differentiation and future-readiness

Question 1: WHAT IS YOUR ROADMAP FOR EMERGING TECHNOLOGIES LIKE AI, AGENTIC AI, AND ADVANCED PERSONALIZATION?

Why This Matters: AI is rapidly transforming retail—from inventory optimization and demand forecasting to fraud detection and personalized recommendations. Agentic AI—systems that autonomously make retail decisions—will become increasingly important. Vendors investing in these areas demonstrate forward-thinking and provide competitive advantage. Understanding vendor commitment to emerging technologies is essential for long-term partnership viability.

Question 2: TELL US ABOUT YOUR CUSTOMER BASE. WHAT IS YOUR RETENTION RATE, AVERAGE CUSTOMER TENURE, AND CUSTOMER SATISFACTION METRICS?

Why This Matters: POS implementations represent multi-year commitments and significant capital investments. Vendors with strong customer retention rates, long average customer tenure, and high satisfaction indicate platform quality and customer-centric development. High churn and declining retention suggest platform weaknesses, poor support, or strategic misalignment. Vendor stability is essential to prevent forced migration and stranded investment.

Question 3: DESCRIBE YOUR API ARCHITECTURE AND INTEGRATION CAPABILITIES. HOW FLEXIBLE ARE YOU FOR CUSTOM INTEGRATIONS?

Why This Matters: Modern retail ecosystems are complex, involving integrations with ERP systems (SAP, Oracle, NetSuite), e-commerce platforms (Shopify, SFCC), OMS solutions, CRM systems, loyalty platforms, payment processors, and emerging technologies. An API-first architecture ensures flexibility to integrate with best-of-breed solutions and adapt as technology landscapes evolve. Vendors with limited or immature APIs constrain retailer flexibility and increase technical debt.

Question 4: DESCRIBE YOUR APPROACH TO LOCALIZATION AND COMPLIANCE FOR MULTI-REGION RETAILERS. WHICH GEOGRAPHIC MARKETS DO YOU SUPPORT?

Why This Matters: Retailers operating across multiple regions face complex, divergent regulatory requirements. Fiscalization requirements (Germany, France, Italy), VAT handling variations, sales tax complexity, receipt formatting standards, consumer protection laws, and data residency requirements vary significantly by jurisdiction. Vendors capable of supporting multi-region deployments with built-in compliance reduce implementation burden and regulatory risk.

Question 5: WALK US THROUGH YOUR PRICING MODEL AND TOTAL COST OF OWNERSHIP. WHAT IS INCLUDED IN THE BASE LICENSE VS. ADD-ON MODULES?

Why This Matters: POS costs extend well beyond software licensing—including hardware, professional services, training, ongoing support, maintenance, integrations, and customizations. Understanding the vendor's pricing model and true total cost of ownership (TCO) is essential

for budgeting, ROI analysis, and ensuring no hidden costs emerge post-contract. Transparent pricing prevents budget surprises and enables accurate financial comparison across vendors.

Question 6: HOW DO YOU ARCHITECT TRUE OMNICHANNEL OPERATIONS WITH REAL-TIME INVENTORY VISIBILITY?

Why This Matters: Omnichannel retail is now table-stakes. Customers expect to shop seamlessly across in-store, online, mobile, and social channels with consistent pricing, accurate inventory, and flexible fulfillment options. A unified omnichannel architecture where POS, OMS, merchandising, and customer data operate on a single data model ensures that inventory is a single source of truth and prevents costly overselling or lost sales from inaccurate stock information.

Question 7: WHAT CERTIFICATIONS AND COMPLIANCE FRAMEWORKS DO YOU MAINTAIN FOR SECURITY AND DATA PROTECTION?

Why This Matters: Retailers are the custodians of sensitive customer data and process billions of dollars in payment transactions. Security and regulatory compliance are non-negotiable baseline requirements. Breaches expose retailers to operational disruption, customer trust erosion, regulatory fines (often 2-4% of global revenue under GDPR), and reputational damage. Vendors must maintain rigorous security certifications (SOC 2, ISO 27001), payment compliance (PCI DSS Level 1), and privacy compliance (GDPR, CCPA) with continuous monitoring and regular updates.

Question 8: DESCRIBE YOUR MOBILE POS CAPABILITIES AND OFFLINE FUNCTIONALITY. HOW LONG CAN STORES OPERATE WITHOUT CONNECTIVITY?

Why This Matters: Mobile POS enables associates to serve customers anywhere in the store, reducing checkout wait times and enabling personalized, consultative selling. Sophisticated offline functionality ensures business continuity during network outages, prevents lost revenue, and enables POS deployment in locations with inconsistent connectivity (remote stores, pop-ups, trade shows). The ability to operate for extended periods offline—with full transactional capability, complex promotions, payment processing, and tax calculations—is a critical differentiator.

Question 9: WHAT OMNICHANNEL FULFILLMENT CAPABILITIES DO YOU PROVIDE, AND HOW DO YOU OPTIMIZE ORDER ROUTING?

Why This Matters: BOPIS (Buy Online, Pick Up In Store), ship-from-store, and similar fulfillment models have become competitive necessities. Intelligent order orchestration—automatically routing orders to optimal fulfillment locations based on real-time inventory, distance, cost, and fulfillment capacity—directly impacts customer satisfaction (faster fulfillment), inventory efficiency (better stock utilization), and profitability (reduced shipping costs). Vendors with sophisticated order routing algorithms provide significant competitive advantage.

Question 10: DESCRIBE YOUR CLOUD ARCHITECTURE, DEPLOYMENT MODELS, AND UPTIME GUARANTEES. WHAT HAPPENS WHEN YOU UPDATE SOFTWARE?

Why This Matters: Cloud-native architecture (microservices, containerization, API-first, headless design) enables rapid innovation, elastic scalability for peak seasons, and zero-downtime deployments. Modern retailers cannot tolerate planned downtime for software updates or routine maintenance. Cloud providers like AWS and Azure have made it possible to deploy production updates without service interruption. Understanding the vendor's architecture, deployment strategy, and uptime guarantees is essential for assessing operational excellence.

Question 11: HOW DO YOU MAINTAIN A UNIFIED CUSTOMER PROFILE ACROSS ALL CHANNELS? WHAT PERSONALIZATION CAPABILITIES DO YOU OFFER?

Why This Matters: Modern retail is fundamentally about personalization. Unified customer profiles—consolidating data from in-store, online, mobile, and social touchpoints—enable associates and marketing teams to understand complete customer context, deliver tailored

recommendations, and provide individualized loyalty benefits. This capability directly drives customer loyalty, repeat purchase rates, and wallet share. Sophisticated personalization can increase conversion rates 10-15% and customer lifetime value 20-30%.

Question 12: DESCRIBE YOUR PRICING AND PROMOTION ENGINE. HOW DO YOU ENSURE CONSISTENCY ACROSS ALL CHANNELS?

Why This Matters: Pricing and promotion consistency across channels directly impacts profitability and brand trust. A centralized, configurable pricing engine ensures customers see identical prices whether shopping in-store or online, that loyalty members receive promised benefits across channels, and that promotional campaigns execute simultaneously across touchpoints. Inconsistent pricing erodes customer trust and creates operational friction. AI-driven pricing optimization—analyzing elasticity, competitor pricing, and inventory—can increase margins 1-3%.

Question 13: WHAT ANALYTICS AND REPORTING CAPABILITIES DO YOU PROVIDE? CAN WE ACCESS REAL-TIME INSIGHTS WITHOUT EXTERNAL TOOLS?

Why This Matters: Data-driven decision-making is fundamental to retail success. Retail leaders need real-time visibility into sales performance, inventory accuracy, employee productivity, and customer behavior across the store, regional, and enterprise levels. Advanced analytics enable predictive forecasting, anomaly detection, and prescriptive recommendations. Vendors providing native analytics (vs. requiring third-party BI tools) typically offer faster insights and lower implementation complexity.

Question 14: WHAT PAYMENT PROCESSORS AND PAYMENT METHODS DO YOU SUPPORT? HOW DO YOU ENSURE PAYMENT SECURITY?

Why This Matters: Customers expect diverse payment options—credit/debit cards, digital wallets (Apple Pay, Google Pay), BNPL (Buy Now Pay Later), alternative payment schemes. Payment infrastructure must be flexible (supporting multiple processors), secure (PCI DSS compliance), and innovative (supporting emerging payment technologies). Understanding payment flexibility and security architecture is essential for competitive positioning and risk mitigation.

Question 15: DESCRIBE YOUR IMPLEMENTATION METHODOLOGY AND TYPICAL PROJECT TIMELINE. WHAT SUPPORT DO YOU PROVIDE DURING AND AFTER GO-LIVE?

Why This Matters: POS implementation is complex and mission-critical. Vendors with strong implementation methodologies, comprehensive training, change management expertise, and ongoing support significantly increase the probability of successful deployment and rapid time-to-value. Poor implementations result in delayed store openings, employee confusion, customer frustration, and lost revenue. Understanding vendor implementation approach is essential for risk mitigation.

CONCLUSION: STRATEGIC EVALUATION AND VENDOR SELECTION

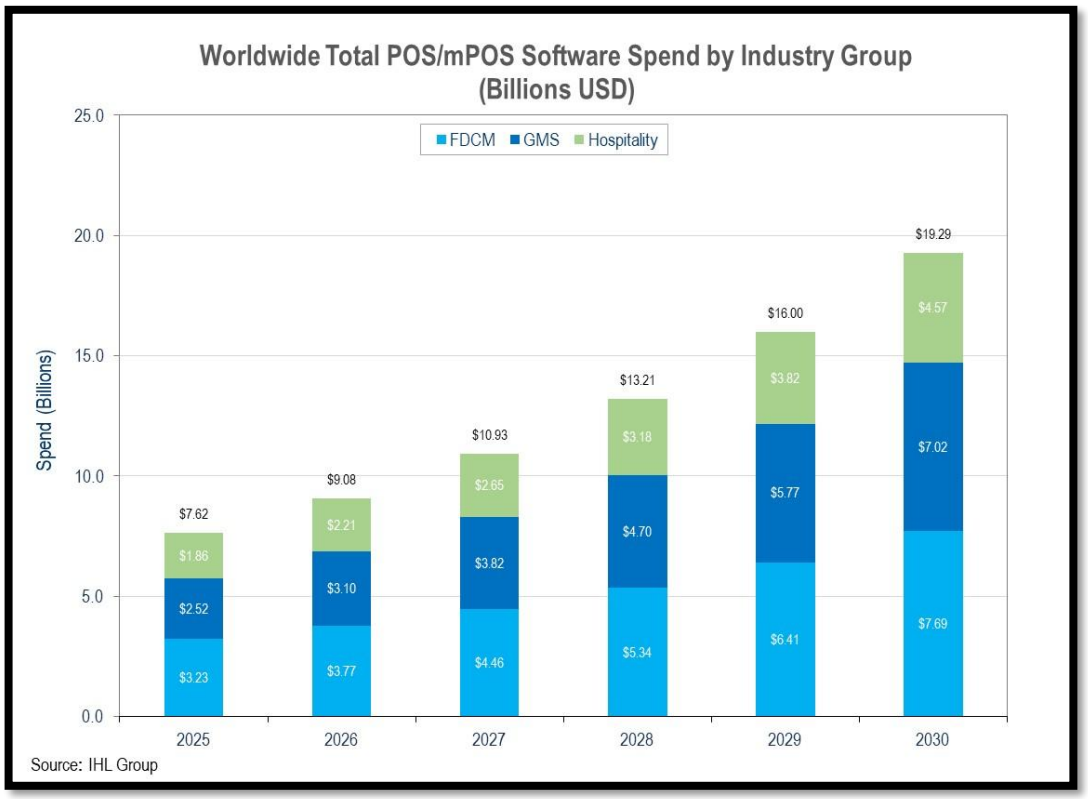
These 15 critical questions form a comprehensive evaluation framework for assessing prospective POS/mPOS vendors. Rather than focusing on feature checklists, these questions encourage strategic thinking about:

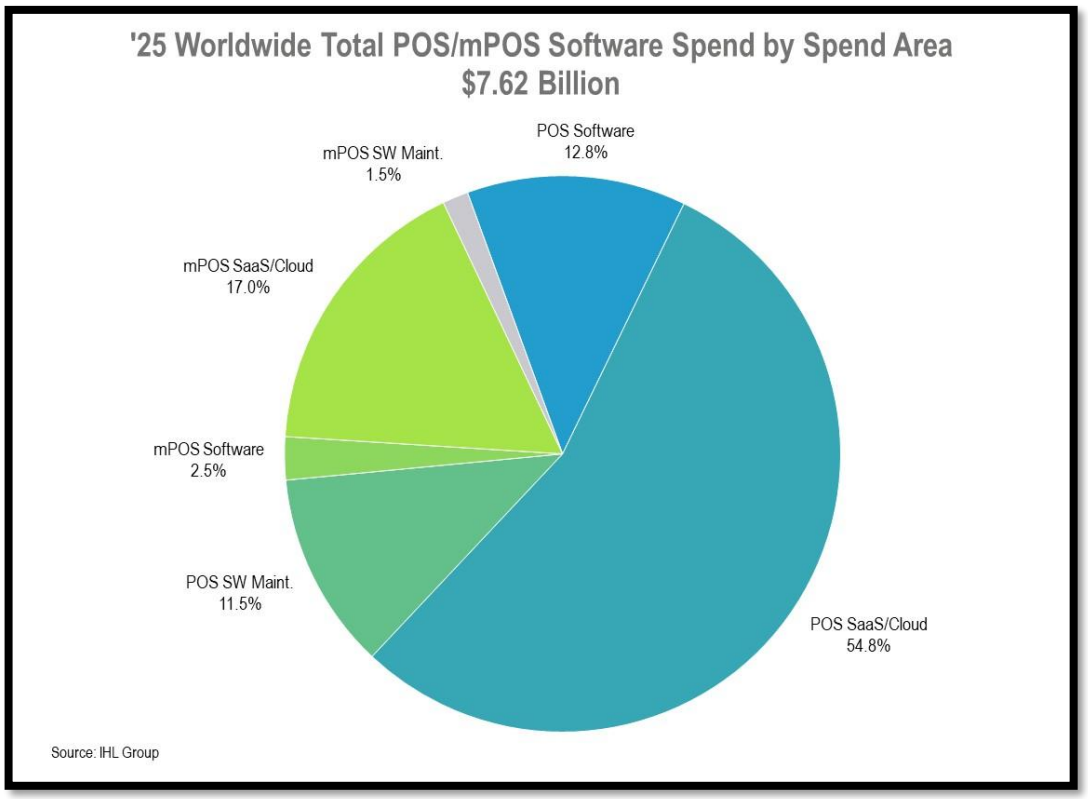
- Omnichannel capability: Can the vendor enable true omnichannel retail with unified inventory and customer data?
- Security and compliance: Are we confident in the vendor's ability to protect sensitive data and maintain regulatory compliance?
- Operational resilience: Can the system operate during network outages and support distributed retail scenarios?
- Data-driven operations: Does the vendor provide analytics and insights that enable informed decision-making?
- Strategic alignment: Does the vendor's roadmap align with our long-term vision for retail innovation?
- Partnership quality: Can we trust the vendor to be a true partner, providing excellent implementation, training, and ongoing support?
- Financial viability: Is the total cost of ownership reasonable and predictable? Is the ROI achievable?

Evaluating vendors across these 15 dimensions provides a comprehensive foundation for selecting a POS platform that will deliver sustained competitive advantage, operational excellence, and business value. Further details and an insight into this topic are detailed at the end of this report in a breakout section.

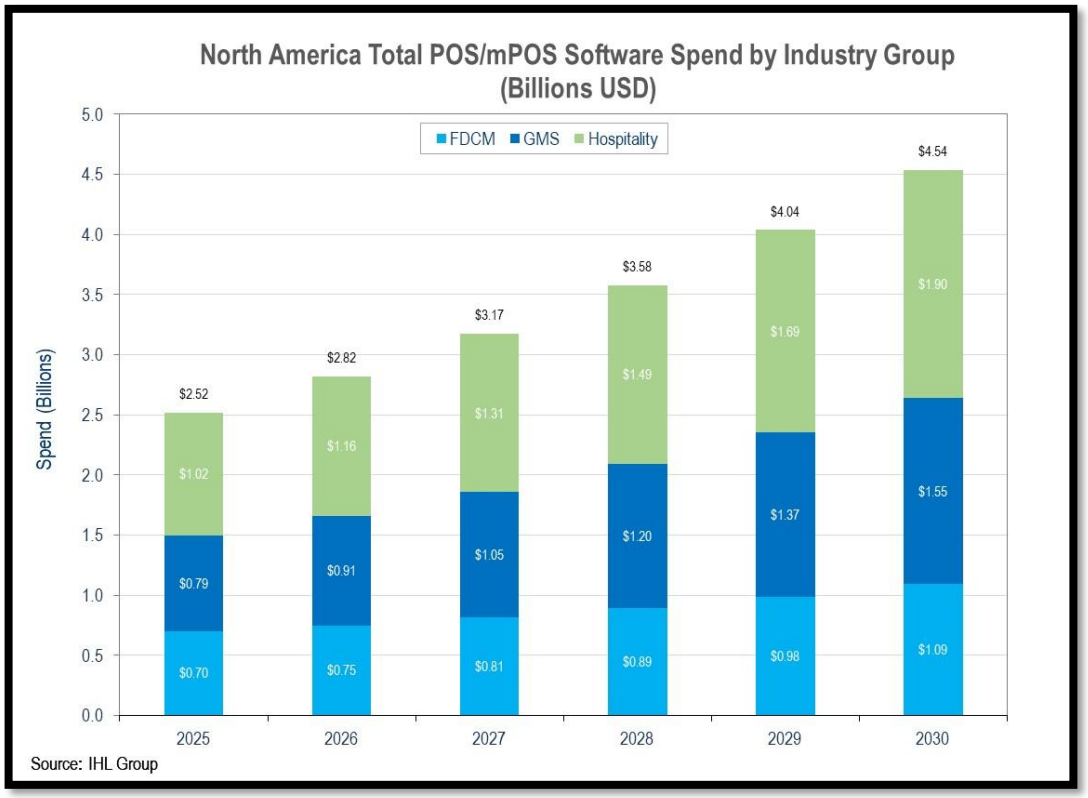
Total Retail POS/mPOS SW Spend

Worldwide





North America



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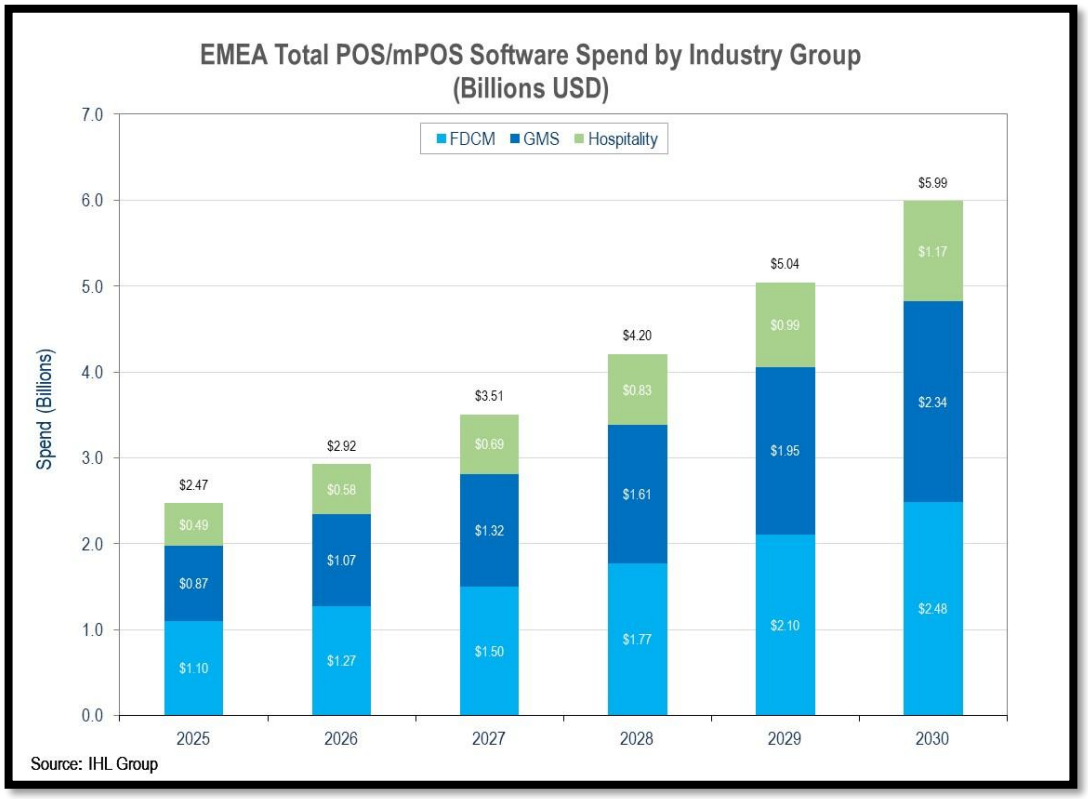

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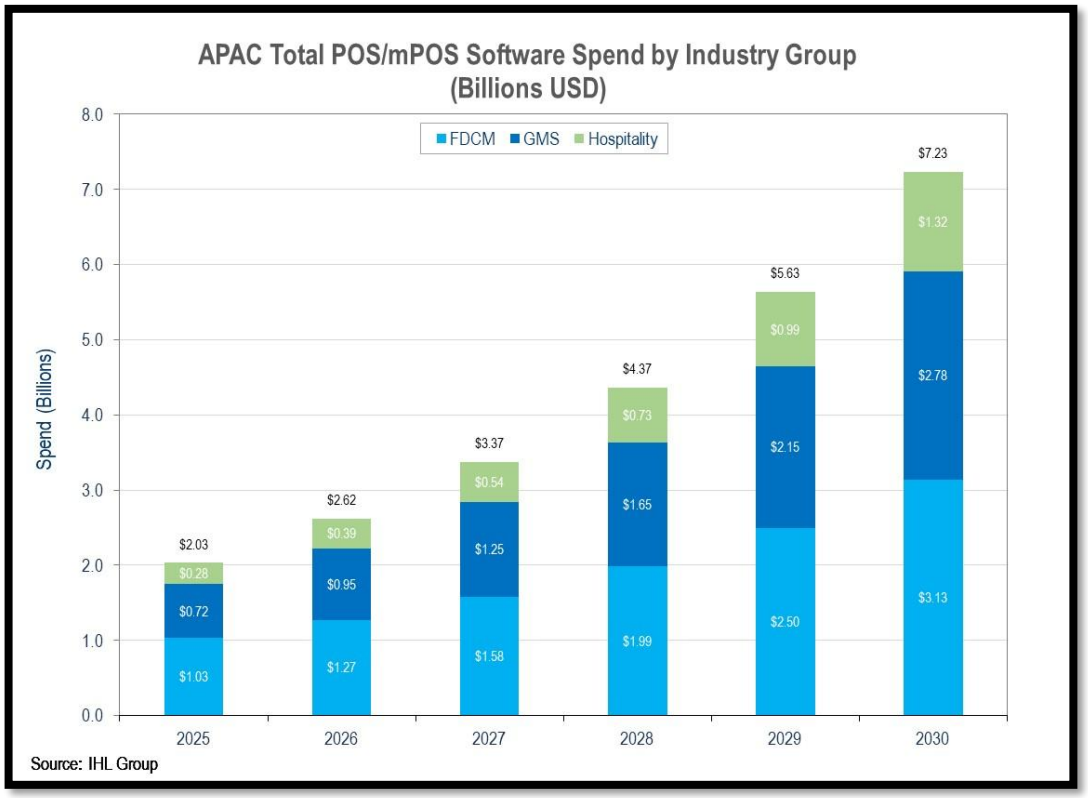
APAC Total POS/mPOS Software Spend by Industry Group
(Billions USD)
FDCM
GMS
Hospitality
Spend (Billions)
8.0
7.0
6.0
5.0
4.0
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1.0
0.0
$2.03
$0.28
$0.72
$1.03
$2.62
$0.39
$0.95
$1.27
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$0.54
$1.25
$1.58
$4.37
$0.73
$1.65
$1.99
$5.63
$0.99
$2.15
$2.50
$7.23
$1.32
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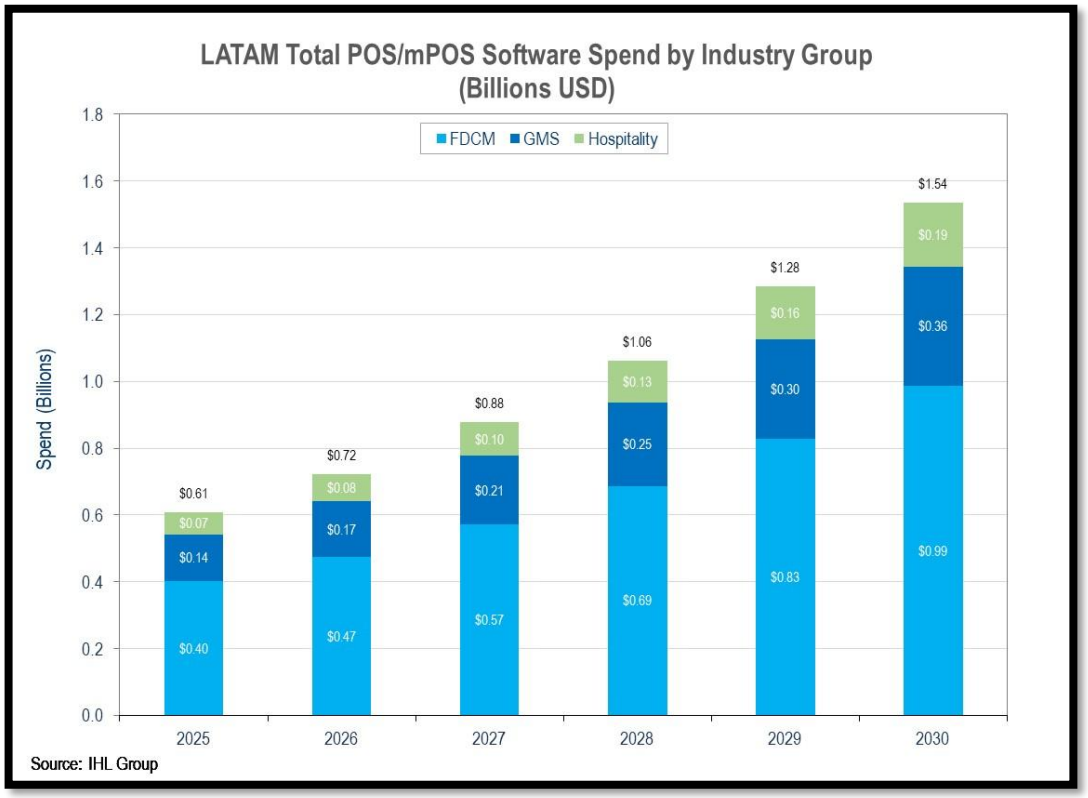
Source: IHL Group

LATAM


LATAM Total POS/mPOS Software Spend by Industry Group
(Billions USD)
FDCM
GMS
Hospitality
Spend (Billions)
1.8
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1.4
1.2
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Source: IHL Group

AI Overview

Multiple vendors are converging on several core AI/ML capabilities that are increasingly becoming table-stakes in the retail POS space. Personalization and recommendation engines are being implemented by approximately half of respondents, typically using machine learning models that identify "buy it again," "frequently bought together," and "similar items" patterns. Several vendors are embedding these recommendations directly into checkout workflows to drive incremental sales. Real-time anomaly detection for fraud and loss prevention is another widely deployed capability, with vendors using configurable rule-based systems that flag unusual transaction patterns—such as unusual void frequencies, excessive discounts, or rapid refunds—and trigger alerts for store operations teams. Customer lifetime value (CLV) prediction appears across multiple platforms as a foundational analytics capability, enabling retailers to segment customers by loyalty tiers and target retention efforts accordingly. Integration-first approaches are nearly universal among vendors, with most offering APIs and webhooks to connect external AI solutions from third parties rather than building all AI capabilities natively. Finally, digital receipt personalization with targeted promotional messaging is supported by the majority of vendors, allowing retailers to surface relevant offers and loyalty information at the moment of transaction capture.

Several vendors are delivering differentiated, high-value AI and agentic capabilities that go well beyond industry norms. Fully integrated computer vision and edge-AI systems are being deployed to perform real-time item recognition, produce scanning, and loss prevention analysis at the point of sale and self-checkout—with models continuously retraining on live production data. This end-to-end ownership of the AI/IoT stack (from cameras and algorithms to SaaS platform and field services) enables rapid iteration and customization for retailer-specific shrink scenarios. Agentic AI orchestration frameworks are being actively developed by multiple vendors, architected to enable autonomous decision-making workflows that can trigger pricing adjustments, dynamic promotions, workforce scheduling, and fulfillment routing without human intervention—while maintaining explainability and governance controls. Natural language query capabilities for business intelligence are emerging, allowing store managers and headquarters staff to ask ad-hoc questions of the data warehouse in plain language and receive generated dashboards and reports, significantly reducing the dependency on data analysts. Closed-loop AI model governance with continuous monitoring, version control, and retraining policies is differentiating vendors that have invested in operational AI practices; these systems track precision, recall, and false-positive rates in production and automatically adapt to seasonal or behavioral shifts. Finally, AI-driven inventory optimization and dynamic replenishment powered by forecast models and real-time demand signals is enabling retailers to reduce markdowns and stockouts simultaneously by distributing inventory more intelligently across the network.

AI and agentic capabilities are poised to fundamentally transform in-store operations and customer experience over the coming years. Checkout friction will decrease significantly as computer vision systems, mobile POS, and intelligent recommendation engines work in concert to enable fast, accurate, and personalized transactions—whether through traditional registers, self-checkout, or mobile associate-led checkout. Customers will encounter hyper-personalized engagement at every touchpoint, from the moment they enter the store, with real-time offers, product suggestions, and loyalty recognition that adapt based on their history and current behavior. Loss prevention and shrink will decline materially through continuous video analysis, automated exception detection, and AI-driven intervention alerts that empower associates to act before theft or fraud occurs. Store associate productivity and job satisfaction will improve as AI handles routine operational decisions (like dynamic pricing, markdown recommendations, and inventory transfers), freeing associates to focus on high-value customer service, advisory selling, and exception management. Inventory accuracy and fulfillment speed will reach new levels, enabling seamless omnichannel experiences where customers can confidently order online for in-store pickup, access any inventory held anywhere in the network, and complete returns or exchanges with minimal friction. Real-time operational insights will flow continuously to store managers and district leaders, surfacing optimization opportunities in labor scheduling, category performance, and customer engagement before they become problems.

Autonomous checkout and frictionless transactions will become mainstream, with computer vision-based scanning, mobile POS, and self-checkout technologies reducing time at registers and enabling associates to complete transactions anywhere in the store, whether at a traditional checkout counter, in the aisles, or curbside. Dynamic, context-aware pricing and promotions will be updated in real time based on local inventory levels, customer segments, and competitive positioning, with personalized offers appearing on digital signage, mobile apps, and receipts the moment they become relevant to each customer. Proactive customer service through connected intelligence will emerge, where integrated systems surface customer profiles, purchase history, preferences, and past service issues to associates the moment a customer is recognized, enabling personalized recommendations and preventing service failures before they occur. Agentic AI-driven task orchestration will streamline store operations, automatically assigning inventory pulls, markdowns, stock adjustments, and fulfillment work to associates based on real-time priorities and labor availability, while continuously optimizing for speed and accuracy. Unified omnichannel fulfillment will create a seamless experience where inventory visibility is accurate across all channels, orders can be placed and modified up to pickup/delivery, and returns can happen at any location with instant refunds or exchanges processed through integrated systems. Data-driven merchandising at scale will enable retailers to automatically optimize shelf pricing, promotional placement, and assortment based on continuous learning from transaction data, video analytics, and customer behavior—moving from static quarterly planning to

dynamic, adaptive strategies. Finally, privacy-first personalization will establish trust, with transparent AI governance, explicit customer consent management, and explainable AI decisions ensuring that the enhanced personalization and loss prevention capabilities operate within clear ethical and regulatory boundaries, building customer confidence in the brand.

The investment in AI/ML/Agentic capabilities by POS vendors signals a clear industry direction: retail is moving from transaction processing toward intelligent, adaptive, autonomous systems that enhance both operational efficiency and customer experience. The next two years will see accelerating convergence around certain core capabilities particularly real-time personalization, autonomous task orchestration, and integrated loss prevention while vendors who have built end-to-end ownership of AI infrastructure (data, models, governance) will have the agility to differentiate. For retailers, the opportunity lies not just in adopting these capabilities, but in orchestrating them as a unified system where data flows seamlessly, decisions are made at the edge where they matter most, and every interaction between customer and associate, associate and system, or system and system is informed by continuous learning and optimization.

AI Vendor Capabilities

aptos

Current AI/ML/Agentic Capability

- **Next-best promotion suggestions** appear in the cart and on product detail pages, helping store associates make more effective sales recommendations.
- **Customer summary insight** analyzes purchase history and attributes to provide 2-3 sentence recommendations to store associates about customer preferences, eliminating manual data scrolling.
- **Advanced Embedded Insights** delivered through partnership with Strategy (formerly MicroStrategy) and Snowflake, enabling store managers and associates to access sales and performance data with trend insights built on pattern recognition that recommend alert boundaries.
- **Data chatbots** allow users to ask data questions and receive natural language answers, with chart generation and explainability capabilities.
- **AI-enabled embedded analytics** integrated directly in POS workflow. Enterprise users can create reports and deliver them to front-line users for immediate impact. Currently in pilot for OMS with POS pilot planned.
- Embedded reporting leverages the POS data model to facilitate creation of retailer-specific reports and dashboards through a user-friendly, AI-supported tool.
- **AI-generated trend analysis** enhances the associate's view of customer purchase history and metrics.

Future AI/ML/Agentic Capability

- Following a **4-stage roadmap to Agentic AI**, currently at stage 2:
  - Stage 1 (completed): Data platform implementation with Snowflake and analytics-based AI
  - Stage 2 (current): Chatbots, explainability, and summarization
  - Stage 3 (planned): Agentic tools including recommendations, next steps, and unique customer offers
  - Stage 4 (planned): Orchestration layer for true agents that proactively share offers and products
- **Self-healing POS** will detect microservice issues and automatically roll back to previous versions or horizontally scale by spinning up new service copies to route traffic and reduce impact.
- **Developing edge processing capabilities for AI features** on certified hardware (Android and iOS devices), leveraging local compute available on each device.
- **LLM AI** will summarize large retail data sets and enable natural language exploration for Analytics customers.
- **Snowflake data warehouse initiative** will enable customers to bring their own AI objectives to the Aptos ONE Platform.
- **AI applied** in engineering processes including security scanning, QA test automation, and CI/CD pipelines.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **AI-enabled embedded analytics** integrated directly in POS workflow, eliminating separate tools or logins. Enterprise users can create and deliver reports to front-line users for immediate impact—a unified approach not commonly seen from other vendors.
- **Phased four-stage approach to Agentic AI** demonstrates methodical progression from data platform foundation through full agent orchestration, showing clear strategic thinking about AI maturity.
- **Partnership with Snowflake and Strategy (MicroStrategy)** delivers a common data model supporting both real-time embedded reporting and bespoke retailer-built dashboards.
- **Associate empowerment focus**: AI augments rather than replaces store associates, with customer summaries and trend analysis enhancing their ability to serve customers effectively.
- **On-device compute architecture** positions Aptos for future edge AI processing, enabling capabilities in offline scenarios or with reduced latency.
- **AI for operational resilience** extends beyond customer-facing features to infrastructure reliability through self-healing capabilities.
- **Managed service model** with 5 releases per year (moving to bi-weekly in 2026) ensures continuous AI innovation without disruption.

cegid

Current AI/ML/Agentic Capability

- **Cegid Pulse intelligent agent suite** is integrated into Cegid Retail solutions, providing real-time customer-facing and operational AI capabilities that are in production today and designed to support Cegid's global retail footprint of 69 countries and 25 languages.
- **Real-time translation for customer interactions** enables store associates and customers to communicate across language barriers with instant split-screen translations during in-person conversations, supporting global retail operations
- **AI-powered customer insights** customer tags covering preferences, purchases, sizes, and interests based on purchase history, with roadmap enhancements adding a dedicated AI-driven recommendation engine to surface cross-sell and upsell suggestions during checkout interactions.
- **Natural language business intelligence** through Cegid Pulse allows users to query retail data in conversational language and receive ad-hoc dashboards, customized indicators, graphs, and predictive models in real-time
- **AI-driven content creation tools** enable headquarters teams to generate engaging posts with relevant images for internal communications, with automatic translation based on user preferences to break down language barriers across global teams
- **Predictive analytics and forecasting** delivered through Cegid Retail Intelligence includes prebuilt KPIs, customizable dashboards, and AI models to forecast activity and analyze sales patterns
- **Structured AI development methodology** involves refining 80 potential use cases through customer discussions, building prototypes for testing, and leveraging a dedicated Centre of Excellence to test components and help development teams integrate AI features at scale

Future AI/ML/Agentic Capability

- **Agentic AI architecture integration** underway with platform incorporating MCP (Model Context Protocol) server layer and agent orchestrator to support autonomous decision-making workflows and agentic AI scenarios
- **Voice-to-action assistant** planned for June 2026 delivery will enable AI-powered assistants to trigger actions in the POS based on voice interactions with sales associates, including consent-based conversation monitoring
- **Cegid's roadmap includes an AI-powered product recommendation engine** that will provide intelligent cross-sell and upsell suggestions during assisted selling interactions, complementing current AI capabilities.
- **Computer vision for product recognition** is currently being tested in proof-of-concepts to recognize items without barcodes, and may be added to the roadmap once validated with customers.
- **Predictive analytics expansion** to include sophisticated forecasting for pricing models, stock optimization, and contextual data surfacing influential factors impacting store performance
- **IoT service integration** planned for 2026 roadmap will offer remote monitoring capabilities for hardware health and diagnostics, enabling proactive device management

Overall AI and Agentic Product Strategy, Points of Differentiation

- **"AI close to each profession"** strategic vision positions AI as central to elevating company potential by providing capabilities tailored to specific retail roles and workflows rather than generic horizontal AI tools
- **Global and multilingual AI deployment** across 69 countries and 25 languages addresses a genuine market need that most POS vendors cannot match, breaking down language barriers for international retail operations spanning all four geographic regions (EMEA, APAC, LATAM and NA).
- **Deployed, production AI capabilities today** including Cegid Pulse translation, customer insights, content creation, and natural language analytics distinguish Cegid from vendors offering primarily aspirational roadmaps
- **Human-centric augmentation philosophy** focuses on empowering store associates and global teams rather than replacing workers, with features like real-time translation and customer insights enhancing associate effectiveness
- **Rigorous, customer-driven AI development** combining funnel methodology (refining 80 use cases) with prototype testing ensures AI aligns with actual retail needs, supported by dedicated Centre of Excellence and top management AI governance
- **Progressive AI maturity roadmap** evolving from current generative AI (translations, content) to advanced agentic capabilities (autonomous recommendations, orchestrated agents) by 2026 demonstrates clear technology progression
- **Integration with existing platform strengths** leverages Cegid's unified commerce architecture, international compliance (69 country packages), and extensibility framework to deliver AI consistently across all touchpoints

Diebold Nixdorf

Current AI/ML/Agentic Capability

- **Computer vision for shrinkage reduction at self-checkout and POS** – Analyzes video feeds in real-time to detect missed scans, item/barcode switching, multipack fraud, loose items, unscanned items during payment, sweet-hearting (cashiers intentionally applying manual discounts), and suspicious behavior patterns with automated alerting.
- **AI-based age verification** – Uses computer vision and ID recognition to automatically confirm customer age through facial analysis or document scan, reducing staff interventions at self-checkout and vending machines while maintaining compliance.
- **Automated item recognition** – AI-based computer vision identifies products by visual characteristics, shape, or packaging for instant recognition at checkout without manual barcode entry for non-barcoded items (loose fruits, vegetables, bakery products).
- **Queue management and customer traffic monitoring** – AI/computer vision analyzes in-store foot traffic and checkout queues to monitor congestion, identify busy zones, SCO statuses, and detect bottlenecks, recommending opening additional checkouts and guiding customers to available systems.
- **Real-time transaction analysis and anomaly detection** – In self-service environments, Vynamic-based solutions monitor scenarios such as missed scans, barcode switching, walkaways, and non-barcoded items, including behavioral anomalies like items left in hand or basket.
- **Centralized returns management with fraud detection** – Centralized returns services track frequent returns, high-value transactions, and unusual payment patterns, with AI models applied in self-service contexts and additional AI at POS positioned on the roadmap.

Future AI/ML/Agentic Capability

- **Intelligent inventory optimization** – AI algorithms analyze historical sales data, seasonality, and external factors to predict future demand accurately and provide automated recommendations for optimal inventory levels and reorder points.
- **Dynamic pricing optimization** – Determines price sensitivity and adjusts pricing strategies dynamically based on market conditions and customer behavior using real-time pricing adjustments.
- **Promotional campaign optimization** – AI tools analyze customer behavior, market trends, and historical data to identify influencing factors, provide price recommendations, and forecast promotion effectiveness.
- **Demand forecasting** – Machine learning analyzes historical sales, store and channel patterns, and external factors (events, weather, promotions) to forecast demand at SKU level, improving inventory accuracy and reducing waste.
- **Assortment optimization** – AI/ML analyzes sales patterns, shopper behavior, local demographics, and external factors to recommend optimal assortment for stores and channels, automatically adapting as trends change.
- **Fresh food production planning** – AI/ML forecasts demand for each fresh item by store, department, and time window, recommending precise production schedules to improve freshness, reduce waste, and improve margins.
- **Return forecasting** – AI/ML analyzes purchase history, product attributes, customer behavior, and return patterns to predict which items are likely to be returned, informing buying decisions and fulfillment routing.
- **AI-driven product recommendations** – ML algorithms analyze customer behavior, preferences, and purchase history to identify patterns for delivering tailored product suggestions, increasing upselling and cross-selling opportunities.
- **Dynamic customer segmentation and micro-segmentation** – Machine learning for customer behavior analysis with automatic customer segment creation based on defined targets and highly granular microsegments that update continuously.
- **Personalized promotions and loyalty offers** – ML algorithms analyze customer behavior and segments to tailor real-time promotions and loyalty rewards matching individual preferences, timing, and purchase intent.
- **AI self-service assistant** – Natural, multilingual, voice- and text-based guidance throughout the checkout process, integrating with real-time product, inventory, and loyalty data.
- **Employee onboarding assistant** – Guides new hires through training and workflows with a virtual always-available mentor, simplifying onboarding and accelerating integration.
- **IT operations assistant** – Automates troubleshooting, ticketing, and incident resolution by learning from historical data and activity logging, monitoring resource consumption and streamlining billing processes.
- **Agentic AI workflow automation** – Planned for manager permission overrides at the POS, enabling autonomous decision-making workflows.
- **IoT service integration** – Planned for 2026 roadmap to offer remote monitoring capabilities for hardware health and diagnostics, enabling proactive device management.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Operational computer vision deployment today** – Diebold Nixdorf is live with advanced shrinkage reduction solutions for both self-checkout and traditional POS, distinguishing them as operational rather than aspirational, with comprehensive loss prevention across multiple fraud vectors.
- **Hardware-software integration advantage** – As both hardware manufacturer and software provider, Diebold Nixdorf delivers more seamless, tested end-to-end solutions with close HW-SW alignment that typical software-only competitors cannot match.
- **Three-pillar AI strategy** – Machine learning and deep learning for predictive analytics, generative AI/LLMs for assistive capabilities, and computer vision for real-time monitoring and fraud detection.
- **Dual AI approach** – Combines immediate operational deployment (computer vision for loss prevention) with a structured roadmap for ML/predictive analytics (demand forecasting, pricing optimization, personalization) and generative AI assistants.
- **Global deployment capability** – AI solutions designed to work across 80+ countries with support for fiscalization in 50+ countries through Country Package as a Service (CPaaS), ensuring AI features can be deployed internationally.
- **Multi-persona AI approach** – Different AI capabilities designed for different users: computer vision supporting loss prevention teams, assistants for store associates and IT teams, and analytics/optimization for merchandisers and planners.
- **Real-time, always-on architecture foundation** – VRP's cloud-native, microservices design synchronizes data between enterprise cloud and stores in real-time, creating the infrastructure necessary for future AI capabilities to operate effectively.

EPICOR

Current AI/ML/Agentic Capability

- **Epicor Propello provides embedded analytics at checkout**, surfacing product details and eligibility for loyalty and promotions through POS and mobile devices. Personalized recommendations and advanced add-on sales prompts are planned as part of future AI-driven enhancements (Prism agentic AI), though not currently available out of the box.
- **Epicor Propello supports basic demand forecasting and purchase order automation natively**. Advanced capabilities like inventory optimization (IPO), predictive staffing (Scheduling), and scenario planning (FPA) require integration with corresponding Epicor modules and are not default features of Propello.
- **Predictive stock replenishment** automates ordering and inventory workflows to maintain shelf availability and reduce dead stock, embedded in core system functionality.

Future AI/ML/Agentic Capability

- **Prism agentic AI platform**, currently in development, is designed to move insights into automated actions, streamlining workflows and accelerating decision-making at scale. Prism serves as the orchestration layer for Epicor's transformation to agentic AI, enabling autonomous workflows with governance and safety controls.
- **Conversational ERP with Epicor Prism** will enable frontline retail staff to interact with Propello using natural language over the next 12 months. Users will ask, learn, and act conversationally—checking inventory, creating tasks, or adjusting pricing—without leaving the POS or ERP interface.
- **Retail-specific agents** including stock, product, add-on sales, and knowledge agents are being introduced to streamline store operations and deliver real-time insights. The enhanced recommendation engine will improve SKU selection and inventory alignment based on demand patterns and upselling opportunities.
- **Model-agnostic orchestration** provides flexibility with role-aware agents that respect ERP permissions and OWASP-aligned security with human-in-the-loop controls for sensitive actions.
- **AI-driven anomaly detection and automated remediation** in the managed services offering will include 24/7 monitoring, automated zero-downtime updates, and predictive support that uses AI to forecast issues, plan capacity, and trigger automated remediation before failures occur.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Cognitive ERP as strategic foundation** transforms the ERP from a passive system of record into an active system of action where intelligence is embedded directly into daily workflows rather than bolted on as separate tools. This positions Epicor uniquely in moving from reporting to autonomous decision-making workflows.
- **Prism as orchestration layer** provides a unified framework for agentic AI with built-in governance, safety controls, and model-agnostic flexibility, avoiding vendor lock-in while enabling adoption of multiple AI models.
- **Mid-market accessibility** distinguishes Epicor's AI strategy by targeting retailers with 3-75 locations and revenue above $10M, providing enterprise-grade AI capabilities at a scale and price point accessible to mid-market retailers rather than only Tier 1 enterprises.
- **Transparent roadmap positioning** demonstrates candor about current versus in-development capabilities. Prism is currently in development, building trust through realistic customer expectations.
- **Practical, incremental AI deployment path** focuses on immediate value delivery: predictive staffing to optimize labor costs, predictive stock replenishment to reduce waste, pattern detection through automation workflows, and conversational knowledge agents to accelerate onboarding rather than pursuing AI for its own sake.

flooid
a GLORY company

Current AI/ML/Agentic Capability

- **AI-powered SIEM (security information and event management) for security monitoring** – Real-time security information and event management capabilities deployed for threat detection across the platform.
- **Loss prevention through associate behavior pattern detection** – AI monitors and identifies patterns in associate behavior to detect potential internal theft or policy violations.
- **Rule-based engine for self-checkout fraud detection** – AI-driven rules engine analyzes customer behavior at self-checkout to flag potentially fraudulent transactions in real-time.
- **Computer vision for ticket switch and non-scan detection** – Image and gesture recognition technology deployed at self-checkout identifies when customers attempt to switch barcodes or fail to scan items.
- **AI-based product identification** – Visual recognition automatically identifies products by appearance, supporting self-checkout and POS for non-barcoded items.
- **Advanced analytics with clustering and interpolation** – Flooid Insights leverages AI clustering algorithms and interpolation methods to analyze sales data, identify patterns, and generate business intelligence.
- **Facial recognition for age verification** – Biometric technology automates age verification for restricted items like tobacco and alcohol, reducing manual staff interventions.
- **Biometric touchless payments** – AI-powered biometric authentication enables secure, contactless payment authorization.
- **Curated data lake for pattern analysis** – Open and accessible data lake environment with curated structures enabling retailers to connect BI tools for pattern analysis and recommendations.

Future AI/ML/Agentic Capability

- **Flooid Intellect with natural language processing** – In-development NLP capability allowing retailers to query data using natural language, receiving immediate insights at the store level with edge and offline processing support.
- **ML-driven pricing, promotions, and inventory optimization** – Planned machine learning models to optimize pricing strategies, promotional effectiveness, and inventory levels based on historical and real-time data.
- **Contextual data enrichment models** – Future capability to surface influential factors impacting store performance by layering contextual data such as weather, events, and local trends onto analytics.
- **Generative AI for associate support (exploratory)** – Under exploration to provide associates instant access to product data, regulations, training materials, and operational procedures.
- **Task-agentic applications** – Roadmap includes development of agentic AI capabilities that can autonomously execute tasks and make decisions within defined parameters, with primary focus on loss prevention and secondary focus on analytics.
- **Real-time learning and autonomous decision-making** – Currently under active review for incorporation into roadmap to enhance associate decision-making capabilities.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Edge-first AI architecture for offline resilience** – Flooid Intellect designed to provide natural language inquiry with data stored on the edge or POS itself, ensuring offline AI processing and latency optimization critical for retail environments with unreliable connectivity enabled by existing resilient architecture supporting full offline sales.
- **Transparent AI maturity roadmap** – Clear distinction between deployed capabilities (SIEM, loss prevention, biometrics) and exploratory initiatives (generative AI, agentic applications), with explicit acknowledgment that predictive POS failure prevention and real-time autonomous learning are not yet deployed.
- **Operational efficiency focus for agentic AI** – Strategic prioritization of agentic AI for loss prevention and analytics rather than customer-facing applications, targeting measurable ROI through shrinkage reduction and operational efficiency.

Current AI/ML/Agentic Capability

- **GK Engage Hyper-Personalization** utilizes machine learning and reinforcement learning to deliver AI-generated, individualized item recommendations and offers in real-time, creating personalized content tailored to each customer's unique needs and going beyond traditional segmentation to segments of one.
- **GK AIR Personalization** provides machine-learning and reinforcement learning-based, anonymized item and content recommendations that do not rely on loyalty information. The system delivers an average of 50 million recommendations per hour across 360+ installations in 34 countries, demonstrating production-scale deployment with proven ROI.
- **GK AIR Price Optimizer** is an all-in-one solution for AI-enabled strategic price management and optimization, that unifies demand forecasting, simulations, and configurable pricing governance. While continuously considering market trends and competitive signals, the solution emphasizes explainable price recommendations, KPI stewardship, and controlled automation - enabling retailers to align pricing decisions with broader commercial and operational objectives.
- **GK Vision** is a computer vision platform for fraud prevention at self-checkout (detecting no-scan, barcode switching, items left in basket/pocket), non-barcoded item recognition for fruits and vegetables, and age estimation for age verification. GK Vision uses lightweight, on-edge deep learning and is currently integrated into CLOUD4RETAIL and in trial with leading international retailers.
- **AI-driven target group selection** assists retailers in creating campaigns and personalized promotions, automatically selecting the best-fitting target groups for predefined offers or determining the most relevant offer for each customer.
- **Fraud Detection Service** for self-scanning and self-checkout uses retailer-defined rules to evaluate fraud risk, with a standard interface to GK AIR for AI-driven evaluation of self-service transactions.
- **Real-time transaction analysis and anomaly detection** through out-of-the-box integration with Fujitsu Profit Protect, providing analysis across multiple processes from scans and returns to inventory movements.

Future AI/ML/Agentic Capability

- **Agentic AI use cases** combining LLMs, SLMs, ML, and Reinforcement Learning currently in development with retailers using the PrivateGPT ecosystem. Examples include intelligent product finding for associates and consumers (suggesting suitable items, comparing attributes, proposing substitutes), employee assistant supporting associates in problem-solving by combining process, consumer engagement, and system knowledge, and success factor analysis identifying why certain stores outperform others.
- **RetailGPT** is a PrivateGPT-based assistant tailored to retail store operations, combining process knowledge, SOPs, and store expertise into single entry point to extensive knowledge bases. Capabilities include question answering, sentiment analysis, planning, information summarization, language translation, named entity recognition, context-aware retrieval, and transactional pattern learning.
- **Enhanced computer vision use cases** including smart exit supervision with full exit monitoring, virtual tagging for shelf protection, cashier coverage to prevent sweet-hearting, behavior analytics in real-time for additional engagement, store planogram optimization, and operational optimization with actionable insights.
- **Advisor/Assistant agents** combining LLM and personalization to answer questions and recommend items for both consumers and staff, with product finding already in co-innovation POC mode and expected general availability within one year.
- **Continuous enhancement of GK Vision and GK AIR AI-driven model training** for pricing, promotions, and stock optimization with contextual data to enrich models for surfacing influential factors impacting store performance.
- **CPG monetization through hyper-personalization**, enabling manufacturers to participate in personalized recommendation and offer programs.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Comprehensive AI portfolio across three pillars**: machine learning/reinforcement learning (GK AIR for pricing and personalization), computer vision (GK Vision for fraud detection, item recognition, age verification), and generative AI/LLMs (PrivateGPT ecosystem for assistants and agentic workflows), demonstrating a holistic rather than point-solution approach.
- **Data sovereignty and edge-first AI architecture** through PrivateGPT appliance and GK Vision's on-edge processing, enabling retailers to maintain control over their data while benefiting from AI capabilities. This addresses critical European data protection requirements and reduces cloud dependency with on-edge processing when possible to reduce latency, availability, and cost impacts.

- **Acquisition-driven AI acceleration** with the 2025 acquisition of Nomitri, a deep tech provider specializing in computer vision, bringing sophisticated learning capabilities that perform on edge, reducing TCO to a fraction of existing solutions and providing very fast onboarding for new use-cases.
- **Hyper-personalization as strategic differentiator** enabling true segment-of-one personalization that autonomously creates offers in real-time, rather than relying on pre-defined segments. The AI automatically determines offer value to protect margin while maximizing conversion.
- **Co-innovation AI development model** with structured customer engagement through workshops, POCs, customer days/summits, and user groups across different retail segments, ensuring AI development is driven by actual retail needs rather than technology trends.
- **Real-world AI case studies demonstrating ROI** including Douglas (8. 0% sales from recommendations, 5. 7% conversion rate in newsletter), 11teamsports (3% increase in orders, margin and revenue optimization), COOP (higher customer shopping frequency and net sales), and BS Apotheken (700,000 products priced daily with optimized margins).

JESTA I.S.

Current AI/ML/Agentic Capability

- **Sales Audit with AI-powered reconciliation** uses Large Language Models (LLM), Small Language Models (SLM), and Natural Language Processing (NLP) to analyze enterprise operational and historical data, reconciling POS and OMS data with Merchandising ERP records to ensure transaction accuracy and compliance.
- **Loss Prevention module with rule-based exception detection** provides real-time transaction analysis using configurable rules for voids, refunds, return-without-receipt frequency, discount and price override behavior, manual markdowns, tender irregularities, and cash drawer openings. The system generates reports viewable by store, cashier, region, or chain-wide to identify trends and high-risk patterns.
- **Tunable thresholds** allow retailers to adjust rules to their operational baseline, lowering noise and focusing on meaningful activity, with exception resolution outcomes informing threshold tuning to improve accuracy over time.
- **Intelligent automation in supply chains** uses AI to continuously optimize forecasting, planning, replenishment, and allocation. The system blends POS history with promotions, seasonality, weather, and product attributes to generate store- and SKU-level forecasts that directly impact buying and assortment strategies.
- **Hyper-personalized product recommendations** through partnership with Crossing Minds delivers AI-powered, behavior-based product recommendations for omnichannel shoppers. These privacy-respecting recommendations are available to sales associates at POS, within customer profiles, and across the Endless Aisle. Generative AI enables conversational product search.

Future AI/ML/Agentic Capability

- **FarsightIQ analytics platform** currently in development will extend loss prevention with predictive and behavioral analysis, surfacing patterns across stores, cashiers, SKUs, time periods, and operational workflows. It will highlight emerging shrink and exception risk earlier, improving investigation prioritization and decision support (0-12 month roadmap).
- **FarsightIQ sales pattern recognition** will analyze transaction history across stores, products, and time periods to highlight best and worst sellers, seasonal and daypart trends, price sensitivity and promotion impact, and location-level performance differences to guide assortment planning and allocation.
- **Customer Lifetime Value (CLV) scoring and predictive churn modeling** are part of the FarsightIQ roadmap, building on current customer activity tracking to support customer segmentation by spend, frequency, and basket mix, identification of emerging high-value customers, and retention targeting.
- **FarsightIQ automated recommendations** will introduce proactive insights that surface where attention is needed, such as items selling faster than forecast and at risk of stockout, stores where labor patterns do not align with peak traffic, products with declining velocity that may need price or placement adjustment, and customer groups showing shift in buying behavior.
- **Vision Ask Jane AI/ML advisor** is an agentic AI tool that provides strategic growth and operational insights for retail and wholesale businesses. It leverages enterprise data to answer queries, deliver visual insights, and recommend actions in areas such as demand planning, inventory management, marketing, and customer service.
- **Agentic AI for autonomous decision-making workflows** (12-36 month roadmap) will enable the POS system to autonomously execute routine decisions once thresholds and guardrails are set, including automatically initiating store-to-store inventory transfers for at-risk items, adjusting prices or markdown timing based on demand trends within approved limits, creating loss prevention case records when exceptions are detected, and escalating POS device health issues before failures occur.
- **AI-driven pricing models** on the roadmap will create real-time pricing recommendations and prescriptions by site, building on current centralized price management capabilities.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Unified suite architecture as AI foundation** - Jesta's Vision Suite 360 is a unified retail platform seamlessly integrating POS, OMS, WMS, Merchandise, and Financials. This eliminates data silos and ensures seamless communication between systems, providing a superior foundation for AI/ML deployment compared to competitors relying on third-party integrations or loosely connected modules.
- **Transparent, rule-based AI approach** - Jesta emphasizes transparent, tunable AI systems rather than opaque "black-box" scoring. Their Loss Prevention module uses configurable rules that retailers can adjust to their operational patterns, with clear audit trails and the ability to lower false positives through threshold tuning based on exception resolution outcomes.

- **Human-in-the-loop philosophy** - All autonomous actions will remain configurable and auditable, with approval workflows in place to ensure oversight and compliance. This approach allows automation of time-consuming tasks while maintaining control and transparency over autonomous decision-making processes.
- **Data-driven foundation with unified data warehouse** - Data from POS, merchandising, inventory, e-commerce, and supply chain flows into a unified warehouse where FarsightIQ applies statistical and predictive models on top of this shared dataset, ensuring analytics reflect the full business rather than isolated systems.
- **Partnership-driven AI innovation** - Rather than building all AI capabilities in-house, Jesta strategically partners with specialists like Crossing Minds for hyper-personalized product recommendations, demonstrating a pragmatic approach to delivering best-of-breed AI capabilities.
- **Balanced approach to AI adoption** - Jesta's roadmap demonstrates a measured progression from rule-based systems (current) to predictive analytics (FarsightIQ, 0-12 months) to agentic automation (12-36 months), ensuring customers can adopt AI capabilities at a pace aligned with their organizational readiness.
- **B2B and wholesale differentiation** - Jesta is one of the only solutions in the industry to address all needs for vertically integrated retail brands, wholesalers, and brand manufacturers that operate across both B2B and B2C channels, providing a broader AI application surface than pure-play retail POS competitors.

Jumpmind

Current AI/ML/Agentic Capability

- Jumpmind does not currently embed AI, machine learning, or agentic capabilities into its Commerce solutions.
- The company explicitly states they are "currently exploring high-value use cases" for AI/ML integration but have not yet deployed any such capabilities in their POS platform.

Future AI/ML/Agentic Capability

- **For 2026, Jumpmind is evaluating computer vision** for item scanning, such as scanning charms into shopping carts or from product display pages to simplify item lookup.
- **The company is investing in R&D to explore prompt engineering** to simplify complex promotion setup, making it easier for retailers to configure sophisticated promotional rules.
- **Jumpmind's approach to AI adoption is pragmatic and customer-centric**, stating their goal is to "design intelligence that fits into how stores actually work" and believing in "leveraging AI only to the extent that it solves real problems and that retailers are able and willing to adopt these technologies. "
- **The company is exploring how their planned Jumpmind Sales Audit** solution can "lay the groundwork for a broader intelligence layer that can power alerts, automate workflows, and support strategic decisions across the business," suggesting future AI capabilities may be embedded within this intelligence layer.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Deliberate and measured AI strategy**: Jumpmind has adopted a thoughtful, customer-needs-first approach. Their strategy prioritizes identifying "high-value use cases" that solve real operational problems before deploying AI technology, recognizing that technological capability alone does not guarantee successful implementation.
- **Strong API-first foundation for future AI integration**: Jumpmind's microservices-based platform with over 95% API coverage provides the technical foundation to incorporate AI services when ready. The planned Sales Audit intelligence layer suggests a strategic vision for centralized AI-driven insights and workflow automation.
- **Retail-first AI vision**: When AI capabilities are developed, Jumpmind's stated approach focuses on in-store operational realities—computer vision for simplified scanning and prompt engineering for promotion configuration both address practical associate and manager workflows rather than abstract AI showcases.

Current AI/ML/Agentic Capability

- **AI-Powered Product Image Search**: Recently launched capability enabling associates to identify products by capturing an image using the device camera during checkout. Leverages machine learning models for real-time product identification, reducing checkout time by 50-70%. Particularly valuable for products without barcodes such as jewelry and specialty retail categories.
- **Shared Ownership with The Zellman Group for AI Loss Prevention**: Integrated AI-powered loss prevention through sister company specializing in advanced analytics for transaction analysis, anomaly detection, and actionable fraud insights. Provides retailers with comprehensive reporting and security technologies to identify suspicious trends and reduce shrink.
- **Exception-Based Reporting Analytics**: Back Office provides exception reports and performance dashboards identifying unusual activity patterns including high refund volumes, repeated voids, discount patterns, and cash variances. Supports data-driven operational decision-making for loss prevention teams.

Future AI/ML/Agentic Capability

- **Expansion of AI Image Recognition**: Plans to extend AI image capabilities beyond product search to include product recommendations, related product suggestions, and inventory management applications such as visual stock verification and cycle counting.
- **Strategic Partnerships for AI Personalization**: Exploring partnerships with best-in-class personalization engines to deliver AI-driven recommendation capabilities. Open architecture and API-first approach positions integration with leading personalization solutions while maintaining unified omnichannel experience.
- **Evaluation of Agentic AI Applications**: Monitoring evolution of agentic AI and evaluating applications in automated inventory recommendations, intelligent order routing optimization, and enhanced customer service workflows.
- **AI-Powered HQ Operations**: 3-5 year roadmap includes intelligent merchandising capabilities as strategic pillar, suggesting planned development of AI-powered tools for headquarters-level decision-making and optimized operations.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Pragmatic, ROI-Driven Approach**: KWI evaluates AI technologies based on proven value and production readiness rather than experimental adoption. Future plans highlight development priorities driven by measurable business impact and client needs and as an innovator in retail AI.
- **Focused AI Investment in High-Impact Use Cases**: Primary AI differentiation centers on recently launched image recognition delivering measurable operational benefits (50-70% checkout time reduction). Demonstrates preference for targeted, high-impact implementations over broad experimental deployment.
- **Platform Architecture Optimized for Future AI Integration**: While native AI capabilities are limited, API-first cloud-native architecture and unified commerce platform (single data model spanning POS, OMS, Merchandising, Loyalty, CRM) provides strong foundation for AI integration as technology matures. Eliminates data fragmentation that hinders AI deployment in multi-vendor environments.
- **Partnership Ecosystem Strategy**: Rather than building comprehensive in-house AI capabilities, leverages partnerships for specialized AI functions (The Zellman Group for loss prevention) and plans integration with third-party providers for personalization and analytics. Enables retailers to access advanced AI tools while maintaining unified platform benefits.
- **40-Year Specialty Retail Focus as Competitive Context**: Deep domain expertise in specialty retail (apparel, footwear, accessories, beauty, jewelry) informs measured AI adoption strategy aligned with specialty retailer needs and operational realities rather than technology-driven roadmaps.

Current AI/ML/Agentic Capability

- **AI-Powered Recommendation Engine**: MI9 Commerce platform includes three production-ready ML models: (1) "Buy it again" predictions based on purchase history, (2) Similar items using catalog attribute similarity, and (3) Frequently bought together predictions identifying co-purchased items in shopping sessions.
- **AI-Driven Demand Management (Adaptive Allocations)**: MI9 Merchant incorporates AI-driven allocation algorithms using sales history, forecasts, and external factors to strategically position inventory for maximum sales. This represents MI9's most mature AI capability, targeting retailers with complex inventory and assortment challenges.
- **Predictive Analytics for Inventory**: ML models within MI9 Merchant estimate inventory inconsistency and stockout prediction to optimize inventory positioning. These capabilities support proactive markdown strategies and allocation decisions.
- **Customer Lifetime Value Prediction**: The MI9 Intelligence platform predicts customer lifetime value using behavioral and transactional data to segment customers and personalize engagement through RFM (Recency, Frequency, Monetary) analysis.
- **Sales Pattern Recognition and Anomaly Detection**: MI9 Intelligence enables retailers to identify patterns, trends, and anomalies across products, locations, and time periods through ML-driven analytics, supporting inventory optimization and markdown strategies.
- **Fraud Detection and Loss Prevention**: Built into MI9 Intelligence, the fraud detection system allows operations staff to audit transactions, set thresholds, and create alerts for specific event sequences (e.g., post-voids followed by open register transactions).
- **Real-Time Alert Generation**: The Intelligence module generates real-time alerts for pricing adjustments, promotional opportunities, and assortment optimization based on up-to-date performance data.
- **POS Transaction Analysis**: MI9 has reporting that detects and alerts staff on potential POS system failures, including missing transactions, supporting operational continuity.

Future AI/ML/Agentic Capability

- **Agentic AI Integration Roadmap**: MI9 is actively integrating agentic AI capabilities to enable autonomous decision-making in retail operations, helping retailers transition from reactive to predictive, autonomous business models.
- **Context-Aware AI Actions**: Developing capabilities to embed context-aware AI for dynamic promotions, workforce optimization, and fraud detection directly within POS workflows.
- **External Agent Framework Integration**: Plans to enable secure integration with external agent frameworks through adaptive APIs and event-driven services.
- **AI Governance and Compliance Systems**: Building systems that collaborate with AI agents while maintaining retailer control over governance and compliance.
- **Enhanced Prescriptive Analytics**: Future roadmap includes expanding from predictive to prescriptive analytics with capabilities that automatically recommend and initiate actions such as markdowns on overstocked inventory or creation of targeted marketing lists directly from the Intelligence platform.
- **Advanced Demand Forecasting Models**: Continued development of AI capabilities including Demand Transference (using omni-channel buying patterns to predict fulfillment locations), Enhanced Shape Forecasting for seasonal patterns, and Monte Carlo Simulation Re-Trend for new product allocation with limited historical data.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Centralized AI Architecture**: Unlike competitors who embed AI exclusively in front-end POS systems, MI9 strategically centers AI capabilities within its MI9 Intelligence analytics platform and MI9 Merchant demand management solution. This creates a centralized AI engine powering insights across the retail ecosystem, enabling closed-loop processes where analytical insights immediately trigger operational actions.
- **Emphasis on Demand Management and Merchandising AI**: MI9's most mature AI capabilities reside in demand management and inventory optimization including Adaptive Allocations, AI-powered draft engines for product mix optimization, and Monte Carlo simulations for new product launches. This back-office focus positions MI9 particularly strong for retailers with complex inventory and assortment challenges.

- **Actionable Analytics ("Closing the Loop")**: A key differentiator is enabling users to move from insight to action within a single system. Users can initiate markdowns or create targeted marketing lists directly from the Intelligence platform, accelerating time-to-action compared to traditional analytics-to-execution workflows.
- **Pragmatic, Value-Driven AI Adoption**: MI9 demonstrates a measured approach to AI integration, focusing on high-value, proven use cases rather than pursuing AI features for competitive positioning. At NRF 2025, MI9 emphasized commitment to helping clients identify opportunities where AI adds real value with clear ROI validation.
- **Forward-Looking Agentic AI Roadmap**: MI9's articulation of an agentic AI roadmap positions them ahead of many POS competitors in systematic thinking about autonomous decision-making frameworks, with focus on context-aware AI actions, governance controls, and human-AI collaboration.
- **Production-Ready Recommendation Engine**: Implementation of collaborative filtering, market basket analysis, and product affinity models demonstrates mature machine learning for personalization—a capability many pure-play POS vendors lack or rely on third-party integrations to provide.

NCR VOYIX

Current AI/ML/Agentic Capability

- **Production-Scale Computer Vision for Loss Prevention**: NCR Voyix POS deploys deep learning neural networks across 61,000 lanes to map produce images to store SKUs in real time at self-checkout. The Picklist Assist solution uses machine learning to continuously refine accuracy through active learning and transaction-based refinement, reducing mis-scans and improving checkout speed. The Halo Checkout system, integrated with Everseen's Evershow technology, recognizes products in any orientation and can scan up to 20 products simultaneously.
- **AI-Driven Fraud Detection and Risk Analysis**: AI algorithms analyze mobile shopping basket patterns and cashier behavior, identifying anomalies and triggering audits based on verified mismatches. ML models flag risky cashiers and transactions through real-time pattern recognition across 8 billion API requests monthly and 436 million transaction logs.
- **Edge AI for Real-Time Store Operations**: AI models run offline on in-store nodes, processing data locally at the lane or device level to minimize latency and ensure immediate responsiveness during network disruptions. The edge-native architecture enables full offline functionality at the lane level while maintaining AI-driven insights for up to 8 days during network outages.
- **Comprehensive Analytics with Generative AI**: The NCR Voyix Insight analytics engine applies AI across cashier risk detection, sales performance, labor efficiency, cash management, self-checkout operations, and promotion effectiveness. The engine generates automated recommendations using machine learning, generative AI, and large language models, processing 11 billion in sales transactions monthly.
- **Predictive Sales Forecasting and Labor Optimization**: AI-driven labor capacity planning and sales forecasting tools predict future sales for revenue optimization, helping retailers align staffing and inventory decisions with demand. Customer lifetime value prediction uses behavioral and transactional data for segmentation and personalized engagement.

Future AI/ML/Agentic Capability

- **Agentic AI Framework with Governance**: NCR Voyix POS is developing AI agents that identify what can be changed and recommend what should be changed, with strategic focus on defining governance frameworks that determine which decisions AI can autonomously execute. This approach emphasizes human-AI collaboration boundaries and graduated autonomy based on customer readiness.
- **Autonomous Store Operations Vision**: The 5-year roadmap envisions autonomous store operations powered by Agentic AI, advanced IoT integration, and predictive orchestration. The platform will support real-time decision-making at the edge, seamless integration across commerce channels, and proactive service delivery through embedded AI and analytics.
- **Enhanced Prescriptive Analytics**: Future development includes deeper integration of AI and machine learning into operational workflows, with prescriptive dashboards expanding beyond current recommendations to include autonomous action initiation based on ML-driven insights. Strategic investments focus on personalization, associate enablement, and omnichannel orchestration.
- **Multi-Sensory Checkout and Biometric Integration**: The 1-year roadmap includes multi-sensory checkout experiences integrating biometrics, computer vision, RFID, smart carts, and enhanced digital validation. TrueAge digital age validation integration is planned to expand compliance for age-restricted transactions.
- **Natural Language Processing and AR Experiences**: The roadmap includes expanded natural language processing for intelligent interactions beyond current forecasting and labor optimization. The 3-year horizon emphasizes contextual shopping with early exploration into augmented reality experiences, vertical-specific configurations, and personalization engines that respond dynamically to consumer behavior.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Enterprise-Scale Production Deployment**: NCR Voyix demonstrates AI maturity through live production deployment across 61,000 lanes processing 8 billion API requests monthly, 436 million transaction logs, and $11 billion in sales transactions. This operational scale at enterprise level provides competitive advantage in AI reliability and performance optimization that few POS competitors can match.
- **Edge-Native AI Architecture**: NCR Voyix's edge AI implementation enables real-time decision-making directly at the store level with AI models running offline on in-store nodes. This architecture ensures uninterrupted AI-driven insights during network disruptions—a capability that cloud-dependent AI systems cannot replicate. The containerized microservices spanning cloud to edge represents sophisticated technical foundation for autonomous operations.

- **Mature Computer Vision Deployment**: NCR Voyix has production-deployed computer vision for loss prevention with deep learning neural networks, positioning it ahead of most POS vendors in visual AI maturity. The Picklist Assist and Halo Checkout solutions demonstrate mature capabilities that continuously improve through active learning, with partnerships including Everseen for advanced product recognition technology.
- **Comprehensive Operational AI Coverage**: NCR Voyix's AI strategy is differentiated by breadth, applying AI across cashier risk detection, sales forecasting, labor optimization, cash management, self-checkout operations, promotion effectiveness, and fraud detection. This horizontal integration across operational dimensions creates compounding value as AI insights from one domain inform decisions in others.
- **Strategic Agentic AI Approach**: NCR Voyix articulates sophisticated understanding of agentic AI beyond industry hype, focusing on governance frameworks, human-AI collaboration boundaries, and graduated autonomy based on customer readiness. The emphasis on identifying what can be changed and recommending what should be changed reflects pragmatic path to autonomy respecting operational realities.
- **AI Development Velocity Through MLOps**: NCR Voyix's dedicated Retail Analytics AI team with established MLOps architecture using Airflow demonstrates institutional capability for rapid AI iteration and deployment. The ability to retrain models for each customer individually and deploy conditionally based on data sufficiency showcases operational AI excellence providing competitive advantage in time-to-market for new AI features.
- **Real-Time Transaction AI**: A critical differentiator is NCR Voyix's emphasis on real-time AI execution at point of transaction, correcting cashier errors, suggesting item matches, detecting fraud patterns, and optimizing checkout flow in milliseconds. This contrasts with competitors whose AI primarily operates in back-office batch processes for reporting and planning.

NEWSTORE

Current AI/ML/Agentic Capability

- **Anomaly Detection for Operations**: NewStore provides anomaly detection for unusual activity patterns such as transaction spikes, with near real-time (5-minute) detection and response capabilities, including automated notifications and incident reports for critical events.
- **Third-Party AI Integration Architecture**: The API-first platform enables integration with third-party AI, machine learning, and recommendation engines for personalization, fraud detection, and customer behavior prediction.
- **Explainable AI Framework**: Outputs from AI/ML models integrated with NewStore are traceable and explainable, with audit logs and metadata tracking ensuring customer-facing AI-driven decisions can be explained in a human-readable manner. The platform implements enforcement and review of model outputs before production use to support transparency and accountability.
- **Real-Time Data Foundation for AI**: NewStore provides real-time omnichannel purchase history and configurable customer profiles that serve as the data foundation for AI-driven personalization, supporting tailored marketing and recommendations through light customization and third-party integrations.

Future AI/ML/Agentic Capability

- **Agentic AI Framework (2026 Roadmap)**: NewStore is actively developing agentic AI capabilities as part of its 2026 product roadmap to enable autonomous, decision-support workflows. At the core is the NewStore MCP (Model Context Protocol) layer, which serves as the connective tissue across the retail ecosystem, providing a unified foundation for intelligent automation.
- **Personal Omnichannel Shopping Assistant**: An AI-powered assistant for both associates and shoppers, integrated into the NewStore Omnichannel POS and consumer shopping apps, delivering personalized product recommendations and guided selling based on purchase history and retailer strategy.
- **AI-Powered Inventory Allocation**: Advanced demand forecasting and behavioral analysis to optimize inventory placement, ensuring the right products are available at the right locations in real time, with ML models predicting demand patterns and automatically rebalancing inventory across the store network.
- **Omnichannel Headquarters Assistant**: A conversational, ChatGPT-style interface for HQ users designed to surface insights from sales, inventory, and customer data, helping retail leaders identify trends, inefficiencies, and growth opportunities.
- **AI-Driven Order Routing**: Automated, intelligent routing that evaluates inventory, logistics, and customer proximity to optimize fulfillment speed and cost efficiency, dynamically assessing multiple fulfillment options in real time.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **MCP Layer as Foundational Architecture**: NewStore's distinctive approach is the Model Context Protocol (MCP) layer positioned as foundational architecture for agentic AI deployment.
- **Integration-First Strategy**: NewStore's current reliance on third-party AI integrations reflects a deliberate "partner for AI, own the data layer" strategy. By maintaining neutrality on AI tooling while owning the unified commerce data model, NewStore positions itself as the integration backbone for retailers' AI ecosystems rather than competing with specialized AI vendors whose capabilities may quickly become obsolete.
- **Device-First, Offline-Capable AI Vision**: The 3-year roadmap emphasis on "device-first approach with all key retail operations running on device and offline" represents a unique strategic position among cloud-native POS vendors. Most competitors focus on cloud-based AI requiring connectivity, while NewStore envisions AI capabilities that function autonomously at the edge during network disruptions.
- **Unified Commerce Data as AI Foundation**: NewStore's differentiation lies in unified commerce data: combining POS transactions, order management, fulfillment, inventory, and customer data in a single platform. This consolidated data foundation eliminates the data silos that plague retailers using separate POS, OMS, and inventory systems, providing AI models with richer context than competitors' fragmented data architectures can support.
- **MACH Architecture as AI Enabler**: NewStore's MACH-based architecture (Microservices, API-first, Cloud-native, Headless) provides a technical foundation superior to monolithic POS systems for AI integration. With event-driven architecture publishing real-time updates and comprehensive API coverage, NewStore can support AI agents that react to store events instantly.

ORACLE

Current AI/ML/Agentic Capability

- **Oracle Retail AI Foundation as Analytical Backbone**: Serves as the analytical backbone across the retail suite, consolidating data from planning, buying, merchandising, and selling applications. Packaged AI capabilities in production include Affinity Analysis (product relationships using graph algorithms), Customer Segmentation (RFM clustering for localized assortments), Store Clustering (grouping for pricing strategies), Customer Decision Trees (hierarchical behavior prediction), Demand Transference (omnichannel buying pattern modeling), and Strategic Forecasting (item-location forecasts with confidence intervals and cold-start handling).
- **Xstore Product Recommender**: Deployed in production for checkout recommendations, enabling retailers to optimize for revenue or margin using data from Merchandising, Xstore POS, or Customer Engagement services.
- **AI-Powered Pricing and Promotion Optimization**: Oracle provides AI-driven pricing, promotion optimization, anomaly detection, CLV modeling, and rich KPI analytics through Oracle Retail and OCI services that can be integrated with Xstore, with large retailers running these combined Oracle Retail solutions across thousands of stores and high transaction volumes.
- **Customer Lifetime Value (CLV) Prediction**: Provides transactional and predictive CLV models, RFM scoring, and engagement metrics through Customer Engagement and Unity CDP.
- **Advanced Analytics with 20,000+ Retail KPIs**: Surfaces over 20,000 retail-specific measures and KPIs through Oracle Retail Insights, including demand decomposition, price/promotion sensitivity with elasticity estimation, basket and affinity analytics, and automated business recommendations for markdowns, assortments, allocation, and replenishment.
- **Innovation Workbench for Custom ML**: Enables retailers to build custom ML models using notebook-based Python tools to extract insights from images, social media, or proprietary algorithms while maintaining integration with Oracle workflows.
- **Oracle Roving Edge for Store-Level AI**: Brings OCI services, including AI capabilities, to store edge with containerized deployment (8 OCPU, 64GB RAM, 7. 7TB storage, battery operation), enabling local AI processing during network disruptions.
- **Production-Scale Enterprise Deployment**: Spans 300+ retail brands globally, processing 1. 5 million transactions daily at single retailers with deployments supporting 8,000 stores for individual customers.

Future AI/ML/Agentic Capability

- **Agentic AI Framework with Human-in-the-Loop**: Aligning with OCI GenAI and agents capabilities to enable safe, policy-first autonomy.
- **Model Context Protocol (MCP) Integration (2025-2026)**: Announced at Oracle AI World 2025, includes SQLcl MCP Server (natural language database queries with audit trail), Oracle Analytics Cloud MCP Server (bridge to agentic workflows), Oracle Vector Store MCP Server (secure vector embedding access), and standardized agent interoperability treating MCP as "USB-C for AI. "
- **Oracle AI Agent Marketplace and Studio**: In production, enables customers to deploy Oracle-validated or partner-developed agents with no coding for sustainability, supplier assessment, and asset maintenance.
- **Multi-Modal MCP Servers (2025-2026)**: Planned to handle text, image (BLOB), and spatial data, with medium-term vision for autonomous database AI agents managing performance, security, and cost optimization without human intervention.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Comprehensive Retail AI Suite Across Value Chain**: Oracle's primary differentiator is breadth and depth of production-deployed retail AI spanning demand forecasting, assortment planning, pricing optimization, promotion execution, inventory management, and POS recommendations—an integrated ecosystem across Plan-Source-Buy-Move-Market-Sell-Fulfill-Replenish with over 20,000 retail-specific KPIs creating network effects competitors with siloed AI cannot replicate.
- **AI Foundation as Universal Intelligence Layer**: Centralized predictive AI engine and data consolidation platform powers all Oracle Retail Cloud Services, enabling consistent ML model performance, centralized governance, and rapid deployment of new capabilities—architecturally distinct from competitors with fragmented AI features or third-party ML platforms.
- **Enterprise-Grade AI at Production Scale**: Xstore capability enabling 300+ retail brands deployed, processing 1. 5 million daily transactions at individual retailers, handling 626,000 transactions per hour and supporting 8,000-store deployments, Oracle demonstrates production AI maturity at enterprise scale few POS competitors match, providing operational confidence that AI capabilities are battle-tested.

- **Model Context Protocol (MCP) as Strategic Enabler**: Native MCP integration in Oracle AI Database 26ai with full audit trail integration positions Oracle ahead of retail technology vendors for emerging agentic AI landscape, treating agents as first-class database citizens—fundamentally different from application-layer AI integration.
- **Prescriptive AI Beyond Predictive**: Extends beyond forecasting to recommend specific actions (price ladders, promotional mechanics, discount depths) with expected financial impact, confidence scores, and constraints, moving from "AI as insight tool" to "AI as decision engine" with A/B testing hooks and closed-loop learning.
- **Policy-First Agentic AI Philosophy**: Emphasizes human-in-the-loop guardrails, role-based access control, configurable tolerances, and approval steps allowing AI-suggested actions to be auto-applied within limits, escalated, or blocked—addressing enterprise concerns about runaway automation with safe autonomy framework including policy enforcement at edge and audit trails.

Current AI/ML/Agentic Capability

- **Einstein AI Product Recommendations**: Built-in AI delivers intelligent product recommendations to shoppers analyzing purchase history, browsing behavior, and product attributes. Customers using Einstein AI report 26% increase in average order value and 15% boost in conversion rates. Stores using POS with AI and customer data see 30% sales increase.
- **AI-Powered Voice Search**: Associates use voice commands to pull up customer profiles, check products, add notes, or view analytics. Commands like "show yellow floral dress" instantly surface relevant products, enabling faster, more natural customer interactions.
- **AI-Driven Upselling and Cross-Selling**: System empowers associates to offer alternatives when items are out of stock or suggest complementary products from the same collection, making personalization scalable.
- **Unified Data Foundation (Data 360)**: POS connects AI capabilities to complete Salesforce platform, providing real-time access to unified business and customer data across B2C Commerce, Order Management, and Point of Sale. This integrated foundation enables AI to deliver contextual, personalized recommendations based on complete customer context.
- **Integration with Agentforce Commerce**: POS platform integrates with Agentforce-powered B2C digital shopping experiences, enabling AI capabilities to span both online and in-store channels with consistent intelligence.

Future AI/ML/Agentic Capability

- **Associate Agentic Guided Selling (Shopper Agent)**: Planned capability will provide real-time insights to associates at POS for guided shopping and clienteling. Agent connects to Data 360 to deliver 360-degree customer view and autonomously suggest personalized, high-value upsells. Agent provides AI-driven insight while associate builds human connection.
- **Proactive, Guided In-Store Operations**: AI agents will monitor real-time inventory and POS data to proactively alert associates to potential operational issues, detect low stock on floor, confirm back-room availability using Flow automation, and create guided tasks for associates.
- **Empowered Discretion with Dynamic AI Recommendations**: Rather than autonomous price changes, agents will empower associates to "make the save" while protecting margins. AI agent detects high-value customers hesitating on purchases, autonomously checks customer lifetime value, product margins, and current promotions, then empowers associate with decision authority.
- **Conversational Store Intelligence**: Future roadmap includes natural language interfaces allowing store managers to ask questions of their data rather than manually navigating dashboards, enabling faster, more intuitive access to business insights.
- **Autonomous Task Orchestration**: Planned AI Agents will proactively detect operational issues and autonomously create and assign remediation tasks to associates within existing workflow, shifting AI from passive analysis to active assistance.
- **Einstein Analytics and Tableau CRM Integration**: POS team actively exploring integration of Salesforce AI tools to enable deeper visibility into sales trends, customer behavior, and store performance through intelligent recommendations and predictive analytics.
- **Predictive Monitoring Capabilities**: Future enhancements planned to integrate Salesforce AI for proactive issue identification, predicting and addressing potential transaction errors, connectivity interruptions, or device malfunctions before they impact operations.
- **RFID and EPC Integration with AI (2026-27 Roadmap)**: Advanced inventory intelligence using RFID for sales, returns, exchanges, high-speed cycle counts, automated tag detection, sales and theft monitoring to combat shrink, and returns verification.
- **Inventory Forecasting and Guided Replenishment (2026-27 Roadmap)**: AI-driven inventory forecasting with guided replenishment recommendations to optimize stock levels and reduce out-of-stocks.
- **AI-Driven Store Associate Agents (2026-27 Roadmap)**: Comprehensive agentic AI capabilities providing recommendations, forecasting, and autonomous workflow support tailored to store associate needs.
- **Unified Semantic Search (2026-27 Roadmap)**: Advanced AI-powered search capabilities that understand context and intent across unified commerce experiences.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Augmentation Over Replacement Philosophy**: Core AI strategy focuses on augmentation rather than replacement—building AI agents to empower store associates and transform average employees into top performers. POS serves as central hub connecting AI, Data 360, and Flow automation directly to associate's primary workflow. This "AI co-pilot" approach differentiates from competitors focused on automation alone.
- **Native Platform Integration**: Unlike competitors requiring complex integrations, POS is native extension of Salesforce platform with built-in Einstein AI. Unified architecture provides immediate access to AI capabilities without additional licensing or integration complexity. Janie and Jack saved $1M by standardizing on integrated POS/OMS/B2C platform and retiring legacy third-party systems.
- **Data 360 as AI Foundation**: Unified customer, order, and inventory data (Data 360) positioned as prerequisite for deploying advanced AI effectively. Deep integration across B2C Commerce, Order Management, and Point of Sale ensures AI has complete business context rather than operating from siloed data.
- **Agentic AI Roadmap**: Transitioning to "Agentic Commerce" as core pillar of product vision, with stated goal to "lead the agentic future of commerce where effortless shopping meets empowered merchandising. " 2025-27 roadmap demonstrates aggressive investment in multiple agentic AI capabilities spanning customer service, fulfillment optimization, sourcing decisions, and store operations.
- **Guided Autonomy Model**: Key differentiator is approach to autonomous decision-making—AI provides intelligence and recommendations but empowers associates with authority to act within "trusted guardrails. " This contrasts with fully autonomous systems, positioning associates as customer experience heroes supported by AI.
- **Einstein Trust Layer**: All AI-driven recommendations and customer data handling secured through Einstein Trust Layer, ensuring privacy, security, and regulatory compliance. Enterprise-grade trust framework differentiates Salesforce in industries with strict data protection requirements.
- **Mobile-First AI Delivery**: Unlike competitors with desktop-centric AI implementations, Salesforce delivers AI capabilities through mobile-first POS experiences, enabling associates to leverage Einstein recommendations anywhere in the store.
- **Workflow Automation Integration**: Tight integration between AI agents and Flow/MuleSoft automation enables multi-step actions to execute seamlessly from POS. AI detecting low stock can automatically check back-room inventory, create associate tasks, and update displays—delivering end-to-end intelligent automation.
- **Platform-First, Not Feature-First Strategy**: Rather than building isolated AI features, constructing comprehensive agentic platform with Agentforce as the foundation. Strategic approach aims to deliver role-specific AI experiences with consistent intelligence across all functions, more ambitious but longer-term strategy than point solution competitors.

Current AI/ML/Agentic Capability

- **AI-Powered Demand Forecasting**: Teamwork Commerce's Model Stock Replenishment feature uses the Croston forecast algorithm for intermittent demand prediction at the item-location level, analyzing up to 180 days of historical sales data via Google BigQuery ETL. This production AI model calculates Minimum Stock Needed, Maximum Stock Needed, and Sales Before Next Delivery to automate replenishment worksheets and generate transfer or purchase orders, optimizing inventory to reduce stockouts and overstock.
- **Automated Replenishment Workflow**: The system exports sales and product data to Google BigQuery for AI analysis, then imports results to populate replenishment worksheets and automatically generates transfer orders for internal locations or purchase orders for external vendors.
- **Intelligent Order Routing with ML**: AI/ML-driven order routing optimizes fulfillment based on inventory levels, distance, cost, and fulfillment capacity, while providing predictive constraint alerts for proactive intervention to prevent order issues or lost sales.
- **Generative AI Shopping Assistant (Production)**: Teamwork Commerce's proprietary Generative AI Engine, in production, assists store associates in finding products and accessing information via quick queries, with support for basic customer assistance; it operates as an adjacent tool to POS Pro rather than a core transaction feature.
- **Real-Time Inventory Intelligence**: Available-to-Sell (ATS) values update within three seconds of transaction completion. The continuous ATS Stream webhook-based feed shares real-time inventory data with external systems, minimizing overselling risk through near real-time synchronization.
- **Customer Segmentation with RFM Scoring**: The Secure CRM (SCRM) system tracks Recency, Frequency, and Monetary (RFM) scores and Lifecycle status for registered customers, enabling behavioral segmentation and personalized engagement strategies.
- **AI-Driven Targeted Offers**: Shopper Services Mode (SSM) dynamically presents customer-specific offers on the customer-facing display. Videos and ads are prioritized based on customer and product information, with automated coupon generation triggered by specific events.

Future AI/ML/Agentic Capability

- **Agentic Commerce Integration (Q1 2026 Pilot)**: Teamwork is developing Agentic Commerce capabilities to embed into its POS solution to support co-pilot and fully agentic sales in Associate and Self-Checkout modes, including Virtual Try-On experiences. In later stages, agentic commerce functionality will extend to Agentic Commerce by phone, email, chat, and other channels.
- **Actively Developing Agentic AI Capabilities**: This development effort is intended to streamline operations and enhance shopping experiences. This work reflects a broader commitment to achieving intelligent, scalable retail operations and increasing customer satisfaction. The core goals include the following:
    - Enrich the product experience to enlighten, entertain and educate your customers about your products. Create awareness, appreciation and desire. Do this in a fraction of the time using AI.
    - Localizing the product catalog, generating localized translations using the culture and style representative of the brand
    - Generate product video clips that enhance the demonstration of products
    - Create and preschedule new product presentations for the coming season
    - AI adapts from sessions to deliver smarter, personalized experiences
- **Generative AI Product Experience Platform Enhancement (Q1 2026 Pilot)**: GenAI will be used to create and improve product descriptions, media elements, translations, and other content assets within the Product Experience Platform solution, streamlining merchandising workflows.
- **Next-Generation AI for Back-Office and Store-Level Operations**: Development of next-generation AI specifically tailored for retail spanning from back-office functions (product merchandising, store-level task management) to enhanced associate tools that facilitate product knowledge and recommendations.
- **AI-Powered Associate Enablement Tools**: Future AI capabilities will empower store associates with machine learning-driven insights that analyze customer history and behavior patterns, enabling associates to deliver meaningful, personalized messages based on past buying patterns.
- **Expanded RFID with AI Integration**: Roadmap includes expanding RFID capabilities to achieve full RFID inventory control and EAS gate support with RFID functionality, providing richer data inputs for AI-driven loss prevention and inventory optimization algorithms.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Pragmatic AI Philosophy**: Teamwork Commerce positions itself as taking a measured, realistic approach to AI adoption, emphasizing "separating hype from reality. " Their public messaging acknowledges that AI is "ready to assist with small integrations that assist retailers in daily tasks," differentiating them from competitors making aggressive AI claims. This pragmatic philosophy positions Teamwork as a trusted advisor focused on delivering actual ROI rather than AI theater.
- **Unified Data Foundation as AI Enabler**: Teamwork's strategic messaging emphasizes that "AI is only as useful as the information it receives. " Their unified commerce architecture—combining POS, OMS, inventory, CRM, and analytics in a single platform—creates a consolidated data foundation that eliminates silos plaguing retailers using separate systems, providing AI algorithms with richer, more accurate context than competitors with fragmented architectures can deliver.
- **RFID as AI Data Layer Strategy**: Teamwork's aggressive investment in RFID technology reflects a strategic vision where RFID serves as the real-time data layer feeding AI algorithms for inventory optimization, loss prevention, and customer personalization, positioning them to deliver AI capabilities grounded in item-level real-time data.
- **Cloud-Native Architecture for AI Scalability**: Teamwork's cloud-native architecture leveraging Google Kubernetes Engine (GKE) with microservices and auto-scaling provides the technical foundation to deploy compute-intensive AI workloads elastically, scaling AI inference during peak demand periods without performance degradation.

TOSHIBA

Current AI/ML/Agentic Capability

- **Vertically Integrated AI Platform (Production)**: Toshiba designs, develops, trains, and maintains the entire ELERA Security Suite stack in-house cameras, algorithms, AI models, SaaS platform, services, and installation. Production use cases include:
    - Produce recognition at traditional POS and self-checkout with AI and computer vision, reducing lookup time by up to 5 seconds per item
    - Item switching detection monitoring for product substitution fraud
    - Self-Checkout mis-scans and unscanned Items detection using computer vision
    - Bottom of the basket detection for items hidden under carts or baskets
    - Grab and go kiosk using the MxP Vision Kiosk with TCx EDGEcam for frictionless checkout
- **Edge AI with Real-Time Decisioning**: AI models execute directly on TCx EDGEcam+ edge devices using Qualcomm QRB5165 SoC, delivering millisecond-level inference without backroom servers. Processing occurs fully at the edge, maintaining stable performance during high traffic and enabling continued operation during network disruptions with automatic data synchronization when connectivity restores.
- **AI-Powered Customer Analytics**: The ELERA Loyalty Promotions platform, in collaboration with partner Birdzi, uses machine learning to predict customer lifetime value, identify loyal and at-risk-of-churn segments by store, and provide predictions and recommendations for high-affinity products based on customer segmentation, purchase history, and lifetime value.
- **Continuous Model Improvement**: Toshiba maintains a closed-loop feedback cycle where live production data is continuously monitored to identify emerging patterns, validate model performance, and inform retraining cycles. Internal AI Model Analytics dashboards track precision, recall, false positive rates, model drift indicators, and performance trends.
- **Proactive Availability Services (PAS)**: Uses machine learning to continuously monitor hardware and software systems, identify early warning signals and performance anomalies, remotely diagnose issues, and initiate corrective actions before store teams are aware of potential disruptions.

Future AI/ML/Agentic Capability

- **Agentic AI Platform Commercialization (12-Month Horizon)**: Launch of the ELERA Agentic AI Platform enabling autonomous decision-making workflows across store operations, architected for adaptive, AI-native operations with real-time decisioning, orchestration, governance, and observability.
- **Expanded Computer Vision Use Cases (12-Month Horizon)**: Expanded bottom-of-basket detection, item counting, stacked item detection, barcode switch detection, and adaptation to additional hardware types extending AI models across diverse checkout, kiosk, and front-end environments.
- **Semantical Summarization and Narrative Reporting (12-Month Horizon)**: Implementation of Large Language Models to transform raw data into natural-language insights for store and corporate users, making AI-driven analytics accessible through conversational interfaces.
- **Next-Generation Edge AI (24-Month Horizon)**: Launch of next-generation TCx EDGEcam providing modular edge-compute AI with multi-input orchestration combining visual, behavioral, sensor, and transactional data for richer contextual decision-making and more sophisticated real-time interventions.
- **Agentic AI Workflows (24-Month Horizon)**: Introduction of agentic AI workflows that autonomously interpret loss trends, trigger recommended actions, and support adaptive system behavior, moving beyond detection to autonomous response within defined governance frameworks.
- **Trust-Based Autonomous Checkout (5-Year Horizon 2029-2031)**: Broader deployment of computer vision, machine learning, and agentic AI for autonomous, rules-governed decision-making across store systems, with vision for comprehensive self-optimizing retail ecosystems where AI manages most operational decisions within defined trust boundaries.

Overall AI and Agentic Product Strategy, Points of Differentiation

- **Complete Vertical Integration as Strategic Moat**: Some competitors rely on third-party AI partners such as Everseen or SeeChange, Toshiba's end-to-end ownership of cameras, algorithms, AI models, SaaS platform, services, and installation provides greater control over performance, security, and rapid innovation cycles, enabling custom use cases and retailer-specific proof-of-concept solutions competitors cannot easily replicate.

- **AI-First Architecture from Inception**: ELERA was built for AI from the ground up, not retrofitted. The platform's edge-native, IoT-enabled architecture processes data where it's generated—at the store, register, or device—enabling IoT inputs from cameras, sensors, and connected systems to trigger decisions instantly, differentiating Toshiba from competitors whose AI capabilities are bolted onto legacy POS architectures.
- **Edge AI as Core Competency**: Deployment of Qualcomm QRB5165 SoC-powered edge computing enables distributed AI with millisecond inference directly on devices without expensive back-room servers. This edge-first strategy eliminates latency, enables offline AI operation, and reduces infrastructure costs compared to competitors whose cloud-dependent AI requires connectivity and centralized processing. Fast Company recognized ELERA Security Suite as a "Next Big Thing in Tech" for Foundational AI.
- **Aggressive Agentic AI Timeline**: Toshiba's public commitment to launch the ELERA Agentic AI Platform within 12 months represents one of the most aggressive agentic deployment timelines in the POS industry, signaling significant internal development maturity and confidence in production readiness while competitors discuss agentic AI in much longer horizons.

Positioning Maps

Revenue metrics alone fail to capture momentum. To identify true market leaders, we evaluate vendors across three dimensions: innovation velocity, market strength, and install base resilience. In this section, we attempt to provide a more accurate representation of the leading software players' true position in the market.

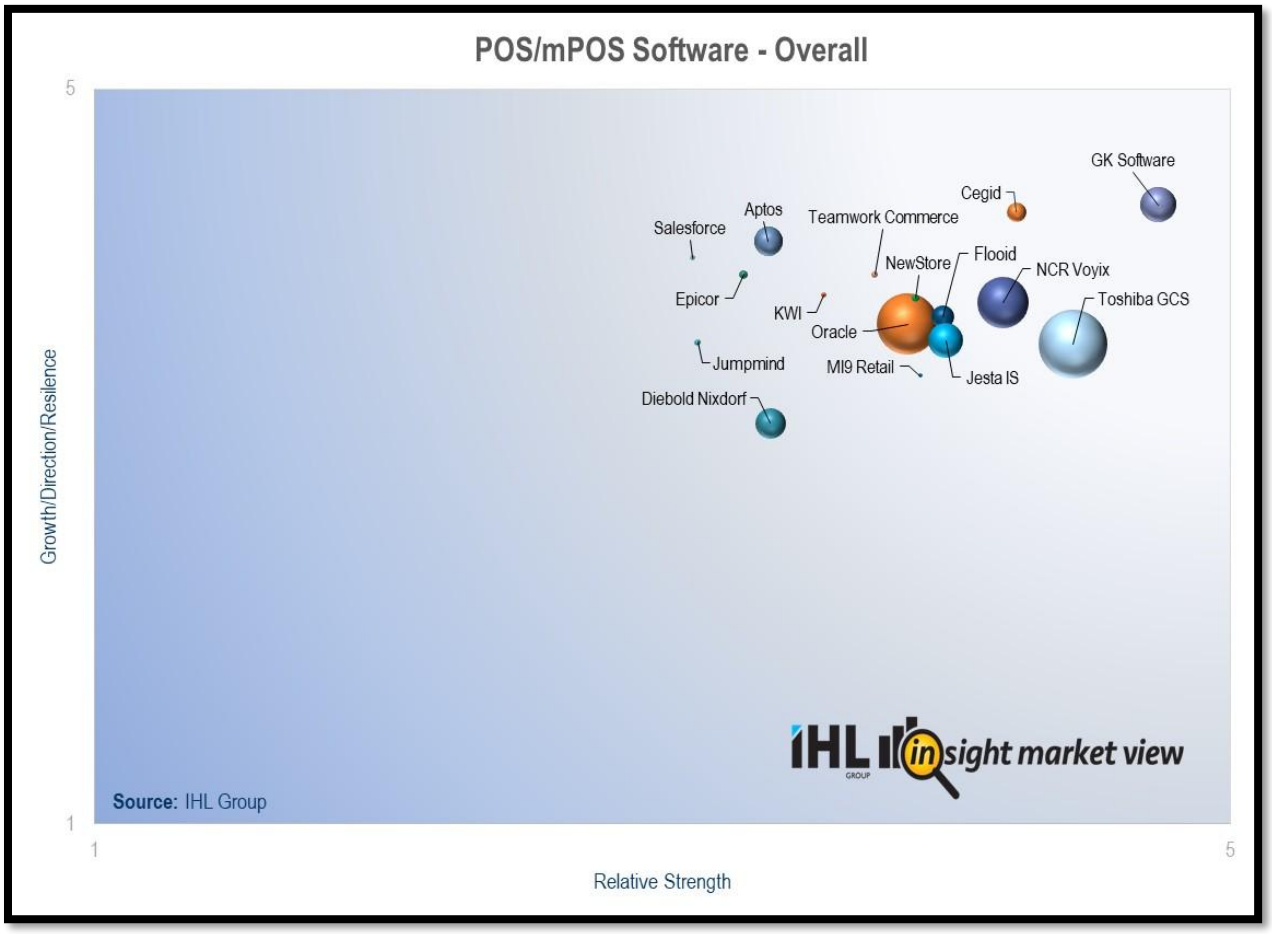
The IHL Insight Market View Positioning Map displays vendors by innovation, market strength, and market share. It is a 3-dimensional view of the market that takes into consideration the scale of the vendors involved and not just direction. So, the reader gets to see size of strength, not just position of strength.

Over 80% of the ratings and positioning come from completely objective measures leveraging our WorldView IT Sizing and Forecasting model and our Sophia data service which tracks installs by vendor. Less than 20% of the total positioning is in any softer measure such as review of innovation or customer satisfaction. For this 20% we have undertaken further measures to ensure there is no bias. Our analysis demonstrates a clear commitment to objectivity in evaluating each solution.

Here are the categories that make up each axis.

X – Market Strength	Y – Growth/Direction/Resilience	Z – Market Share
Functionality across 13 Key Categorizations	Revenue Growth Trend	Market Share
# Retail/Hospitality Accounts	Customer Satisfaction	
Size of Accounts	Unified Commerce Coverage (BI, Commerce, Merch/SCM, Sales & Mktg, Store Systems)	
	Stability/R&D Commitment/Funding	

Total POS/mPOS Software – Overall Positioning



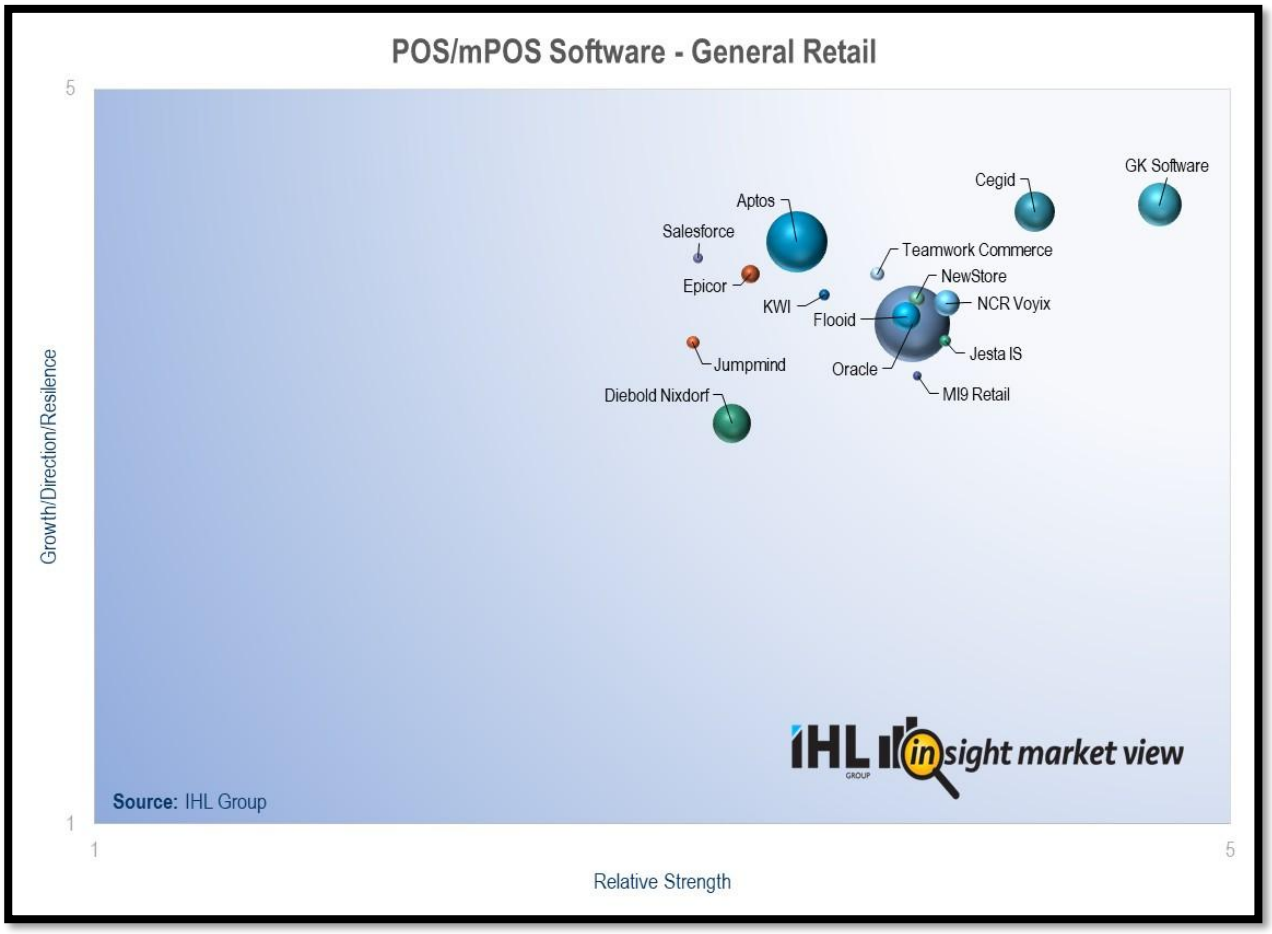
The IHL Insight Market View of the POS/mPOS landscape shows a tightly clustered, highly competitive POS/mPOS vendor landscape, with most leading solutions grouped in the upper-right quadrant, indicating strong market strength combined with positive growth, direction, and resilience. The bubble sizes highlight that a few vendors pair this strong positioning with particularly large market share, while a number of emerging or more focused players achieve similar directional momentum with somewhat smaller installed bases.

In the core leadership zone, NewStore, Mi9 Retail, Oracle, Teamwork Commerce, and Flooid form the central mass of the market, combining above-average strength with solid forward trajectory. NCR Voyix, Toshiba GCS, Jesta IS, and Cegid sit slightly to the right and higher, signaling that they match or exceed this group on both current footprint and resilience, with Toshiba in particular standing out for the size of its bubble and its strong placement on both axes. GK Software appears even farther toward the upper-right, marking it as one of the most advanced and resilient offerings overall, albeit with a somewhat more focused market footprint compared with the very largest players.

Just behind this core cluster, vendors such as Aptos, Salesforce, Epicor, KWI, and Jumpmind occupy positions that suggest credible strength and positive momentum but with relatively smaller market share, implying either strong niche plays or solutions earlier in their growth curve. Diebold Nixdorf sits slightly lower and left of this group, indicating a more moderate combination of growth and relative strength, reflecting a more mature, established base with slower directional change.

Across the chart, the absence of vendors in the lower-left and lower-right regions reinforces that the evaluated players are generally healthy: even solutions with modest share tend to show constructive growth and resilience rather than decline. Taken together, the map tells a story of an increasingly consolidated, innovation-driven POS market in which a concentrated group of platforms set the pace, a few large incumbents leverage scale and stability, and a cohort of agile, cloud-native vendors press upward with strong innovation velocity and targeted market focus.

Total POS/mPOS Software – General Retail



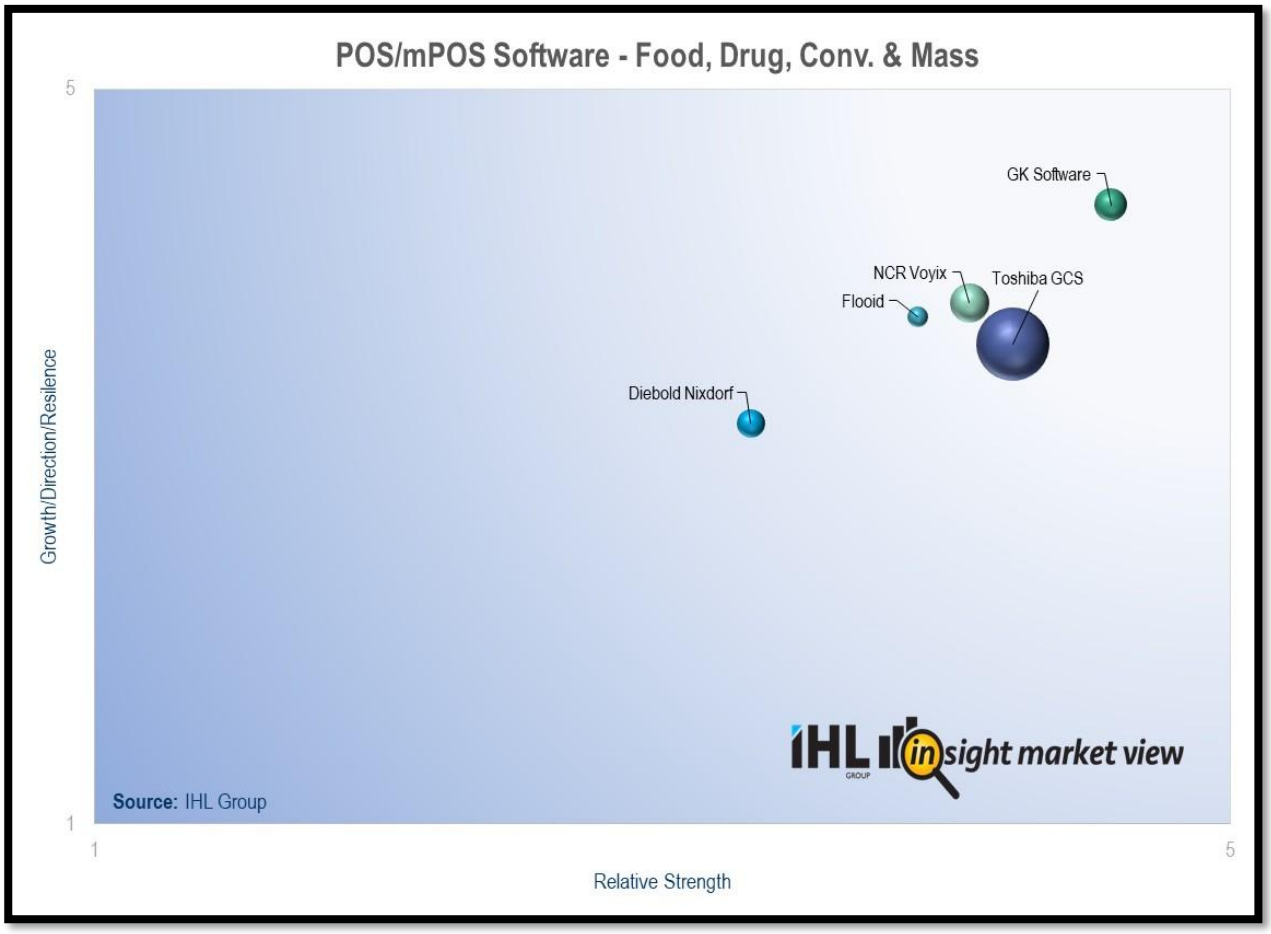
In the General Retail view, the landscape again concentrates most major vendors in the upper-right quadrant, but the pack is tighter and more evenly matched, underscoring how competitive POS is in specialty and department store segments. Relative strength scores for the top dozen vendors are clustered in a narrow band above the midpoint, with almost all of them also showing clearly positive growth, direction, and resilience, suggesting a mature market where leaders are differentiated more by nuance than by dramatic gaps.

Within this cluster, Teamwork Commerce, NewStore, NCR Voyix, Flooid, Oracle, Mi9 Retail, and Jesta IS overlap closely, forming the core of the specialty and department store leaders that blend solid current franchise strength with forward momentum. Their bubbles are moderate to large, indicating that these solutions pair that attractive trajectory with meaningful installed bases across specialty softlines, hardlines, and department store environments. Cegid and GK Software sit just above and to the right of this central mass, signaling that they outpace peers slightly on both axes and stand out as particularly resilient and strategically well-positioned for general retail.

Aptos, with one of the largest bubbles on the chart, appears slightly left of the absolute leaders but higher on the growth and resilience axis, highlighting a vendor that combines substantial market share with especially strong innovation and directional momentum in specialty and department store use cases. Salesforce, Epicor, KWI, and Jumpmind cluster just behind the main group, indicating credible and improving offerings whose relative strength and growth are positive but not yet at the same level as the largest incumbents and omnichannel suites. Diebold Nixdorf is positioned lower and farther left than the rest, implying a more limited relative strength and slower trajectory in these segments, which likely reflects a more focused or legacy-oriented presence compared with the cloud-first and unified-commerce leaders.

The overall story from this chart is of a healthy and innovation-oriented general retail POS market in which numerous vendors provide robust solutions for specialty and department stores, but a handful of platforms—especially Cegid, GK Software, Aptos, and the tightly bunched omnichannel suites around Teamwork Commerce and NewStore—set the pace on both current market position and future readiness.

Total POS/mPOS Software – Food/Drug/Convenience/Mass



The Food, Drug, Convenience, and Mass chart shows a much more concentrated competitive set, with only four vendors landing in leadership positions and all of them solidly to the right of the midline on relative strength and above the midpoint on growth, direction, and resilience. This indicates that, in these high-volume store formats, a small set of platforms command most of the momentum and are clearly differentiated from the rest of the POS market.

Toshiba GCS and GK Software anchor the top-right region, signaling that they combine very strong current market strength with robust forward trajectory across grocery, drug, convenience, and mass merchants. Toshiba's bubble is the largest on the chart, underscoring its particularly significant share and installed base in these segments, while GK sits even higher on the growth and resilience axis, suggesting especially strong innovation velocity and strategic momentum, albeit with a somewhat smaller but still substantial footprint.

Just behind these two, NCR Voyix and Flooid are positioned slightly left and lower but still firmly in the upper-right quadrant, indicating strong, resilient offerings that are competitive on both capability and direction, though with comparatively smaller share than Toshiba in particular. Diebold Nixdorf trails this group at a mid-right, mid-up placement, implying a credible but more modest role in food, drug, convenience, and mass, with steadier but less pronounced growth and directional change than the four leaders clustered ahead of it.

Overall, the story this chart tells is of a concentrated, scale-driven market in which Toshiba and GK have emerged as the clear pace-setters, very closely followed by NCR Voyix and Flooid, while other POS vendors active in broader retail segments play only secondary roles in these demanding, transaction-intensive formats.

POS/mPOS Providers' Key Differentiators

Leading POS/mPOS Providers Definition

We strongly believe POS/mPOS is foundational for success in today's modern retail enterprise. Depending upon a retailer's size and history, it often helps define the choice of either an integrated suite or best-of-breed solution. There is truly no one-size-fits-all approach. For retailers seeking counsel in these areas, our REAP Advisory reports are a ready resource for that advice. Based upon those reports, our research, and the information on installations we've been able to collect, we wanted to provide a summary of the key vendors in the key areas and their predominant deployment tier. For inclusion in the subsequent table for General Retail and FDCM, we applied the following criteria by solution:

- POS/mPOS – at least 10 WW accounts at that level

This is based upon known accounts in IHL Group's Sophia Retail Data Service, covering the leading 5,000 retailers in the US and EMEA. In reviewing this chart, one should not consider this to be an exhaustive list of the only vendors that might service accounts across the three groupings charted here. In Sophia we have over three hundred unique vendors providing solutions in these three areas across North America and Europe.

Additionally, one should not infer that because a vendor is listed in Tier II that they are not able to service Tier I clients. Similarly, a vendor in Tier III should aptly be considered for Tier II and potentially Tier I opportunities. As an even further qualifier, retailers can often have unique make-or-break type requirements, so just because a vendor is listed in Tier I, they may not be best suited for all opportunities at that level.

Furthermore, if a vendor had 8 Tier I POS/mPOS accounts, and several others in the Tier II space, they were put in the Tier II block. For retailers wanting specific details on client installations used in this analysis, please feel free to schedule a call with us.

One final note: These observations are based upon our research or public information vendors have shared with us. Some vendors have either chosen not to provide feedback, or company rules prohibit them from sharing. It is our experience that vendors freely share references with retailers, so we recommend that retailers query a broad array of vendors prior to forming their short list.

Leading POS/mPOS Providers

	General Retail		FDCM	
Tier I (>$1B)	Aptos Cegid Diebold Nixdorf Flooid GK Software	Jumpmind NCR Voyix NewStore Oracle Teamwork Commerce	Diebold Nixdorf Flooid GK Software	NCR Voyix Toshiba GCS
Tier II ($250M-1B)	Epicor Jesta IS KWI	MI9 Retail Salesforce		
Tier III ($50M-250m)				

Leading POS/mPOS Providers' Metrics

The next 8 charts highlight some of the key comparative metrics between vendors. These are meant to highlight some of the key differentiators among vendors. These can be used as pre-screening metrics, or the basis for further questions.

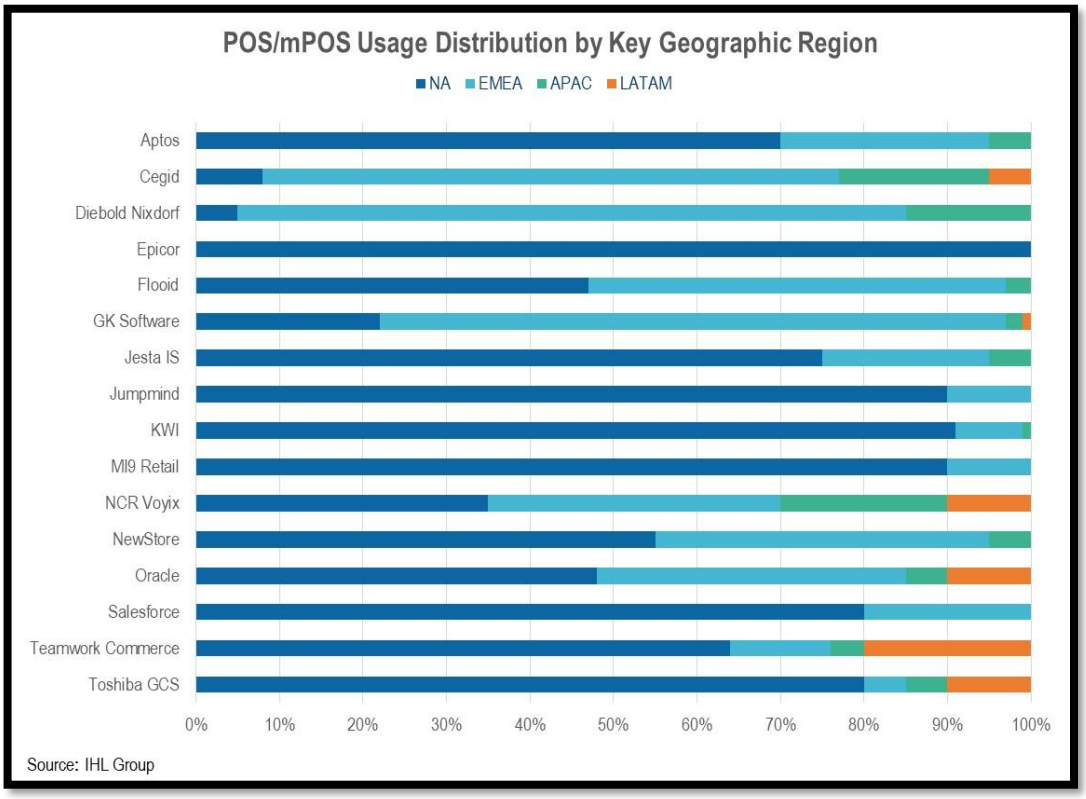
The charts in this report combine directly reported metrics with carefully developed estimates where vendor data was unavailable or could not be disclosed under vendor policy. The objective is to present a realistic and decision-useful view of the market while recognizing practical limits on primary data collection.

Where vendors did not provide specific figures for metrics such as store counts, number of clients, or installed devices, values have been estimated using a combination of: (a) data from other IHL Group research initiatives, (b) known installations captured in the Sophia retail technology database, and (c) prevailing industry norms derived from prior studies. All such estimates have been constructed on a conservative basis to avoid overstating any vendor's scale or market position. The charts do not distinguish between metrics reported directly by vendors and those derived through estimation; all figures should therefore be interpreted as best-effort approximations rather than audited values suitable for financial reporting.

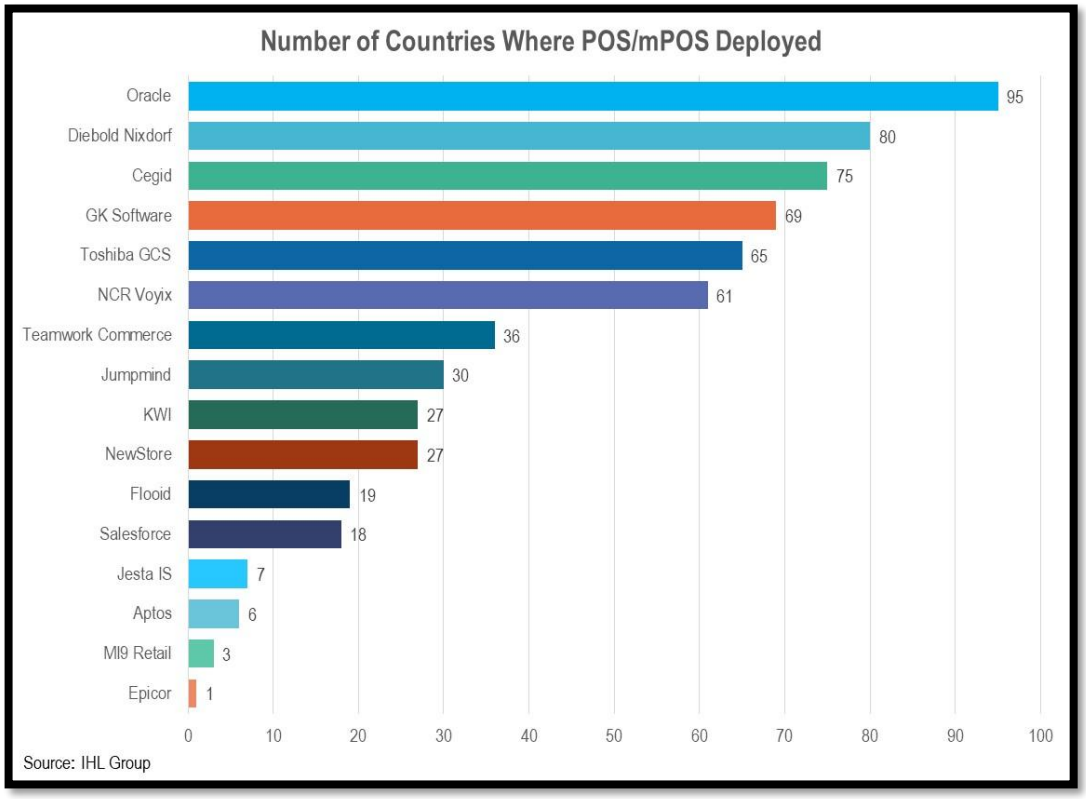
These charts attempt to highlight differentiators in the following areas:

- Internationalization
- Architecture
- Vendor size and range of POS/mPOS accounts serviced
- Vendor momentum, and
- Reporting

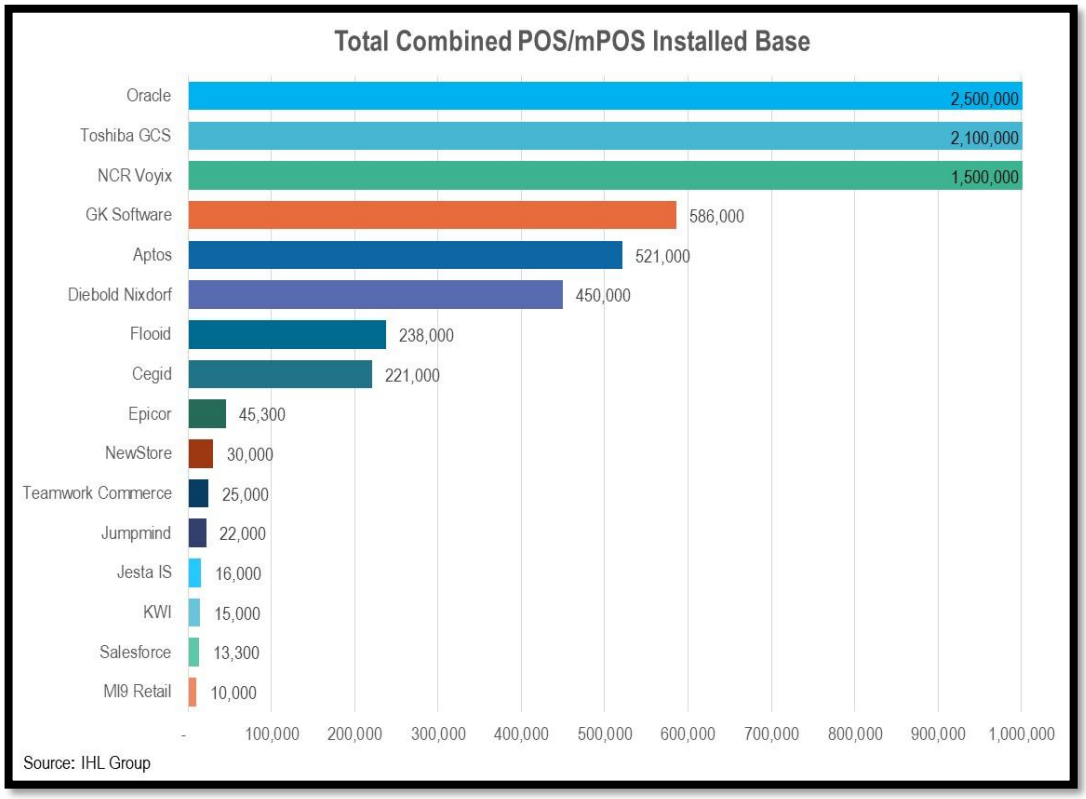
POS/mPOS Characteristic: Geography



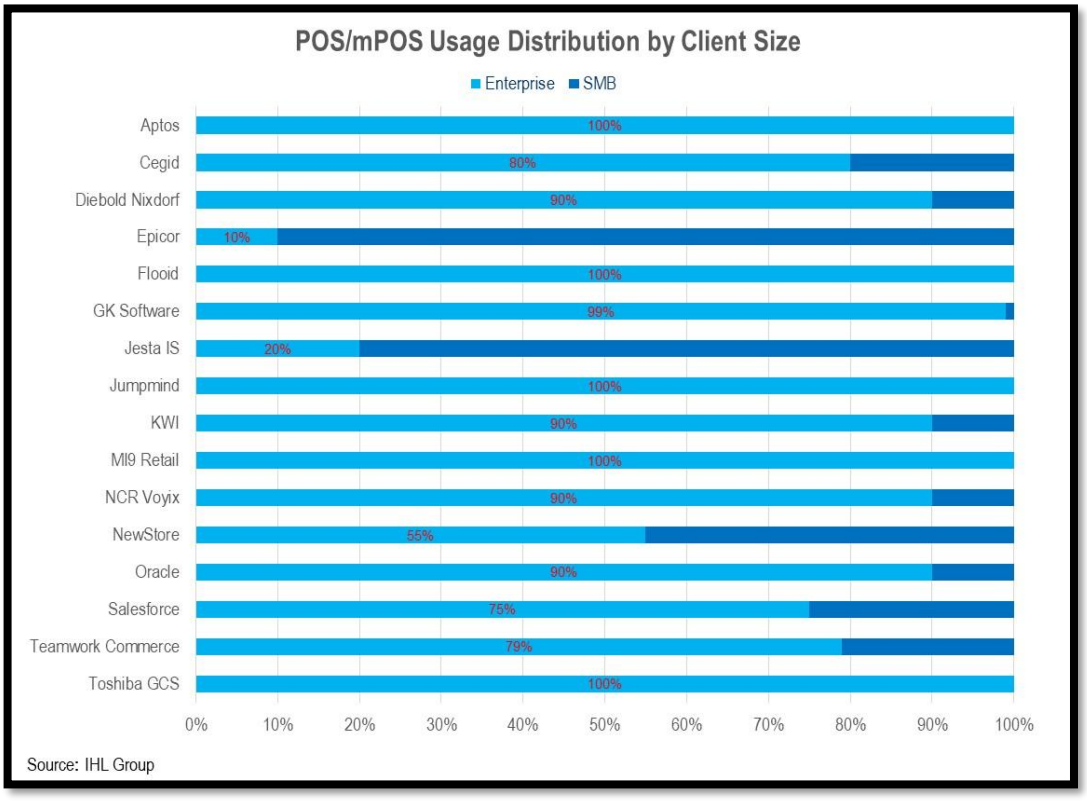
POS/mPOS Characteristic: Country Experience



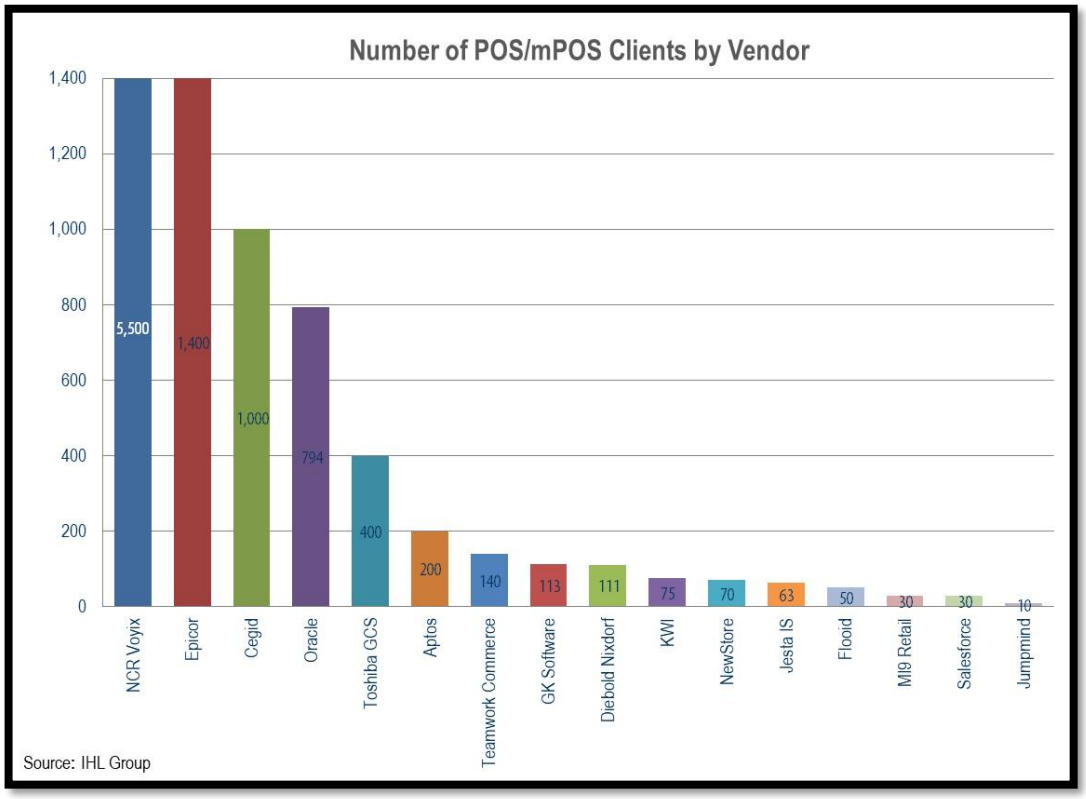
POS/mPOS Characteristic: Total POS/mPOS Devices Licenses



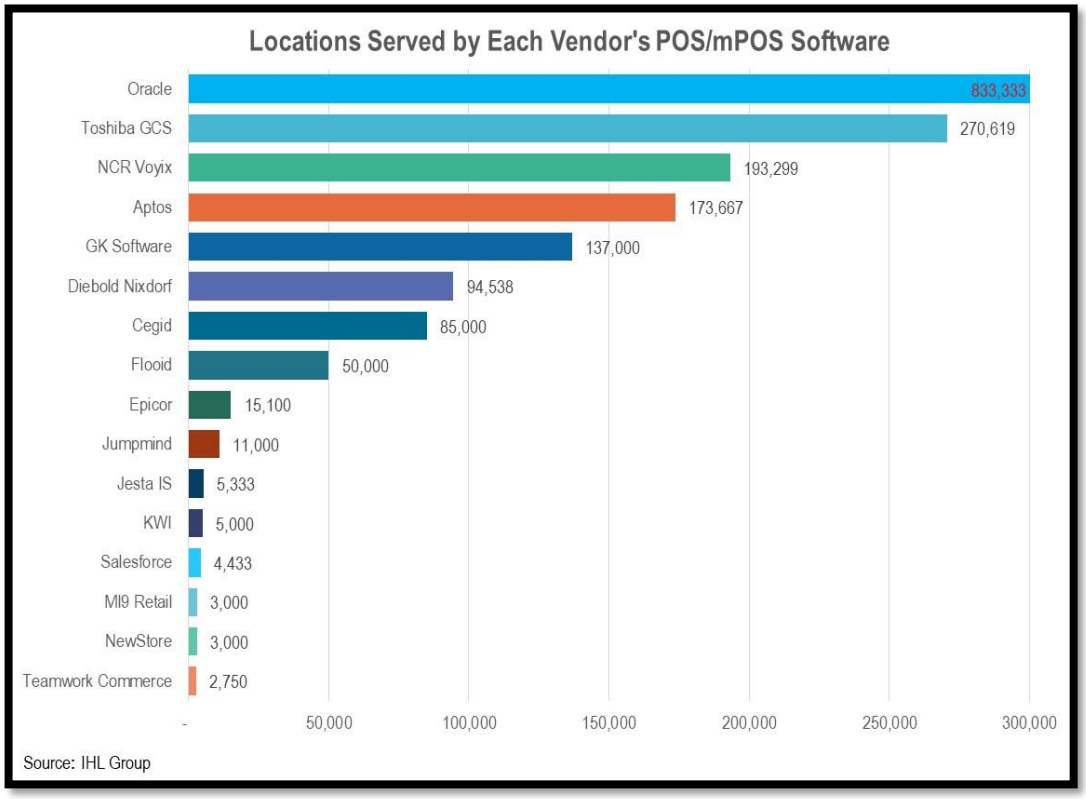
POS/mPOS Characteristic: Usage Distribution by Client Size



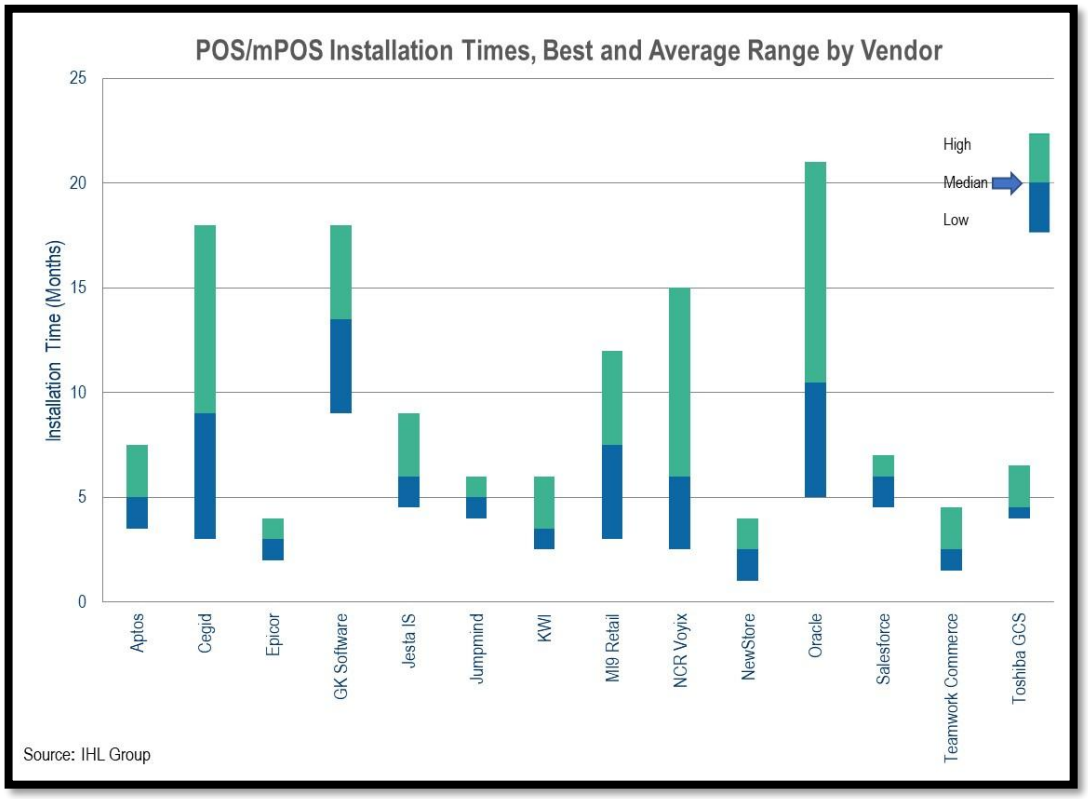
POS/mPOS Characteristic: Total POS/mPOS Clients



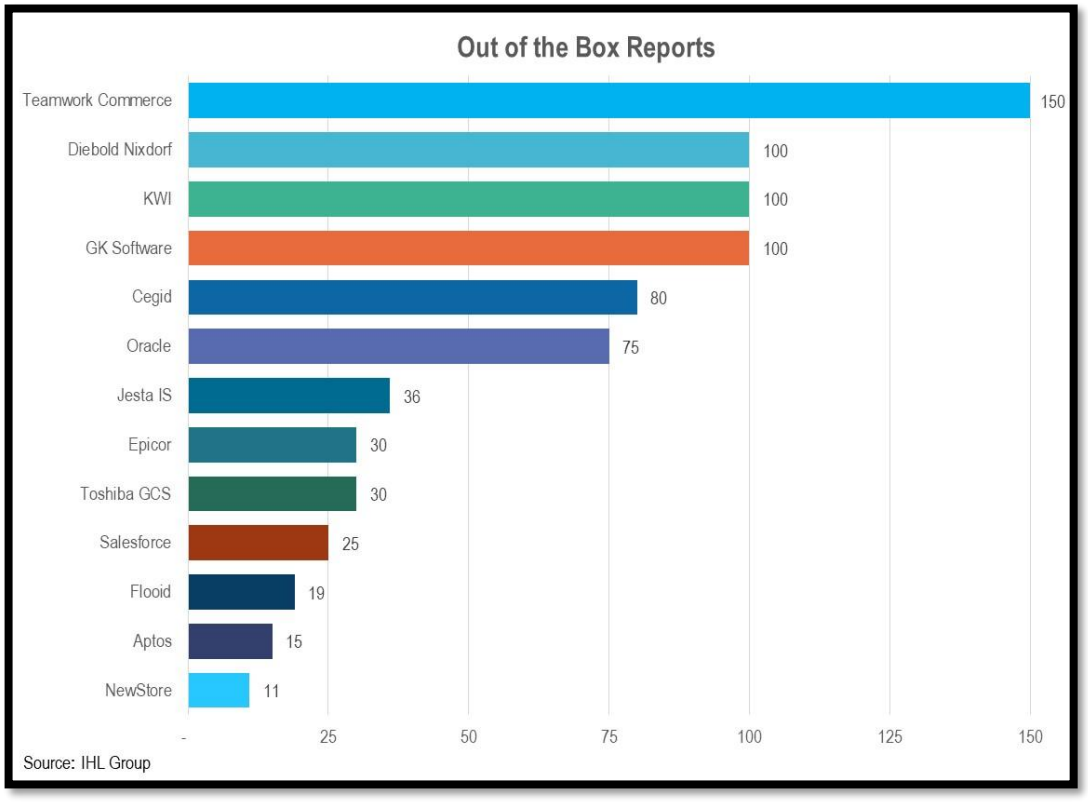
POS/mPOS Characteristic: Retail Locations Supported



POS/mPOS Characteristic: Integration



POS/mPOS Characteristic: Ready Reports



Key Observations/Differentiators of the Leading Vendors

The summaries which follow are based upon interviews and briefings with vendors and retailers. This is not meant to be exhaustive, but highlights either those items emphasized in the interview, or items that we felt were differentiators or salient relative to a POS/mPOS selection.

The reality is that there are several hundreds/thousands of features and functions that drive an POS/mPOS selection. A vendor's value proposition is much more detailed than can be captured in a few bulleted items. With that noted, the observations that follow note the responses and areas that we felt were differentiated. These comments are drawn from general understanding, the briefing process as well as the 158-question survey each vendor filled out.

We have only included summary profiles on those vendors that responded to the questionnaire. This is the same approach we took in the preceding charts to limit it to only those vendors who were able to respond.

Should you have questions on any vendors, our observations or any metrics, please feel free to reach out.

Vendor Solution Overviews

Solution Overview

Product Name:	GK CLOUD4RETAIL omniPOS
Target Markets:	Tier 1 retailers globally across grocery, fuel and convenience, fashion, specialty, luxury, and sub-segments including health and beauty, DIY, and retail hospitality
Core Platform:	Cloud-native microservices architecture with over 400 REST APIs, supporting flexible deployment models (SaaS, on-premise, or hybrid) across 69 countries with 422,000+ deployed devices processing over $1 trillion in annual sales
Recent Strategic Acquisitions:	Nomitri (2025) for deep-tech computer vision specializing in on-edge processing for fraud detection, item recognition, and age verification

Top 5 Differentiators

1. Unmatched International Scale with Built-In Compliance

Description: GK CLOUD4RETAIL supports deployment in 69 countries with dozens of country packages available out-of-the-box, covering fiscal, legal, local, and language requirements. A dedicated internationalization team continuously monitors legislation changes across all supported countries, providing impact analysis, development, integration, certification, and ongoing maintenance as part of the standard product at no additional cost.

Evidence:

- 69 countries supported with built-in fiscal devices, online data submission to tax authorities, cryptographic signatures, standardized audit exports (SAF-T, DSFinV-K, X/Z reports), e-invoicing, and country-specific receipt requirements
- Continuous compliance monitoring with recent updates including Germany (Amadeus Verify), Bulgaria (Diebold 1200 printer), Greece (major fiscal update), France (annual audit), Zambia (offline handling)—all delivered through regular releases
- 24 languages with multi-currency transactions, real-time FX rates, VAT management compliant with EU ViDA
- Multi-region data centers with GDPR, CCPA, ISO/IEC 27001, SOC 2, PCI DSS compliance
- Shoprite Group deployed across multiple Southern African countries leveraging GK fiscalization in South Africa, Angola, Zambia, Botswana, and Malawi; Adidas operates across 25 countries with consistent experience.

2. Production-Deployed AI Ecosystem with Proven ROI

Description: GK delivers three integrated AI solutions in production with measurable business impact: GK AIR (price optimization and personalization), GK Engage (composable loyalty and hyper-personalization), and GK Vision (computer vision for fraud detection and item recognition). The company is advancing Agentic AI through its PrivateGPT ecosystem for on-edge, data-sovereign processing.

Evidence:

- GK AIR: 360+ cloud installations across 34 countries processing an average of 50 million recommendations and prices per hour; Douglas achieved 8. 0% sales from recommendations, 5. 7% newsletter conversion rate, 31. 7% click rate; 11teamsports increased margins and revenue with 3% order increase; BS Apotheken OHG prices 700,000 products daily
- GK Engage: Launched 2024, deployed in 80+ stores with AI-driven hyper-personalization creating real-time offers based on current basket, consumer profile, shopping behavior, and location; Coop Switzerland is using GK AIR. There are two additional unnamed retailers using Engage including a retailer that has deployed GK Engage in 490 Stores in Belgium and Luxembourg.
- GK Vision (Nomitri acquisition): On-edge computer vision for SCO fraud detection (no-scan, barcode switch, items left), non-barcoded item recognition, and age verification—in trial with leading retailers with significantly lower TCO than competing solutions

- PrivateGPT: On-premise LLM framework for intelligent product finding, employee assistance, and success factor analysis with data sovereignty
- The Predecessor (MCA- mobile Consumer Assistant) mobile framework allowed one retailer to support 1 billion loyalty transaction, and 6 million users at another

3. Extreme Platform Flexibility and Openness

Description: GK CLOUD4RETAIL provides true hardware and OS agnosticism with six distinct extension models enabling customization without impacting the standard product. Retailers maintain full control over deployment model, operating systems, devices, services, and automation level while continuing to receive standard updates.

Evidence:

- Hardware/OS agnostic: Windows 10+, Linux (SuSE, Redhat), iOS 15+, Android 8+, clients across stationary POS, mobile POS, tablets, and industry devices
- Six-layer extension model: parameter configuration (thousands of parameters), WYSIWYG UI customization, process modeling with domain-specific language, App Enablement for external apps, comprehensive SDK, custom client development without touching core
- 400+ open REST APIs with public developer portal (omnibasket. com), SDKs, sandbox environments, postman collections enabling headless commerce
- Deployment flexibility: Azure/AWS fully managed cloud, on-premise data center, or hybrid using identical Docker/Kubernetes technology stacks
- Shoprite Group implemented Africa's first RFID self-checkout in 6 months, with the overall POS effort encompassing 2,450 stores with 29,191 terminals in 5 months; Thalia bookstores integrated custom features using App Enablement stating "We are much faster and no longer require significant additional effort when it comes to driving new release or product updates"

4. Enterprise-Grade Performance at Proven Scale

Description: GK CLOUD4RETAIL is the current solution live in thousands of stores for many of the world's largest retailers, demonstrating exceptional performance benchmarks including sub-200ms transaction response times, 300 transactions per second throughput, 99. 75% uptime guarantee, and proven scalability during Black Friday and Singles Day peak events.

Evidence:

- 422,280 devices deployed globally (June 2025) processing over $1 trillion in annual sales
- Performance benchmarks: p95 200ms transaction receiving response time, 300 tx/s throughput for average 10-line-item transactions
- Edge computing resilience: full offline operation with unlimited duration—POS continues scanning, pricing, promotion calculation, taxes, receipt printing using cached master data with guaranteed ordering and conflict-safe reconciliation
- Cloud-native microservices architecture following MACH principles (Microservices, API-first, Cloud-native, Headless) with Docker/Kubernetes, auto-scaling, stateless services
- Multi-layered security: secure coding (SonarQube, SpotBugs, OWASP), container scanning (Trivy, Syft), cluster threat detection (Falco), mutual TLS (Linkerd service mesh), SIEM (OpenSearch/Elastic Security)
- Shoprite Group rolled out to 2,450 stores in 5 months upgrading 29,191 tills with former CIO David Cohn stating "I can't overstate the stability of this first release. It worked out of the box, with very few defects or issues"; Coop Switzerland manages 1,900 stores across multiple formats on single platform

5. Comprehensive Multi-Format Platform with Unified Business Logic

Description: GK CLOUD4RETAIL provides complete coverage across all retail touchpoints and formats—POS, mPOS, self-service (self-checkout, self-scanning, smart cart, scanless), fuel, hospitality—with a unified promotion and pricing engine, store operations, and omnichannel fulfillment sharing the same business logic and real-time data synchronization.

Evidence:

- Single platform serves grocery, fuel and convenience, fashion, specialty, luxury, health and beauty, DIY, liquor, retail hospitality—enabling multi-format retailers to achieve economies of scale
- Unified Pricing Calculation Engine (PCE) serves all touchpoints (POS, mPOS, SCO, self-scanning, fuel, hospitality) calculating discounts in real-time; supports complex promotions: BOGOF, mix-match, tender-based, continuity, challenges, tiered benefits, personalized offers

- Complete store operations: inventory management on mobile devices, automated reordering integrated with SAP Retail Suite, two-stage approval workflows, Stock Information Service with proxy mode for ERP synchronization
- In-store fulfillment launched 2024 with microservices-based composable services, substitute handling, pick/pack/pickup workflows with status updates
- Cross-channel returns: receipt and receipt-less with configurable authorization, automatic transaction search across channels, fraud prevention through one-time blocking
- Comprehensive payment ecosystem and existing integrations: Adyen, WorldPay, Aurus integration; major card brands; Verifone, Ingenico, PAX terminals; mobile wallets (Apple Pay, Google Pay, WeChat, Alipay); BNPL; local schemes (SEPA, Girocard, iDEAL)
- Sopharma Trading (Bulgaria's largest healthcare company, 210+ stores) achieved seamless ERP-to-store-to-online-to-warehouse data supply with Technology Support Manager stating "For our business, the GK CLOUD4RETAIL commerce platform is the best solution I have seen so far".

DETAILED INSIGHT APPENDIX: Retailer Key POS/mPOS Selection Questions

Selecting a POS/mPOS solution represents one of the most significant technology decisions a retail or hospitality enterprise can make. The choice impacts daily store operations, customer experience, employee productivity, financial performance, and long-term competitive positioning. This guide reframes the most important POS capabilities into 15 strategic questions that retail executives and procurement teams should ask prospective vendors during the evaluation process.

These questions are designed to:

- Uncover vendor capabilities in areas critical to modern retail success
- Assess strategic alignment between vendor roadmap and retailer vision
- Evaluate implementation risk and vendor stability
- Understand total cost of ownership and partnership value
- Identify competitive differentiation and future-readiness

Question 1: WHAT IS YOUR ROADMAP FOR EMERGING TECHNOLOGIES LIKE AI, AGENTIC AI, AND ADVANCED PERSONALIZATION?

Why This Matters:

AI is rapidly transforming retail—from inventory optimization and demand forecasting to fraud detection and personalized recommendations. Agentic AI—systems that autonomously make retail decisions—will become increasingly important. Vendors investing in these areas demonstrate forward-thinking and provide competitive advantage. Understanding vendor commitment to emerging technologies is essential for long-term partnership viability.

What to Listen For:

- AI capabilities today: What AI/ML capabilities does the vendor currently offer? Look for: product image recognition, computer vision fraud detection, dynamic pricing optimization, demand forecasting, inventory balancing recommendations, personalization algorithms, loss prevention analytics.
- AI roadmap: What AI capabilities are planned? When? Are these native capabilities or third-party integrations? How does the vendor prioritize AI investments vs. other development areas?
- Agentic AI: Is the vendor developing agentic AI capabilities (autonomous decision-making)? Which use cases? Inventory rebalancing? Pricing optimization? Staff scheduling? Predictive procurement?
- Data and AI governance: As AI becomes more prevalent, how does the vendor address explainability and auditability? Can retailers understand why specific pricing/recommendations are made? This will be required for regulatory compliance and customer trust.
- Edge AI: Can AI models run on edge devices (store-level servers or POS terminals) or only in the cloud? Edge AI enables offline operation and faster decision-making.
- Integration with third-party AI: If the vendor doesn't provide native AI, what is their strategy for integrating third-party AI platforms (OpenAI, Google, etc.)? How seamless is this integration?
- Ethical AI: How does the vendor address ethical AI concerns (bias in recommendations, discriminatory pricing, privacy in personalization)?

Red Flags:

- Vendor has no AI roadmap or minimal AI investment
- All AI capabilities are delegated to third parties; no native AI development
- No vision for emerging technologies like agentic AI
- Cannot articulate approach to AI explainability and auditability
- Ethical AI considerations not addressed

Follow-Up Questions:

- "Walk us through your AI roadmap for the next 3 years. Which specific use cases are you targeting? Why these first?"
- "We want to use AI to optimize pricing dynamically based on demand and inventory. Does your system support this natively? Or would we need to integrate a third-party AI platform?"
- "One of our concerns is AI bias. If your system recommends products to customers, can we audit these recommendations to ensure they're not biased based on customer demographics?"
- "Many retailers are exploring autonomous decision-making (e.g., automatically rebalancing inventory between stores). Is this on your roadmap? When? What other decision-making workflows might we automate?"

Question 2: TELL US ABOUT YOUR CUSTOMER BASE. WHAT IS YOUR RETENTION RATE, AVERAGE CUSTOMER TENURE, AND CUSTOMER SATISFACTION METRICS?

Why This Matters:
POS implementations represent multi-year commitments and significant capital investments. Vendors with strong customer retention rates, long average customer tenure, and high satisfaction indicate platform quality and customer-centric development. High churn and declining retention suggest platform weaknesses, poor support, or strategic misalignment. Vendor stability is essential to prevent forced migration and stranded investment.

What to Listen For:
- Customer retention rate: What percentage of customers renew their contracts annually? Industry leaders typically achieve 95%+ retention. Lower retention (below 90%) suggests customer dissatisfaction.
- Average customer tenure: How long do customers typically stay with the vendor? 5 years? 10+ years? Longer tenure indicates customer satisfaction and stickiness.
- Customer base: How many active customers does the vendor have? How many locations are deployed? Larger customer base indicates market acceptance and proven reliability.
- Customer satisfaction (NPS): What is the Net Promoter Score (NPS)? 50+ is considered excellent; 30-50 is good; below 30 is concerning. Is NPS trending up or down?
- Customer references: Can the vendor provide references—particularly from retailers comparable to your organization? Ask about their experience, satisfaction, and likelihood to recommend.
- Acquisition vs. organic growth: Is the vendor growing through new customer acquisition or primarily retaining existing customers? Growth through retention suggests product-market fit; growth through acquisition alone is less sustainable.
- Market position: Has the vendor's market share grown or declined over the past 3 years? Growing market share indicates competitive success; declining share suggests strategic challenges.

Red Flags:
- Retention rate below 90%
- Average customer tenure less than 5 years
- Declining customer base or market share
- Low or declining NPS
- Cannot provide strong references
- Recent executive turnover or organizational restructuring
- Acquisition activity (suggests financial distress or strategic pivot)

Follow-Up Questions:
- "Provide the names and contact information for five reference customers similar to our organization (comparable size, vertical, geographic scope). How long have they been customers? Are they satisfied? What are their biggest challenges with your platform?"
- "Your retention rate is X%. Who leaves and why? What are the most common reasons for churn?"
- "How has your market share and customer base grown over the past 3 years? Are you gaining share or losing share to competitors?"
- "What is your NPS? How has it trended over the past 2 years? Have you achieved significant improvements?"

Question 3: DESCRIBE YOUR API ARCHITECTURE AND INTEGRATION CAPABILITIES. HOW FLEXIBLE ARE YOU FOR CUSTOM INTEGRATIONS?

Why This Matters:
Modern retail ecosystems are complex, involving integrations with ERP systems (SAP, Oracle, NetSuite), e-commerce platforms (Shopify, SFCC), OMS solutions, CRM systems, loyalty platforms, payment processors, and emerging technologies. An API-first architecture ensures flexibility to integrate with best-of-breed solutions and adapt as technology landscapes evolve. Vendors with limited or immature APIs constrain retailer flexibility and increase technical debt.

What to Listen For:
- API comprehensiveness: Does the vendor provide a comprehensive API surface? Look for APIs covering: transactions, inventory, pricing, promotions, customers, orders, fulfillment, payments, reporting, loyalty. Comprehensive APIs enable end-to-end integrations.

- API count: How many APIs does the vendor expose? Industry leaders provide 100-400+ APIs. Fewer APIs indicate less flexibility.
- API documentation: Is API documentation complete, with examples and use cases? Comprehensive documentation accelerates integration development.
- Integration patterns: What integration patterns are supported? Look for: synchronous REST APIs, asynchronous webhooks, event-driven architecture, message queues (Kafka), batch file processing, ETL frameworks. More patterns provide more flexibility.
- Pre-built connectors: Does the vendor provide pre-built connectors for common enterprise systems (SAP, Oracle, NetSuite, Salesforce, Shopify)? Pre-built connectors accelerate implementation.
- Developer ecosystem: Does the vendor support a developer community? Developer portals? SDKs? Sandbox environments? These support third-party integration development.
- Integration middleware: Does the vendor provide integration middleware (iPaaS) or recommend third-party options (MuleSoft, Integration Cloud)? Integration middleware accelerates complex integrations.
- Custom integration support: How does the vendor support custom integrations? Do they provide professional services? Can customers build custom integrations themselves?

Red Flags:

- Limited API surface (fewer than 50 APIs)
- Poor or incomplete API documentation
- No support for modern integration patterns (webhooks, event streams)
- No pre-built connectors for common enterprise systems
- Weak developer ecosystem or community support
- Custom integrations require extensive vendor professional services

Follow-Up Questions:

- "Describe the technical architecture of a typical integration. We want to integrate our SAP system with your POS. Walk us through the integration architecture. How are inventory, pricing, and order data synchronized?"
- "Do you provide a pre-built SAP connector? Or would we need to build a custom integration? How much professional services effort would this require?"
- "We want to use MuleSoft as our enterprise integration platform. Can we integrate your system with MuleSoft? What APIs would we use? Any constraints?"
- "Provide case studies showing complex integrations with multiple enterprise systems. What was the integration architecture? How long did implementation take?"

Question 4: DESCRIBE YOUR APPROACH TO LOCALIZATION AND COMPLIANCE FOR MULTI-REGION RETAILERS. WHICH GEOGRAPHIC MARKETS DO YOU SUPPORT?

Why This Matters:

Retailers operating across multiple regions face complex, divergent regulatory requirements. Fiscalization requirements (Germany, France, Italy), VAT handling variations, sales tax complexity, receipt formatting standards, consumer protection laws, and data residency requirements vary significantly by jurisdiction. Vendors capable of supporting multi-region deployments with built-in compliance reduce implementation burden and regulatory risk.

What to Listen For:

- Geographic coverage: In how many countries is the vendor deployed? What regions (Europe, APAC, Americas, LATAM)? Broader coverage indicates proven international experience.
- Localization: Does the vendor support language localization? Multi-currency? Regional tax requirements? The more comprehensive, the better.
- Fiscalization support: In which countries do they provide fiscalization (government-required digital receipts, audit trails, tax reporting)? This is essential for European retailers. Examples: Germany (TSE), France (DGCPP), Italy (RTC), Spain, Poland, Sweden.
- Compliance frameworks: Beyond fiscalization, what other compliance frameworks do they support? GDPR compliance? Local consumer protection laws? Data localization requirements?
- Regional expansion: If your organization plans to expand to new markets, how quickly can the vendor support new regions? What is the typical timeline for new country/region deployment?
- Regulatory updates: How does the vendor stay current with evolving regulations? Who monitors regulatory changes? What is the deployment timeline for compliance updates?
- Professional services: Do they have in-country expertise and professional services in key markets? This accelerates implementation in new regions.

Red Flags:

- Limited geographic coverage; not deployed in your target regions
- No fiscalization support in required countries
- Limited localization capabilities
- No clear process for regulatory updates or new region deployment
- No in-country professional services or support
- Compliance documentation vague or incomplete

Follow-Up Questions:

- "We currently operate in the US and Europe. We want to expand to Asia (Singapore, Hong Kong, Japan). Can your system support these markets? What fiscalization/compliance requirements exist? How long would expansion to new markets take?"
- "The EU GDPR requires specific data handling and customer consent management. How does your system ensure GDPR compliance? Can you demonstrate this to our Data Protection Officer?"
- "Germany requires electronic receipts (TSE) with cryptographic signatures. Does your system support German TSE? How is this implemented?"
- "We expect new regulations related to AI transparency in pricing. How quickly can you adapt your system to support emerging regulations?"

Question 5: WALK US THROUGH YOUR PRICING MODEL AND TOTAL COST OF OWNERSHIP. WHAT IS INCLUDED IN THE BASE LICENSE VS. ADD-ON MODULES?

Why This Matters:

POS costs extend well beyond software licensing—including hardware, professional services, training, ongoing support, maintenance, integrations, and customizations. Understanding the vendor's pricing model and true total cost of ownership (TCO) is essential for budgeting, ROI analysis, and ensuring no hidden costs emerge post-contract. Transparent pricing prevents budget surprises and enables accurate financial comparison across vendors.

What to Listen For:

- Licensing model: What is the licensing model? Per-location? Per-user? Per-transaction? Hybrid? Different models have different cost implications as the business scales.
- Base license included: What is included in the base license? Core POS functionality? Reporting? Customer management? Loyalty? Inventory management? Understand what's included vs. what costs extra.
- Add-on modules: What modules/capabilities require additional licensing? Examples: Advanced Analytics, AI Personalization, OMS, CRM, Advanced Loyalty. Understand what is optional vs. core.
- Professional services: How is professional services priced? Project-based? Time and materials? What is included in implementation? What costs extra (data migration, integration development, customization)?
- Training and change management: Are training and change management included? Or do they cost extra?
- Ongoing support: What is included in ongoing support? 24/7 support? Business hours only? What is the support cost? Are there different tiers?
- Hardware: Is hardware included or separate? If separate, what is the typical hardware cost? Does the vendor have hardware partnerships/discounts?
- Implementation timeline and cost: Typical implementation timeline? Typical implementation cost? Factors that increase cost?
- 5-year TCO: Can the vendor provide a 5-year TCO estimate for a deployment of your size (number of stores)? Include software, hardware, services, support.

Red Flags:

- Vague pricing; cannot provide clear cost breakdown
- Many "hidden" costs (integration, training, support) not disclosed upfront
- No clear licensing model; cost structure unclear
- Hardware costs exorbitant
- Implementation timeline and costs not predictable
- 5-year TCO significantly higher than alternatives

Follow-Up Questions:

- "Can you provide a detailed cost breakdown for a 200-store implementation? Break down: software licensing (per-location, per-user), hardware, professional services (implementation, training, data migration), first-year support, and 5-year TCO. "

- "Our IT team wants to integrate with our SAP system and build custom reporting dashboards. What would this cost? Is this a separate professional services engagement?"
- "Do you have volume discounts for larger deployments? At what store count do discount tiers begin?"
- "Provide three comparable retailers (similar store count, complexity) and their actual implementation costs and 5-year TCO. How do their deployments compare to our projected scenario?"

Question 6: HOW DO YOU ARCHITECT TRUE OMNICHANNEL OPERATIONS WITH REAL-TIME INVENTORY VISIBILITY?

Why This Matters:
Omnichannel retail is now table-stakes. Customers expect to shop seamlessly across in-store, online, mobile, and social channels with consistent pricing, accurate inventory, and flexible fulfillment options. A unified omnichannel architecture where POS, OMS, merchandising, and customer data operate on a single data model ensures that inventory is a single source of truth and prevents costly overselling or lost sales from inaccurate stock information.

What to Listen For:
- Architecture description: Does the vendor describe a truly unified platform or a collection of best-of-breed systems integrated together? Unified platforms (single data model, single cloud instance per customer) typically provide superior data consistency and faster synchronization than integrated multi-vendor stacks.
- Real-time inventory synchronization speed: What is the actual latency for inventory updates when a transaction completes? Industry leaders achieve updates within 3 seconds. Slower updates (batch processing hourly or daily) indicate potential overselling and operational friction.
- Omnichannel support: Does the system support BOPIS (Buy Online, Pick Up In Store), BORIS (Buy Online, Return In Store), Ship-from-Store, curbside pickup, and endless aisle? These capabilities are essential for competing with pure-play e-commerce and omnichannel leaders.
- Reference customers: Can they provide examples of large multi-store retailers (500+ locations) successfully operating omnichannel workflows? Ask specifically about complex scenarios like inventory transfers between stores during order fulfillment.

Red Flags:
- Vendor describes inventory updates as "near real-time" or "eventually consistent"
- Omnichannel capabilities are add-on modules requiring separate licensing or integration
- Cannot demonstrate inventory accuracy under high transaction volumes
- Limited references in your specific retail vertical

Follow-Up Questions:
- "Walk us through the technical architecture that ensures inventory consistency during peak sales periods (e.g., Black Friday) when thousands of transactions are occurring simultaneously. "
- "How does your system prevent overselling when the same inventory is accessible through both online and in-store channels?"
- "What happens to inventory accuracy if a store loses connectivity for several hours? Can it process transactions safely and resync accurately?"

Question 7: WHAT CERTIFICATIONS AND COMPLIANCE FRAMEWORKS DO YOU MAINTAIN FOR SECURITY AND DATA PROTECTION?

Why This Matters:
Retailers are the custodians of sensitive customer data and process billions of dollars in payment transactions. Security and regulatory compliance are non-negotiable baseline requirements. Breaches expose retailers to operational disruption, customer trust erosion, regulatory fines (often 2-4% of global revenue under GDPR), and reputational damage. Vendors must maintain rigorous security certifications (SOC 2, ISO 27001), payment compliance (PCI DSS Level 1), and privacy compliance (GDPR, CCPA) with continuous monitoring and regular updates.

What to Listen For:
- Current certifications: Does the vendor maintain SOC 2 Type II (not Type I—Type II requires 6+ months of audit evidence), ISO 27001, and PCI DSS? When were these certifications last renewed? Certifications expiring more than 12 months ago indicate potential compliance gaps.

- Encryption specificity: Do they use AES-256 for data at rest and TLS 1. 2+ for data in transit? These are modern standards. If they mention only AES or older encryption protocols, probe deeper.
- Data residency: For retailers operating in regulated jurisdictions (EU, China, California), can the vendor support local data residency? This is increasingly required for GDPR compliance and is non-negotiable for international retailers.
- Payment data handling: How does the vendor prevent storing sensitive payment card information? They should describe tokenization, Point-to-Point Encryption (P2PE), or direct payment processor integration. If they handle card data internally, this represents significant risk.
- Incident response: What is their process for detecting and responding to security incidents? Who are the authorized contact points? Do they have formal SLAs for incident notification?

Red Flags:

- Vendor cannot provide recent SOC 2 audit reports or certifications
- Compliance documentation is vague or unavailable
- They store raw payment card data or customer SSNs/driver licenses
- No formal incident response plan or SLAs
- Cannot demonstrate compliance in your required geographic regions

Follow-Up Questions:

- "Walk us through a recent security audit or penetration test. What vulnerabilities were identified and how were they remediated?"
- "If your data center suffers a breach, what is your incident notification timeline to our organization and affected customers?"
- "How do you handle emerging compliance requirements? For example, if the EU introduces new AI governance regulations next year, how quickly can you adapt?"
- "Provide references from three retailers comparable to our organization that have successfully certified your platform in their security/compliance audits. "

Question 8: DESCRIBE YOUR MOBILE POS CAPABILITIES AND OFFLINE FUNCTIONALITY. HOW LONG CAN STORES OPERATE WITHOUT CONNECTIVITY?

Why This Matters:

Mobile POS enables associates to serve customers anywhere in the store, reducing checkout wait times and enabling personalized, consultative selling. Sophisticated offline functionality ensures business continuity during network outages, prevents lost revenue, and enables POS deployment in locations with inconsistent connectivity (remote stores, pop-ups, trade shows). The ability to operate for extended periods offline—with full transactional capability, complex promotions, payment processing, and tax calculations—is a critical differentiator.

What to Listen For:

- Offline duration: Can the system operate for 8 hours (one shift)? 24 hours (full business day)? 72+ hours? Longer is better. Industry leaders support 72+ hours offline operation.
- Offline capabilities: During offline operation, which features remain functional? Look for: full product catalogs cached locally, complex promotion calculation, tax determination, payment processing (including contactless NFC), customer lookups, returns/exchanges, and inventory transfers. Limited offline capability (e.g., cash-only, no promotions) indicates architectural limitations.
- Automatic failover: Does the system automatically detect connectivity loss and failover to offline mode? Or does it require manual intervention? Automatic detection is essential to prevent checkout friction and customer frustration.
- Synchronization process: After connectivity is restored, how are offline transactions synced to central systems? Is the process automatic or does it require manual intervention? Is there risk of data loss or duplicate transactions? Ask for technical details.
- Offline data caching: What data is cached on the device to support offline operation? Vendors should describe: product master data (SKUs, descriptions, images), pricing, tax tables, promotion rules, customer profiles, inventory snapshots. If critical data isn't cached, offline capability is severely limited.

Red Flags:

- Vendor can only operate for 1-2 hours offline
- Offline functionality is limited (e.g., "cash only" or "simple promotions only")
- Manual process required to failover to offline or resync after reconnection
- No support for payment processing offline
- Cannot demonstrate offline operation in realistic store scenarios

Follow-Up Questions:

- "Walk us through a complete offline scenario: store loses internet connectivity at 2 PM Friday during peak shopping. What happens? Can associates continue processing sales? Returns? Gift card transactions? Can customers pay with credit cards? When connectivity is restored Monday morning, how does data synchronization occur?"
- "Your marketing team sends a new promotion to all stores. If a store is offline, will the promotion be available at the next checkout? How is this ensured?"
- "Have you tested offline operation with high transaction volumes? What are the performance characteristics (e.g., checkout speed) during extended offline periods?"
- "Provide a case study of a retailer operating pop-up stores or mobile retail locations. How do they manage POS operations without consistent connectivity?"

Question 9: WHAT OMNICHANNEL FULFILLMENT CAPABILITIES DO YOU PROVIDE, AND HOW DO YOU OPTIMIZE ORDER ROUTING?

Why This Matters:

BOPIS (Buy Online, Pick Up In Store), ship-from-store, and similar fulfillment models have become competitive necessities. Intelligent order orchestration—automatically routing orders to optimal fulfillment locations based on real-time inventory, distance, cost, and fulfillment capacity—directly impacts customer satisfaction (faster fulfillment), inventory efficiency (better stock utilization), and profitability (reduced shipping costs). Vendors with sophisticated order routing algorithms provide significant competitive advantage.

What to Listen For:

- Fulfillment models supported: Does the vendor support BOPIS, BORIS, ship-from-store, curbside pickup, and similar models? Are these core POS capabilities or add-on modules requiring separate licensing?
- Order orchestration sophistication: How many configurable order routing rules can the system support? Industry leaders support 10+ rules (e.g., "fulfill from closest store with available inventory," "prioritize fulfillment from warehouses to preserve store inventory," "use customer geolocation to optimize delivery," "fulfill from highest-margin locations"). Simple systems support only basic rules (e.g., "closest store").
- Split shipments: Can orders be split across multiple fulfillment locations? This is essential when a single location cannot fulfill an entire order. What about partial reservations and backorders?
- Real-time fulfillment management: Can store associates manage fulfillment (picking, packing, customer handover) directly from mobile POS? Or is fulfillment management relegated to back-office systems?
- Customer notifications: When orders are ready or shipped, how are customers notified? Email? SMS? In-app notification? Real-time tracking capability?
- Performance metrics: Ask for case studies demonstrating fulfillment performance: average fulfillment time (BOPIS), fulfillment accuracy, customer satisfaction scores, inventory utilization improvement.

Red Flags:

- Fulfillment capabilities are limited or require third-party OMS integration
- Order routing is manual or requires back-office intervention
- Store associates cannot manage fulfillment from mobile devices
- No support for split shipments or complex routing scenarios
- Cannot demonstrate fulfillment performance at scale

Follow-Up Questions:

- "A customer orders an item online that's out of stock at their preferred store but available at two other locations 30 miles and 60 miles away. Walk us through how your system determines which store should fulfill the order, and why. "
- "During holiday season, we expect 5x normal order volumes. How does your order orchestration system scale? What are the performance characteristics?"
- "Can we configure different fulfillment rules for different customer segments? For example, premium loyalty members might receive free 2-hour curbside pickup, while general customers have standard 24-hour pickup. "
- "Provide references from three retailers with 500+ locations that have implemented ship-from-store at scale. What fulfillment volumes are they achieving? What are their fulfillment accuracy metrics?"

Question 10: DESCRIBE YOUR CLOUD ARCHITECTURE, DEPLOYMENT MODELS, AND UPTIME GUARANTEES. WHAT HAPPENS WHEN YOU UPDATE SOFTWARE?

Why This Matters:
Cloud-native architecture (microservices, containerization, API-first, headless design) enables rapid innovation, elastic scalability for peak seasons, and zero-downtime deployments. Modern retailers cannot tolerate planned downtime for software updates or routine maintenance. Cloud providers like AWS and Azure have made it possible to deploy production updates without service interruption. Understanding the vendor's architecture, deployment strategy, and uptime guarantees is essential for assessing operational excellence.

What to Listen For:

- Deployment model options: Does the vendor offer SaaS (cloud-hosted), on-premise, or hybrid options? SaaS is increasingly standard for retail. On-premise may be required for security-sensitive or air-gapped environments. Hybrid models provide flexibility.
- Cloud providers: Which cloud providers does the vendor use (AWS, Azure, GCP, Oracle, etc.)? Do they have experience with all major clouds or specialize in one? Cloud diversity can reduce vendor lock-in risk.
- Data residency: For retailers operating in regulated jurisdictions (EU, China, California), can the vendor support local data residency? This is increasingly required for regulatory compliance.
- Uptime guarantee (SLA): What is the guaranteed uptime? Industry standard is 99. 9% (8. 76 hours downtime/year) or 99. 95% (4. 38 hours downtime/year). Some vendors guarantee 99. 75% or lower.
- Update process: How frequently does the vendor deploy software updates? Daily? Weekly? Monthly? Are updates mandatory or optional? Do updates require downtime? Industry leaders (Salesforce, NewStore) deploy updates every 2-4 weeks with zero downtime. Vendors requiring scheduled maintenance windows represent operational burden.
- Update content: What is included in each update? Security patches? Feature enhancements? Bug fixes? Can the vendor describe recent updates and their business impact?
- Microservices architecture: Does the vendor describe their system as microservices-based (multiple independently deployable services) or monolithic (single unified codebase)? Microservices allow independent scaling and updates with lower operational risk.

Red Flags:

- SLA lower than 99. 9% uptime
- Vendor requires planned downtime windows for updates
- Updates include only bug fixes; feature enhancements require major version upgrades
- No clear communication about update frequency or content
- Cannot demonstrate zero-downtime deployment capabilities
- Monolithic architecture described as "state of the art"

Follow-Up Questions:

- "Over the past 12 months, how much total downtime has your platform experienced? Walk us through the major incidents. "
- "A critical security vulnerability is discovered. How quickly can you deploy a fix? What is the maximum time to customer deployment?"
- "If we don't want a particular feature update, can we opt out? Or are updates mandatory?"
- "Walk us through a recent major update. What was included? How was it deployed? Did any customers experience downtime?"
- "Your system processes $1 billion in transactions annually. Describe how you ensure data consistency and transaction integrity during rolling updates. "

Question 11: HOW DO YOU MAINTAIN A UNIFIED CUSTOMER PROFILE ACROSS ALL CHANNELS? WHAT PERSONALIZATION CAPABILITIES DO YOU OFFER?

Why This Matters:
Modern retail is fundamentally about personalization. Unified customer profiles—consolidating data from in-store, online, mobile, and social touchpoints—enable associates and marketing teams to understand complete customer context, deliver tailored recommendations, and provide individualized loyalty benefits. This capability directly drives customer loyalty, repeat purchase rates, and wallet share. Sophisticated personalization can increase conversion rates 10-15% and customer lifetime value 20-30%.

What to Listen For:

- Customer profile unification: How are customer profiles unified across channels? Does the system automatically match customers across online and in-store identities? What is the matching accuracy? How are customer merges handled?

- Data consolidation: What customer data is consolidated? Purchase history (in-store and online)? Loyalty status? Preferences? Wish lists? Customer service interactions? The more comprehensive, the better.
- Personalization capabilities: Beyond basic segmentation, what personalization capabilities does the vendor offer? Look for: dynamic product recommendations, personalized offers/promotions, behavioral targeting, RFM (Recency, Frequency, Monetary) scoring, predictive propensity modeling.
- AI/ML involvement: Are personalization algorithms rule-based (manually configured) or AI-driven (machine learning)? AI-driven approaches adapt to changing behavior and typically outperform rule-based systems.
- Associate access: Can store associates access unified customer profiles and recommendations at the point of sale? Or is personalization data relegated to back-office/marketing systems?
- Privacy and consent: How does the system manage customer consent for data collection and personalization? GDPR and CCPA require explicit opt-in for many uses. Can customers easily opt out?
- Performance metrics: Ask for case studies demonstrating personalization ROI: conversion rate lift, average basket size increase, customer lifetime value improvement.

Red Flags:

- Vendor offers only basic segmentation (e.g., "Gold/Silver/Bronze" tiers)
- Customer profiles are not unified across channels (separate systems for online and in-store)
- Personalization capabilities are limited or require separate licensing
- No AI/ML capabilities; all personalization is manually configured
- Store associates cannot access customer profiles or recommendations
- No clear privacy/consent management framework

Follow-Up Questions:

- "A customer purchases a winter coat in-store on January 15th. Six months later, they visit the website and browse winter jackets. Does your system recognize they recently purchased a coat and recommend complementary items instead? Walk us through this scenario. "
- "We want to identify customers at risk of churn and offer targeted promotions to retain them. Can your system predict churn propensity? What data does it use? How accurate is the prediction?"
- "We operate luxury boutiques where consultative selling is critical. Can we create a customer profile that includes: preferred styles, fit preferences, personal preferences (e.g., 'prefers emerald over sapphire'), and past consultation notes? Can a sales associate access this during checkout?"
- "Provide case studies from three retailers showing personalization ROI: conversion rate lift, basket size increase, loyalty program engagement improvement. "

Question 12: DESCRIBE YOUR PRICING AND PROMOTION ENGINE. HOW DO YOU ENSURE CONSISTENCY ACROSS ALL CHANNELS?

Why This Matters:

Pricing and promotion consistency across channels directly impacts profitability and brand trust. A centralized, configurable pricing engine ensures customers see identical prices whether shopping in-store or online, that loyalty members receive promised benefits across channels, and that promotional campaigns execute simultaneously across touchpoints. Inconsistent pricing erodes customer trust and creates operational friction. AI-driven pricing optimization—analyzing elasticity, competitor pricing, and inventory—can increase margins 1-3%.

What to Listen For:

- Centralized price management: Is there a single source of truth for pricing and promotions? Or are prices managed separately for each channel (in-store POS, e-commerce site, mobile app)?
- Pricing hierarchy: How does the system handle different price levels? Vendors should describe: base prices, customer-specific pricing, loyalty member pricing, location-specific pricing, channel-specific pricing, regional pricing. Can retailers configure rules that automatically apply the most favorable price?
- Promotion complexity: What types of promotions are supported? Look for: percentage discounts, fixed-amount discounts, BOGO (Buy One Get One), tiered discounts, volume discounts, category discounts, bundle pricing, loyalty-member-only promotions. More complexity indicates more mature system.
- Campaign scheduling: Can retailers schedule promotions in advance, set date/time ranges, target specific locations, and target specific customer segments? Can campaigns be automatically activated/deactivated?
- Consistency enforcement: How is pricing consistency enforced? Vendors should describe real-time synchronization of price/promotion changes from central system to all POS terminals, e-commerce platforms, and mobile apps.

- Price optimization: Does the vendor offer AI-driven dynamic pricing? Or is pricing purely manual? Dynamic pricing can optimize prices based on demand, inventory levels, and competitor pricing.
- Audit trail: How are price changes logged and audited? Retailers need clear visibility into who changed what, when, and why—for compliance, dispute resolution, and process improvement.

Red Flags:

- Pricing is managed separately for different channels
- Promotion creation is manual and time-consuming
- No support for complex pricing scenarios (e.g., hierarchy, customer-specific pricing)
- Pricing changes are not real-time; there's latency between change and in-store implementation
- No audit trail for pricing changes
- Dynamic pricing is not supported

Follow-Up Questions:

- "A new promotion is decided Wednesday evening: 20% off winter coats for loyalty members, valid Thursday-Sunday at all stores. Walk us through the process to activate this promotion. What is the time from decision to in-store availability at all 500 stores? Any risk of inconsistent promotion application?"
- "We have a tier-1 customer (Fortune 100 retailer) requiring volume-based pricing discounts. Can we configure this customer to automatically receive 15% discount on purchases over $1,000? Can this customer see the discount in their loyalty account?"
- "During holiday season, we want to dynamically optimize prices based on inventory levels and demand patterns. Can your system automatically increase prices for high-demand, low-inventory items and decrease prices for slow-moving inventory?"
- "We made a pricing error last week—offered 50% discount instead of 15% on a specific item. What visibility do we have into this error? Can we identify all affected transactions and apologize to customers?"

Question 13: WHAT ANALYTICS AND REPORTING CAPABILITIES DO YOU PROVIDE? CAN WE ACCESS REAL-TIME INSIGHTS WITHOUT EXTERNAL TOOLS?

Why This Matters:

Data-driven decision-making is fundamental to retail success. Retail leaders need real-time visibility into sales performance, inventory accuracy, employee productivity, and customer behavior across the store, regional, and enterprise levels. Advanced analytics enable predictive forecasting, anomaly detection, and prescriptive recommendations. Vendors providing native analytics (vs. requiring third-party BI tools) typically offer faster insights and lower implementation complexity.

What to Listen For:

- Native vs. third-party analytics: Does the vendor provide native reporting and analytics? Or do they require integration with third-party BI tools (Tableau, Power BI, Looker)? Native analytics provide faster time-to-insight; third-party integration provides flexibility for advanced users.
- Real-time data refresh: How frequently are analytics updated? Real-time (as transactions occur)? Hourly? Daily? Real-time is increasingly expected by modern retailers.
- Pre-built reports: How many pre-built reports are included out-of-the-box? Do they cover key retail domains: sales analysis, inventory performance, employee productivity, customer behavior, financial analysis? Look for 100+ reports as baseline.
- Dashboard capabilities: Can retailers create custom dashboards? Are dashboards mobile-accessible? Can different user roles see role-specific dashboards?
- Advanced analytics: Beyond standard reporting, does the vendor offer advanced analytics? Look for: predictive forecasting, anomaly detection, AI-driven recommendations (e.g., "reduce inventory by 20% in this category"), propensity modeling, customer lifetime value prediction.
- Data drill-down: Can analysts drill down from summary metrics to transaction-level detail? This is essential for root cause analysis and troubleshooting.
- External data integration: Can the system integrate external data sources (weather, economic indicators, competitor pricing) to provide contextual analytics?
- Ad-hoc reporting: Can business users create custom queries without IT/BI team support? This democratizes analytics access.

Red Flags:

- Analytics require third-party tools; no native analytics
- Limited pre-built reports (fewer than 50)
- Daily or weekly data refresh (not real-time)
- No mobile analytics access

- Advanced analytics (forecasting, anomaly detection) not supported
- No ad-hoc reporting capability for business users

Follow-Up Questions:

- "It's 2 PM on Friday. I need to know which product categories underperformed this week compared to last week, broken down by store. Can I get this insight immediately from your system? Walk me through the process. "
- "We want to identify stores with inventory discrepancies. Can your system flag stores where physical inventory variance exceeds 1%? Can we drill down to SKU-level detail?"
- "Our employee productivity has declined this month. Can your system help identify which stores/associates are underperforming and why? What metrics are available?"
- "Provide case studies from three retailers showing how your analytics led to business decisions (e.g., inventory optimization, pricing adjustments, promotional decisions). "

Question 14: WHAT PAYMENT PROCESSORS AND PAYMENT METHODS DO YOU SUPPORT? HOW DO YOU ENSURE PAYMENT SECURITY?

Why This Matters:

Customers expect diverse payment options—credit/debit cards, digital wallets (Apple Pay, Google Pay), BNPL (Buy Now Pay Later), alternative payment schemes. Payment infrastructure must be flexible (supporting multiple processors), secure (PCI DSS compliance), and innovative (supporting emerging payment technologies). Understanding payment flexibility and security architecture is essential for competitive positioning and risk mitigation.

What to Listen For:

- Payment processors supported: Which payment processors does the vendor support? Look for major global processors (Adyen, Worldline, Verifone, Fiserv, Chase Paymentech, Square, etc.). Supporting multiple processors reduces vendor lock-in risk.
- Payment methods: What payment methods are supported? Look for: credit/debit cards, digital wallets (Apple Pay, Google Pay, WeChat Pay, Samsung Pay), BNPL (Affirm, Afterpay), gift cards (internal and third-party), stored value, checks, cash, alternative payment schemes (Alipay, local payment methods).
- Split tender support: Can customers split a single transaction across multiple payment methods? This is essential for customer flexibility and increasingly expected.
- Currency support: For international retailers, does the system support multiple currencies? Can it perform real-time currency conversion? Does it support local payment schemes (SEPA, Girocard, iDEAL)?
- Card brand support: Which card brands are supported? Visa, Mastercard, American Express, Discover, Union Pay, etc. Coverage determines addressable customer base.
- Payment security architecture: How does the vendor handle payment security? They should describe: tokenization (sensitive data replaced with tokens), Point-to-Point Encryption (P2PE), or direct processor integration. They should NOT store raw payment card data.
- PCI compliance: What level of PCI DSS compliance do they maintain? Level 1 (highest security) is ideal. Levels 2-4 indicate less stringent security.
- Emerging payment support: Are they investing in emerging payment technologies (BNPL, cryptocurrency, blockchain verification)? This indicates forward-thinking.

Red Flags:

- Limited payment processor support (only 1-2 processors)
- Limited payment method support (only credit/debit)
- No split tender support
- Cannot support multiple currencies or local payment schemes
- They store raw payment card data internally
- Below PCI DSS Level 2 certification
- No innovation in emerging payment technologies

Follow-Up Questions:

- "A customer wants to split their $100 purchase: $60 on their credit card and $40 on a gift card. Can your system handle this? Walk us through the transaction flow. "
- "We operate in five countries with different local payment preferences (Europe prefers SEPA, Asia prefers Alipay/WeChat). Can your system support country-specific payment schemes simultaneously?"

- "Walk us through your payment security architecture. How do you prevent payment card data theft? What certifications validate this?"
- "Provide references from three retailers showing you can process 10,000+ payment transactions per day without performance degradation or security incidents. "

Question 15: DESCRIBE YOUR IMPLEMENTATION METHODOLOGY AND TYPICAL PROJECT TIMELINE. WHAT SUPPORT DO YOU PROVIDE DURING AND AFTER GO-LIVE?

Why This Matters:
POS implementation is complex and mission-critical. Vendors with strong implementation methodologies, comprehensive training, change management expertise, and ongoing support significantly increase the probability of successful deployment and rapid time-to-value. Poor implementations result in delayed store openings, employee confusion, customer frustration, and lost revenue. Understanding vendor implementation approach is essential for risk mitigation.

What to Listen For:
- Implementation methodology: Does the vendor describe a structured, repeatable methodology? Look for: discovery phase, fit-to-standard assessment, design and configuration, testing (UAT, SIT, performance), pilot rollout, hypercare support, knowledge transfer. Mature methodologies reduce execution risk.
- Project phases: How many phases does implementation include? Can the vendor describe typical timeline and milestones?
- Timeline expectations: What are typical implementation timelines? Minimum (fast-track)? Average? Maximum (complex)? Industry leaders typically deploy within 12-16 weeks for enterprise customers.
- Pilot approach: Does the vendor recommend pilot rollout (phased deployment starting with limited stores) or big-bang (all stores simultaneously)? Pilot approach reduces risk and enables process refinement.
- Training and change management: Beyond technical training, does the vendor provide change management support? Do they address organizational readiness, process redesign, employee adoption?
- Hypercare support: What support is provided immediately post-go-live (hypercare)? How long does this period last? What is the support SLA during hypercare vs. normal operations?
- Ongoing support: What is the support model post-go-live? 24/7/365? Business hours only? What is the response time for different severity issues?
- Success metrics: How does the vendor measure implementation success? Do they track metrics like on-time delivery, within-budget delivery, user adoption rates, post-go-live issues?

Red Flags:
- Vendor lacks documented implementation methodology
- Implementation timelines are extremely aggressive or vague
- No pilot approach; big-bang deployment only
- Limited or no hypercare support post-go-live
- Ongoing support is outsourced or has long response times
- Cannot provide success metrics or references

Follow-Up Questions:
- "Walk us through your implementation methodology from contract signature to stores going live. How many phases? What are key milestones? What are success criteria for each phase?"
- "We have 200 stores across three countries. What is your recommended rollout approach? Phased or big-bang? Why? What are the risks?"
- "We want to minimize business disruption during go-live. Describe the cutover process. How is the transition from legacy POS to your system managed? What is the risk of lost transactions or data?"
- "What happens on Day 1 post-go-live when critical issues arise? What is your response time? Describe a recent issue and how your team resolved it. "
- "Provide three reference customers who have successfully implemented your system. What was their project timeline? Did they complete on time and within budget? Any surprises?"

CONCLUSION: STRATEGIC EVALUATION AND VENDOR SELECTION

These 15 critical questions form a comprehensive evaluation framework for assessing prospective POS/mPOS vendors. Rather than focusing on feature checklists, these questions encourage strategic thinking about:

- Omnichannel capability: Can the vendor enable true omnichannel retail with unified inventory and customer data?
- Security and compliance: Are we confident in the vendor's ability to protect sensitive data and maintain regulatory compliance?
- Operational resilience: Can the system operate during network outages and support distributed retail scenarios?
- Data-driven operations: Does the vendor provide analytics and insights that enable informed decision-making?
- Strategic alignment: Does the vendor's roadmap align with our long-term vision for retail innovation?
- Partnership quality: Can we trust the vendor to be a true partner, providing excellent implementation, training, and ongoing support?
- Financial viability: Is the total cost of ownership reasonable and predictable? Is the ROI achievable?

Evaluating vendors across these 15 dimensions provides a comprehensive foundation for selecting a POS platform that will deliver sustained competitive advantage, operational excellence, and business value.

How We Got Here

The IHL Insight Market View series is part of the IHL Retail Executive Advisory Program. This is the first of several research studies to be released and it is only available as part of an advisory relationship. The IHL Insight Market View research studies combine several of IHL's best-in-class research components into a single industry view meant for retailer and vendor executives.

Step 1 – We leverage our WorldView IT Sizing Forecast Model, a sizing and forecast tool for over 300 retail Hardware, Software, SaaS and Services categories. IHL has been sizing and forecasting the retail/hospitality market worldwide by solutions for over 10 years. This provides the upper bounds of the market data and total market size.

Step 2 – We combine this with our Sophia Data Service that tracks over 5,000 enterprise retailers and hospitality providers (with a minimum of 50 locations) in terms of which vendor's technology a given retailer/hospitality provider has installed, the total lanes/licenses, the timing of those installations and when they are due to be replaced.

Step 3 – We validate the installs and business sizing for each vendor through public records and vendor/channel interviews. Customer service/traction is validated through existing customer interviews and surveys.

Step 4 – We merge all of this together into a singular view that not only provides total market size, but also market share and scale of difference between vendors.

This study represents the overall worldwide retail and hospitality Software and Software-as-a-Service market. For more information on the additional studies being released as part of the Retail Executive Advisory Program, please see our website or contact us at +1. 615. 591. 2955.

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