Discover the Best-in-Class Vendors Who Can Help You Achieve Success

The Aberdeen AXIS provides:

- Best-in-Class performance evaluations of vendors based on KPIs from Aberdeen’s benchmark studies
- An assessment of each vendor’s market readiness determined by over 250 evaluation criteria

Presented by:
Sahir Anand, Sr. Research Analyst

With:
Benjamin Ream, Research Analyst and Chris Cunnane, Research Associate
Executive Summary

Introduction

Aberdeen’s data has revealed that at least 60% of retailers have point-of-sale (POS) or point-of-service systems that are older than five years. Out of the 60%, 35% of retailers currently use POS systems that are older than 10 years. This has created a large gap in the retailer’s objective of delivering improved customer satisfaction at POS. The reason for this gap is the outdated POS process resulting from a lack of standards-based migration in software, hardware and peripherals towards next-generation fixed and mobile POS systems. This AXIS Report is primarily an assessment of POS software solution vendors from a market readiness and customer value delivered perspective; the analysis also provides additional commentary on POS hardware and peripherals vendors. Based on Aberdeen’s results, NCR, SAP, Celerant, MICROS Retail, Oracle, and Microsoft are among the top performers amongst the POS software solution or platform providers. This report is intended to help facilitate an understanding and selection of POS solutions for retailers and hospitality end-users.

The Retail Point-of-Sale System AXIS

Source: Aberdeen Group, Q4 2008
Chapter 1:
Analyst Insights

Retailers and hospitality companies have implemented point-of-sale or point-of-service (POS) systems to increase store productivity, gather more information, and reduce the cost of operations. However, due to the continued expansion in the cross-channel selling environment, POS technology has to move beyond the traditional objectives of store productivity and cost of operations. POS has to transform towards providing customer satisfaction and revenue growth in the stores.

The following sections provide an overview of the benefits, challenges, and typical migration paths for this customer-facing technology.

POS Software Solution Benefits

According to Aberdeen data from end-user feedback, the benefits of an effective retail point-of-sale operations strategy include:

- Reduced chainwide POS checkout time: target < 1.5 minutes
- Improved chainwide POS system uptime: target > 97% uptime
- Enhanced transaction size (in terms of dollar value): target > 19.5% growth over the previous year
- Improved chainwide customer satisfaction score at POS: > 80% of customers extremely satisfied

The Legacy POS Challenge

POS system transition requires a thorough due diligence to retrofit advanced capabilities in retail and hospitality stores. Customer benefits aside, any major POS transition can be a complex, capital-intensive and time-consuming task for retailers. New POS implementations or improvements require a carefully prioritized capital outlay as part of the annual store IT budget, a shift in the corporate culture of the retailer towards customer-oriented operations, and changes to the store front and back-end business processes (data integration and network management) that are intrinsically tied to the POS system for effective operations.

Top performing retailers are implementing customer-centric POS improvements as part of the migration planning process at the store level. This migration can take anywhere from one to four years depending on the size of the initiative and retailer (i.e. number of stores requiring retrofit). The transition from legacy POS technology towards the next generation customer-friendly POS systems is by no means easy, but it is a necessity that a retailer must consider in order to offer a convenient, safe, and inviting shopping environment for customers.

Retailers and hospitality companies are encountering significant POS process and system-upgrade related challenges. The four primary challenges can be summarized as follows:

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- **Inadequate network bandwidth** due to prevailing use of dial-up networks, lack of network visibility, or optimization. Without the adequate network capabilities, 70% of retailers are unable to use web-based POS tools such as web order management, order look-up or e-mail functions as well as other web-based enterprise-level applications that can be accessed from POS registers.

- **Integration shortcomings** between POS and back office, inventory and cash management applications lead to a lack of data updates that cause operational complexities in the areas of sales, budgeting, resource planning and workforce management.

- **A lack of centralized customer, product, and location data management** leads to data integrity-related roadblocks for 50% of retailers. This complexity impedes data integration for seamless inventory optimization, order tracking, drop, ship, and pick-up options for customers. Moving towards a centralized information repository enables the development of consistent product messaging, coordinated cross-channel promotions, and customer loyalty programs.

- **Lack of a tamper-proof PCI-compliant data security infrastructure** to protect cardholder data access by external entities and fraudulent use of data by internal employees is necessary (note: only 53% of retailers meet this criteria).

### 21st Century POS Migration Path

Major retail sub-segments such as supermarkets, grocery, department stores, specialty, hospitality, and general merchandise and apparel are faced with the highest current penetration of legacy POS systems. The creation of a standards-based legacy POS migration policy is a major challenge as resources, executive support, and cross-functional coordination are the major roadblocks in decision making towards upgraded customer-centric POS software, hardware, and peripherals.

Retailers require a firm one-year to three-year rapid and coherent POS migration policy that is based on three core tenets: an enterprise roadmap for POS migration, standards-based integration of POS with other applications, and a set of customer and revenue-centric knowledge and performance management objectives that are geared towards customer satisfaction. The migration of order management, loyalty and guided selling, and payments to the next generation of convenient customer interface should be integral components of this process.

Within the next two years, retailers can make significant advancements in updating legacy POS, both for fixed or wireless (mobile) POS in three primary areas:

- **Provide loyalty programs** such as customer referral programs, coalition marketing, in-store and web-based personalized promotions

- **Enhance POS register application enhancements to include inventory management** software for improved optimization and visibility of inventory

- **Enhance POS register application enhancements to include dynamic CRM tools** and functions such as customer demographic information updates for relationship marketing programs, gift registry, loyalty or reward sign-ups

### Survey Overview

The results are based on relevant survey responses from 1,036 enterprise end-users, responding to questions relating to their experiences with retail POS solution and service providers.

### Analyst Insight

Retailers require a firm one-year to three-year rapid and coherent POS migration policy that is based on three core tenets: an enterprise roadmap for POS migration, standards-based integration of POS with other applications, and a set of customer and revenue-centric knowledge and performance management objectives that are geared towards customer satisfaction.
Chapter 2: Recommendations

Before considering any POS software provider, retailers must weigh the ability of the solution provider to design and develop the POS installation or improvement criteria based on four key factors. These factors include POS integration with other retail applications; scalability of POS towards broader point applications (promotions, back office, cash management, electronic payment enhancements) for improved point-of-service; and flexibility for changes to POS back-end (data capture, price, inventory and promotion updates); and front-end functions and user interface.

The following are recommendations that retailers must consider before undertaking a new POS system acquisition or upgrade:

- **Restructure the POS architecture at your stores.** Under-performing companies must consider restructuring the in-store POS architecture if they intend on competing in a competitive retail market. Aberdeen’s results indicate that companies at the lower end of the retail market (when it comes to performance in customer satisfaction, POS checkout time, or improvement in transaction size) must start with a gap analysis of current store processes that relate to the execution of payments, guided selling, and order management POS to determine if restructuring front-end processes can reduce the complexity at POS. The next step is outlining a restructuring strategy that must involve a cost-benefit analysis of software, hardware, and peripheral upgrade requirements that can improve POS performance. The most vital ingredients for criteria selection are a specified ROI roadmap, open standards for scalability, and support.

- **Integrate POS with other customer process management applications.** Planning the next phase in the architecture upgrade plan focuses on integration. Aberdeen’s data indicates that 50% of under-performing companies operate in a silo and do not integrate CRM, inventory, cross-channel, and other enterprise applications with their POS. Data integration through a centralized data management strategy that includes SOA elements is critical for accessing cross-channel information, inventory, and loyalty information at POS. In terms of operations, POS integration lays the foundation for sales analysis, promotion planning, workforce management, and overall revenue management.

- **Establish a knowledge and performance management culture for POS systems.** The final phase of re-structuring POS in stores is creating the ability for a headquarters team to gather, create, and distribute POS performance reports and benchmarking customer experience performance by store. By establishing POS performance tracking by store, retailers can manage the improvement process better and keep results in line with the company’s corporate customer satisfaction and revenue growth objectives. Companies seeking
improved results should start by establishing POS performance metrics such as customer satisfaction, checkout time, and transaction size improvement. These metrics are measurable and attainable. Data should be gathered, analyzed and reported on these metrics on a weekly basis. If your stores are underperforming on the desired results, a set of front-end process improvement and risk management functions should be laid out for store execution. Monthly reviews on the performance plan can put the store back on track with the company goals.

- **Develop knowledge and performance management processes further through cross-functional collaboration for meeting POS performance objectives.** One of the ways that companies can improve performance is by focusing on more effective knowledge and performance management related to POS systems. Too few companies are managing the customer POS experience using customer satisfaction metrics, or analyzing POS data for planning promotions that are executed at POS. These two results indicate that a knowledge and performance management culture has not developed in companies seeking high-performing status. It is crucial to create cross-functional collaboration between IT, marketing, and store operations to improve the focus on POS knowledge sharing and setting the path to POS experience improvement. Both steps will improve customer focus and revenue growth.

- **Consider SOA for POS integration with other customer process management applications.** Companies in search of better results need to adopt Service Oriented Architecture (SOA) elements to integrate the POS architecture with customer process applications such as CRM, multi-channel information and order management, and payment. SOA enables a more seamless flow of data integration processes which will allow companies to deliver faster transaction time, build faster response time towards promotions that are executed at POS, and reduce IT costs due to open standards which can be upgraded in the near future.

- **Adopt a POS upgrade roadmap.** The challenge of upgrades at POS is best addressed by companies that adopt a standards-based POS migration policy providing a model of performance in retro-fit upgrades in the legacy systems throughout their chains of stores. Typically, a retailer should consider a one-year to three-year plan for retro-fitting software, hardware, and peripherals that have the potential to improve customer experience and increase revenue. In evaluating any software or hardware upgrade, one of the criteria should be the flexible architecture of the solution for future upgrades.

- **Improve multi-channel integration at POS.** The ability to access websites, catalogs, and fulfill web-generated orders at POS is a capability that is currently under-utilized in the industry. This is a key integration capability for a customer-centric POS system in a retail environment that is rapidly expanding towards cross-channel selling. Aberdeen data has found that 70% of retailers consider a multi-channel customer to be more valuable and profitable as they tend to spend more if they are shopping in different channels.

**Analyst Recommendation**

The ability to access websites, catalogs, and fulfill web-generated orders at POS is a capability that is currently under-utilized in the industry. All tier retailers must consider cross-channel integration as part of the POS software advancement roadmap.

This is a key integration capability for a customer-centric POS system in a retail environment that is rapidly expanding towards cross-channel.
Chapter 3: 
How to Read the AXIS

Aberdeen AXIS provides an objective, fact based, vendor assessment looking at the provider’s history of Value Delivered (Y-axis) and their Market Readiness (X-axis). The results are based on relevant survey responses from hundreds of enterprise end-users, responding to questions relating to their experiences with the respective solution or services. Vendors represented on the AXIS are illustrated by their performance against the various axis as well as the visibility they received from the market as part of the research.

Aberdeen’s research is predicated on primary survey responses with follow-on telephone interviews. All responses are blinded and follow Aberdeen’s published methodology. Data collected is reviewed and interpreted by the respective Aberdeen research team and draws upon information typically collected over the prior 12-month period.

Based on business-user survey responses from qualified candidates, vendors have been positioned in one of four categories in the Aberdeen AXIS chart:

1. **Champion:** Vendor has demonstrated superior proficiency in delivering both real value as well as the ability to serve and support its installed user base.
2. **Contender:** Vendor has consistently delivered on ensuring that users achieve a measurable value for their investment as well as the ability to continue to support and service its customers.
3. **Competitor:** Vendor is progressing toward delivering a balance of value and service / support / sustainability. Additional opportunities remain to enhance the value realized by its customers as well as its ability to meet the ongoing needs of the market.
4. **Challenger:** Vendor has achieved market visibility but has an opportunity to assist customers in achieving the value they’re looking to realize from the investments made. Vendor readiness remains a concern.

**Value Delivered (Y-axis)**

The Value Delivered by a vendor is determined by the percentage of survey respondents using the solution that achieves Best-in-Class performance.

Over the past 12 months, Aberdeen has surveyed hundreds of end-user organizations on the subject of retail Point-of-Sale system usage. The research analyzed the responses based on stated strategies, key performance indicators and business outcomes. Using Aberdeen’s proprietary PACE™ methodology, business users are placed into three performance maturity groups: the top 20% of performers are considered “Best-in-Class,” the middle 50% “Industry Average,” and the bottom 30% are “Laggard.” Survey respondents, as part of the process, identify the various products and services they have deployed. The aggregated
performance of a technology vendor’s business users, complemented by live interviews, determines the relative Value Delivered to the market.

**Market Readiness (X-axis)**

Market Readiness is a critical assessment of the technology vendor’s current ability to serve the market based on over 250 objective assessment criteria.

Vendors are provided a standard questionnaire that seeks to thoroughly assess their ability to support their installed base, to bring new products to market, to serve the global community, and to sustain economic cycles, among other KPI’s. This survey is augmented by customer interviews and independent research to validate the findings. Vendor briefings may be conducted to provide additional clarification and insight. Each vendor’s risk and reliability, strengths and challenges, historical performance and future outlook are evaluated and a weighted score is determined. The result is represented as a numerical outcome on the AXIS by way of Market Readiness. Solid circles on Table 1 represent solution providers from which comprehensive data was made available for review and validation; reverse-shaded circles represent vendors from which response or available information (i.e. public records) was limited in scope.

Rather than project the suitability of a particular feature or function, the AXIS is a customer-centric view of the success organizations have had with various providers and the potential risk, or lack thereof, associated with the vendor’s ability to meet their current and future obligations. These obligations include, but are not limited to, service, support, product updates and upgrades, staffing (e.g. customer service), and financial stability. Vendors falling into the Champion or Contender categories are logical partners for future projects. Those identified in the Competitor and Challenger areas are also strong potential suitors for consideration with additional investigation.

The goal of the AXIS is to provide the competitive intelligence business users require to make smart, informed decisions about their technology initiatives.

**Research Methodology**

Aberdeen applies a unique methodology to benchmark research that evaluates the business Pressures, Actions, Capabilities and Enablers (PACE) that drive corporate performance.

The success of business strategies are determined by a Competitive Framework in which the top 20% of achievers are Best-in-Class, the middle 50% are Industry Average, and the bottom 30% are Laggards.

Companies that identify the most influential pressures and take the most effective actions are most likely to achieve superior performance. The solution providers that help enterprises achieve this Best-in-Class performance are recognized in the Aberdeen AXIS.
Table 1: Aberdeen AXIS Vendor Breakdown for Retail POS Systems

<table>
<thead>
<tr>
<th>Company: Total Scores</th>
<th>Market Readiness</th>
<th>Value Delivered</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCR</td>
<td>31</td>
<td>80</td>
<td>111</td>
</tr>
<tr>
<td>SAP</td>
<td>39</td>
<td>55</td>
<td>94</td>
</tr>
<tr>
<td>Oracle</td>
<td>33</td>
<td>59</td>
<td>92</td>
</tr>
<tr>
<td>Celerant</td>
<td>34</td>
<td>56</td>
<td>90</td>
</tr>
<tr>
<td>MICROS Retail</td>
<td>35</td>
<td>55</td>
<td>90</td>
</tr>
<tr>
<td>Microsoft</td>
<td>32</td>
<td>57</td>
<td>89</td>
</tr>
<tr>
<td><strong>AVERAGE SCORE</strong></td>
<td><strong>32</strong></td>
<td><strong>54</strong></td>
<td><strong>86</strong></td>
</tr>
<tr>
<td>Tomax</td>
<td>31</td>
<td>44</td>
<td>75</td>
</tr>
<tr>
<td>Torex Retail</td>
<td>26</td>
<td>45</td>
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<td>JDA</td>
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<td>54</td>
<td>70</td>
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<tr>
<td>Epicor</td>
<td>37</td>
<td>31</td>
<td>68</td>
</tr>
<tr>
<td>Radiant Systems/Quest Retail</td>
<td>39</td>
<td>*</td>
<td>N/A</td>
</tr>
<tr>
<td>Retalix</td>
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<td>*</td>
<td>N/A</td>
</tr>
<tr>
<td>Retail Pro</td>
<td>34</td>
<td>*</td>
<td>N/A</td>
</tr>
<tr>
<td>Cornell-Mayo</td>
<td>20</td>
<td>*</td>
<td>N/A</td>
</tr>
</tbody>
</table>

* Insufficient market visibility to evaluate

Source: Aberdeen Group, Q4 2008

Vendor Exclusion

Vendors may be excluded from the AXIS report for various reasons including:

1. Failure to achieve adequate market visibility within the context of the surveys
2. Failure to provide requisite Market Readiness information
3. Inability to validate Market Readiness information (i.e. customer interview responses are inconsistent with vendor representation)

Additional Market Readiness information may be extracted from public records when available. In the context of the POS AXIS the following companies were identified but lacked sufficient market visibility for grid inclusion: CORESense, Crossview, and Retail Anywhere. These providers are discussed in Chapter 4.
Chapter 4: Vendor Snapshots

The vendor snapshots provide a high level overview and insight into various vendors identified in this AXIS report. The review is based on primary research along with the analyst team insight drawn from briefings and customer interviews.

NCR

Overview
Established in 1884, NCR is a multi-national provider of assisted and self-service solutions to several industry verticals including retail, travel, hospitality and financial services. NCR provides retail and financial electronics such as point-of-sale (POS) terminals, Automated Teller Machines (ATMs) and bar code scanners. NCR’s operating units include retail store automation (POS systems, kiosks), financial self services (payment systems, ATMs), Systemedia group (paper, ink, and other media products), payment and imaging solutions (check image processing), and worldwide customer services (professional and support services). In the area of POS solutions for retailers, this vendor offers hardware, software, scanners, peripherals, self check-out and consulting services.

Observations
NCR Corporation provides end-to-end fixed and wireless POS solutions including hardware, software, peripherals and consulting services. Aberdeen's analysis for POS software Market Readiness and Value Delivered to customers shows that this vendor is by far the clear leader in the category. NCR provides 50% higher value to its customers when compared to the score attained by the average POS software provider. NCR outperforms other POS vendors due to its deep domain expertise in the POS space, a flexible POS technology framework, and a robust ecosystem of resellers and partners such as Microsoft, Epicor-NSB, JDA, MICROS and Retalix, among several other companies. Partner ecosystems have become a necessity in the POS space for end-to-end POS offerings, regardless of which tier retailer that ISVs are serving.

Aberdeen’s analysis reveals that NCR historically relied on POS hardware-related organic customer as well as acquisition-based growth (i.e. acquisitions of Ceres Integrated Solutions, Kinetics, and services company 4Front Technologies). After spinning-off enterprise data warehouse provider Teradata in 2007, NCR has strived to focus on its core POS solutions business and diversify its customer base further, both in terms of revenue size and geography. This vendor currently boasts sizeable cash reserves ($952 million, 2007) that support balance sheet liquidity as well as prospective growth through possible acquisitions and broader resources for product research and development.

“...We undertook the RFP process to evaluate several POS applications. However, we chose NCR’s ACS. We have deployed NCR’s ACS software and POS hardware at all our chain locations except for one of our sister brands. The primary and secondary applications including the upload of our large number of stock keeping units (SKUs) run very effectively. Based on our unique needs, we are very pleased with the NCR ACS application as it has robust POS functionality, features, and user interface. Another point of merit is the POS application integrates effective our enterprise data warehouse environment as well as our enterprise resource planning suite.”

- Director General, Retail Applications, Large Global Supermarket/Grocery Chain:
NCR serves its diverse customer base by focusing on the POS software needs of end-users in high customer-touch and high-traffic retail formats such as supermarket, grocery, convenience, hospitality, specialty, and general merchandise. These segments require POS software that enables faster customer throughput, ease of payment, and facilitates loyalty elements such as receipt discounted product offers and rewards. The main advantage of NCR POS software is the ease of integration, flexibility, and scalability when combined with NCR POS hardware.

According to Aberdeen data, 60% of retailers that possess POS systems that are in the legacy category (older than 10 years) will need terminal, software, and peripheral upgrades with the next one to three years. The upgrades are required for legacy POS in grocery, specialty, hospitality, and other retail segments. The prospects for future POS upgrades and new POS installations in retail and hospitality verticals bodes well for the growth objectives of NCR. This vendor’s POS software technology capabilities support POS application flexibility and extensibility standards that are critical for continued growth and development of the point-of-service in retail.

NCR’s applications support multi-language product localization, a .Net platform, and open architecture standards for easier POS software and hardware integration with varied POS peripherals such as 2-D scanning capabilities, electronic payment acceptance software upgrades such as contactless and mobile payments, and weight verification. A notable element that is currently missing from the software offerings of NCR, however, is the option for retailers to adopt on-demand POS capabilities that can potentially enable lower infrastructure costs.

NCR does possess several legacy POS deployments in the retail industry, particularly in the grocery segment. The prospective POS upgrades for these legacy systems within the next 12 to 36 months are both a revenue opportunity for NCR as well as a point of entry for its competitors such as IBM or Fujitsu.

**SAP**

**Overview**

SAP is a provider of Enterprise Resource Planning (ERP) software used to integrate back-office functions such as distribution, accounting, human resources, and manufacturing. More than 47,500 companies in some 120 countries use its software. Over the last ten years, SAP has expanded into related fields including retail, business intelligence, and Customer Relationship Management (CRM). The company has also increasingly targeted small and mid-sized customers as an area for future growth. In the last few years, SAP relied on growth through acquisition within the retail vertical. The integrated applications of SAP for Retail grew further through SAP’s acquisitions of Dacos (1994), Campbell (1999), Triversity, and Khimetrics in 2005. In 2007 this company acquired business intelligence software provider Business Objects, which has a presence in retail and other consumer service industries totaling approximately $6.8 billion. In the POS software sphere, the Triversity acquisition provided the POS and store...
solution linkage which was missing from the SAP’s retail applications portfolio. SAP’s retail POS customer list includes 250 brands such as Dollar General, Sephora, Town Shoes, The Children’s Place, Williams-Sonoma, and Virgin Entertainment.

Observations

As one of the primary ERP solution providers in the retail industry, SAP has gradually developed its focus on supporting a retail solutions strategy. The acquisition of Triversity in 2005 enabled SAP to offer retailers a focus on the store environment, including store customer service and store integration with other retail applications. Triversity’s portfolio included POS software applications and other store solutions that interact with the POS environment such as customer loyalty, store inventory management, back office, loss prevention, workforce management, and multi-channel customer service. Aberdeen’s POS software analysis shows that Triversity’s POS solution has enabled improved retail focus and better customer satisfaction for SAP’s retail customers.

Aberdeen’s analysis reveals that SAP scores higher than the average attained by all POS application providers in the space, both in terms of POS software Market Readiness and Value Delivered to the customer. Aberdeen’s results point out that SAP ranks only second to NCR in this category.

In terms of the Market Readiness as a vendor that deploys effective POS applications and associated maintenance, integration, and support services, SAP shows 23% higher Market Readiness when compared to the norm. Though only nominal, SAP scores higher than the norm in terms of Value Delivered to customers as well. SAP provides 1% higher value to its customers when compared to the score attained by the average POS software provider. When compared to the norm on Value Delivered to customers, SAP can outperform the norm to a greater degree by further inducing their retail customers to focus on retail POS software performance benchmarks such as customer satisfaction at POS, uptime, timely price and promotion updates, and speed of check-out.

Aberdeen’s analysis indicates that SAP POS software applications score over the norm due to a frequent (six-month) release schedule that ensures improved feature-functionality upgrades for customer convenience and ease of store operations. This vendor has increased the focus on POS performance benchmarks applying increased focus on standards-based integration. Their POS software technology capabilities support POS application flexibility and extensibility standards that are critical for continued growth and development of the point-of-service in retail. SAP’s POS application is built on the Java platform, supports multi-language product localization, and open architecture standards for easier POS software and hardware integration with varied POS peripherals. SAP is also providing the option for retailers to adopt on-demand POS capabilities that can potentially enable lower infrastructure costs. This vendor’s POS applications fulfill retail POS needs including client/server, java/j2ee, Microsoft Windows, or Linux-based POS environments.

“Our old POS solution required custom programming for everything. Triversity-SAP gives us a high degree of flexibility. By that, I mean we can solve most business issues without custom programming.”

- Robert Fort, CIO & VP-IT, Virgin Entertainment Group
Oracle

Observations
Oracle is one of the primary providers of end-to-end retail solutions. In the last five years, Oracle acquired several retail application providers including 360 Commerce, Retek, Profit Logic, and most recently Advance Visual Technology (AVT). Oracle has followed a growth through acquisitions strategy and aggressive product development by broadening their global large, mid-size, and small-to-mid-size business solutions focus. Oracle’s point-of-service stack of applications as well as customers has been developed primarily via the acquisition of 360 Commerce.

In the POS sphere, Oracle offers both fixed and wireless POS software applications for traditional checkout, self checkout and additional applications for mobile POS. One of the main advantages of Oracle POS applications and POS methodology is the ability to provide rapid integration capabilities with other Oracle retail enterprise applications, multi-channel and web-platforms as well as other competing inventory, merchandising, customer relationship management, loyalty, and data-related retail applications. Aberdeen’s results indicate that Oracle is delivering 9.3% higher value to the market when compared to the average POS application provider.

Similar to the case of IBM and NCR, 360 Commerce has several legacy deployments in retail including Home Depot, among others. This is an upgrade and retro-fit revenue opportunity for Oracle as well as the competition including the likes of SAP, Microsoft, NCR, among others. An improvement area for Oracle is the need for increased penetration of SaaS-based POS offerings in the mid-size as well as large retail segments, which can enable these retailers to reduce their IT infrastructure burden.

Celerant

Overview
Formed in 1999, privately held Celerant Technology offers a highly flexible, customizable Java-based Point of Sale application. It is available to retailers that require operational awareness and management at the store level, employing applications such as price-optimization, customer satisfaction initiatives, employee management and tight inventory-control. They have an eclectic customer base: mostly tier III and some tier II companies, their client list runs the gamut from The New York Public Library and Orange County Choppers (i.e. motorcycles), to Muttropolis (i.e. pet store) and The Washington Redskins. It is platform-independent, and can run on Linux, UNIX, Windows® and Macintosh. The system can be used in multiple retail formats, but its sweet spot is apparel and specialty.

Observations
Aberdeen’s analysis shows that Celerant’s POS offering has effective peripheral capabilities including wireless POS and handhelds. It is platform-independent, and can run on Linux, UNIX, Windows® and Macintosh. The
system can be used in multiple retail formats, but its sweet spot is apparel and specialty. In retail trade publications they have consistently ranked in the top five for “Specialty & Apparel POS.” Aberdeen’s analysis shows that their growth is organic, although they will partner with other vendors, as they did with Paymentech. As a privately held company, their financials are kept confidential.

Their 240-deployed customer base is strongly within tier II and tier III retailers, including specialty, apparel, footwear and sportswear. They are a Microsoft Certified Partner. According to Aberdeen data, the current state of the POS market indicates that 54% tier II and tier III retailers will require POS upgrades in the next one to three years. The top two reasons users cite as Celerant strengths are Total Cost of Ownership (TCO) and technology innovation. In their next POS release, 10% of changes in their next yearly release will address bugs, while an encouraging 50% will be for user requests.

It’s open-architecture, real-time inventory visibility and wireless functionality should put Celerant on the short list of many tier II and tier III specialty retailers, 69% of their users are “small” companies, with fewer than 99 employees. As they list no Tier I retailers as clients, the experience with large-scale scalability of solutions may be a factor for companies to consider. Ninety-nine percent (99%) of their install base is in North America. They’ve demonstrated an ability to scale to tier II retailers (31% of installs); Celerant should therefore make a concerted effort to increase their percentage of tier II customers to mitigate the risk of over-reliance on the more susceptible small market retailers.

**MICROS**

**Overview**

MICROS Systems, Inc., headquartered in Columbia, Maryland, is a developer of enterprise applications serving the hospitality and specialty retail industries. MICROS serves table service and quick service restaurants, hotels, the leisure and entertainment industry, and specialty retail stores, with complete information management solutions including software, hardware, enterprise systems integration, consulting and support. MICROS distributes its products through subsidiaries, independent dealers / distributors, and company-owned sales and service offices around the world. This global network consists of over 4,800 employees, more than 80 wholly or majority-owned subsidiaries and branch offices in major markets, and 115 distributors in 45 countries.

**Observations**

MICROS is the only full systems solutions provider for all market segments with a global distribution and service network in place for major chains, regional chains, local independents, table service and the quick service market. MICROS provides restaurant information systems comprising hardware and software for point-of-sale (POS) and operational applications.
MICROS' POS offering for retail stores, called Xstore, provides an application with demonstrated multi-channel capabilities, access to full customer history, custom messaging at the POS register, and location-based inventory. Due to its open business logic architecture, modifications can be made to the extension layer above the base code, avoiding costly customization. Their target market continues to be strictly tier II specialty and apparel retailers, who want an extra emphasis on customer-centricity. They boast over 200 retail accounts, including Aeropostale, Barney's New York, Bed Bath & Beyond, The Finish Line, Ritz Camera, IKEA, The Limited, Polo Ralph Lauren, The Sharper Image, Talbots, and Timberland.

MICROS has taken a robust application (they acquired tier II specialty POS vendor Datavantage) and made it even stronger: the base product has 21 modules associated with it, making it exceedingly customizable.

Aberdeen research shows the system is reliable as well, as only 5% of system upgrades are slated for bug fixes, compared to 50% for user requests and 45% for new functionality. Based on the already successful Datavantage platform, MICROS has added to Xstore such important functionality as CRM, Loyalty, XBR loss prevention and real-time inventory visibility.

Its customer base is 50% tier I and 50% tier II. It is only available as a licensed, purchased product; no SaaS offering is available. MICROS is among the most point-specific POS vendors; while this may prove useful in positioning themselves in the market, it heightens risk through non-diversification. While they've recently added a Merchandise Management Suite (MMS) to their offerings, MICROS would be wise not stop there, and continue building out their product footprint.

**Microsoft**

**Observations**

Microsoft's retail platform, operating systems and applications focus includes a wide variety of value chain and functional areas including POS, self-service kiosks, business intelligence, workforce management, promotions, and merchandising. In assessing Microsoft's performance in the POS space, this vendor does out-perform the average POS application provider in delivering value to its customers by a margin of 5.6%. Microsoft is uniquely positioned in the retail applications space as this vendor provides operating system, platform solutions, and POS software applications through its partner ecosystem. Besides the Microsoft Dynamics POS and Retail Management System (RMS) offering for small to mid-size retailers, in the point-of-service space, Microsoft provides the operating system platform solutions for traditional checkout (Windows embedded point-of-service operating system platform), self-service kiosks, and self-checkout as well as the Windows Mobile operating system platform for mobile point-of-service applications.

In order to effectively position its POS operating system solutions and ecosystem-backed applications, Microsoft focuses on supporting three basic POS fundamentals in retail and hospitality. Firstly, this vendor provides plug-and-play open architecture for standard retail applications. Secondly,
Microsoft supports the scalability and extensibility of a POS operating system through ease of application integration with multi-vendor peripheral hardware and software. Thirdly, this vendor is a proponent of addressing the specific needs of small to mid-size retail businesses where the escalating cost of IT operations is a growing concern. Microsoft and ecosystem partners are perhaps the only entities that are undertaking accelerated innovation and development for providing POS performance and subscription-based SaaS retail applications model. Their objective is to create a mass adoption level which enables retailers to embrace minimal IT infrastructure requirements and a low per-user subscription-cost for on-demand retail applications. Microsoft needs to continually enhance its overall product positioning in retail and hospitality sub-tiers and top tier retail (> $1 billion in revenues) by further developing the model for delivering both on-premise and SaaS-based differentiated retail platforms for fixed and wireless POS.

**Tomax**

**Overview**

Tomax has been providing POS software for over 25 years. Among the vanguard of Java-based, multi-channel POS vendors, Tomax has built a reputation and customer base. Tomax develops and hosts software that helps retail chains simplify business processes, manage marketing channels, and reduce information technology infrastructure costs. Clients use Tomax’s Retail.Net suite to manage customer transactions, complete returns, streamline workflow processes and forecast staffing needs. The company also provides support and training services.

**Observations**

Its target market is tier I and tier II retailers that want a POS application with a heavy multi-channel, multi-platform, real-time slant. Customers who choose Tomax often do so to reduce the IT complexity across all selling channels, freeing them up to concentrate on retailing. Customers include L.L. Bean, Benjamin Moore Paints, Safeway, Trader Joe’s and American Eagle Outfitters. They have 90 current clients, with 75% of them tier I.

At almost 70%, payroll as a percent of budget is higher than most of its competitors. Tomax hosts many of its customers, which allows them to balance out their revenue stream nicely: 24% new customer product; 32% new customer professional services and 43% revenue from hosting, maintenance and support.

As the consolidation of retail-specific Independent Software Vendors (ISVs) continues unabated, Tomax could very well be an appealing target for M&A. Very much like 360 Commerce (acquired four years ago by Oracle), Tomax is a “not-too-big, industry-recognized best of breed, Java-based ISV,” which makes it an especially appealing target for software companies with M&A growth plans. Potential suitors might include HP or Microsoft.
Torex Retail

Overview
Established in 1988, Torex Retail’s global footprint spans across 19 countries and 2,100 employees. Torex Retail's software applications cover a wide range of front- and back-office applications, from point-of-sale (POS) and inventory management to customer counting, cash audits and staff scheduling. It also offers installation, support and maintenance services. Torex’s primary POS applications are Retail-J and Lucas. The company's customers, which primarily come from the retail and convenience store sectors, include BayWa, BP, IKEA, Selfridges, Nike, T-Mobile, Tommy Hilfiger, Lego, Burger King, Gulf, Breuninger Department Stores, Esprit, Intermarche, Ethel Austin, Fassbender & Rausch, and K&L Ruppert. Customers located in Europe have traditionally accounted for the majority of Torex’s sales, but the company has expanded operations in the North American market since early 2007. Torex Retail was acquired by Cerberus Capital Management in mid-2007.

Observations
Compared to the top performers in the POS application space, Torex has unrealized potential to fulfill retail customer expectations as well as an ability to be a mature market player in the area of retail POS applications. Aberdeen’s analysis indicates that Torex Retail ranks below the norm score attained by POS software application providers on Market Readiness and Value Delivered to customers. Torex has performed 22% below the average score of POS application providers on Market Readiness as a vendor to deploy effective POS applications and associated maintenance, integration and support services. In a similar vein, its ability to satisfy customers Torex has under-delivered by 17%, when compared to the norm.

While Torex does possess some named-brand marquee retail clients in Europe such as IKEA, it currently lacks the same credibility in the Americas. Torex competes in the food, leisure, grocery, petroleum, convenience and fast-moving consumer goods segments in retail. In the primary segments of focus in the Americas, Torex is trying to take on a well-established and highly concentrated market of software vendors including competitors such as Retalix.

Despite strong ecosystem relationships with the likes of IBM and NCR, Torex has a primary base in Europe and lacks penetration for both its major POS products in the Americas due to the lack of a compelling grass roots sales, service or support organization. Despite the challenges in the Americas and numerous internal change management issues, under Cerberus, Torex is looking to revive its market position and attempt to capture new market share in the emerging markets. A noteworthy highlight of this recent strategy is its focus on emerging markets in the Asia-Pacific region, such as India.

Torex’s POS software technology capabilities are also a mixed bag. For instance, Torex supports six-month releases of its POS solutions ensuring timely updates for its retail clients. Its application is built on the Java
platform with multi-language product localization capabilities. However, Torex does not provide open architecture standards for easier POS software and hardware integration with varied POS peripherals. Moreover, along with its on-premise deployment capability, Torex does not provide on-demand or Software as a Service (SaaS) capabilities for lean POS deployment, maintenance and support. This effectively takes the retail POS infrastructure cost-containment option off the menu of choice for retailers when selecting a POS software provider.

JDA

Overview

JDA Software Group’s supply and demand optimization (SDO) software helps retailers manage supply and demand chains, as well as business processes ranging from planning and forecasting to e-commerce and store operations. The company also offers point-of-sale applications to handle back-office functions, including inventory management, receipts and returns. Other products include analytic applications for decision support and collaborative tools for maintaining product and catalog information with partners, distributors and suppliers. JDA has more than 5,600 customers worldwide.

Observations

JDA has been a retail-specific software provider for over 30 years. Although they have had a POS application for 15 of those years, they are far better known for their supply and demand chain capabilities, as well as their merchandise management application, Arthur, than for Point of Sale. They have loyal Supply Chain and Arthur customers, as existing users account for 65% of software license sales.

Their target market is tier I, with a smattering of tier II retailers as well. Customers include BJ's Wholesale Club, Fred Meyer Kraft Foods and Office Max. Their target retail verticals include grocery, apparel and specialty. The services they provide these verticals is as extensive as nearly any retail-focused vendor.

JDA has a relatively large POS install base of several hundred retailers. Over the last three years this enterprise solution provider has introduced capabilities to integrated CRM functionality, loyalty with traditional POS functionality, and wireless POS functions. After acquiring Independent Software Vendors (ISVs) e3 and Manugistics, it will be interesting to see whether digesting continued acquisitions (such as the recently folded i2 deal) takes JDA's eye off the retail ball, especially in the POS space and retail merchandising-related modules. However, with its extremely wide base of loyal users, depth in product offerings, and Aberdeen’s research showing that 60% of retailers plan a POS upgrade in one to three years, JDA might well be advised to back away from the M&A banquet table and focus more on organic growth through R&D on applications like POS.
**Epicor**

**Overview**

Epicor Software provides enterprise resource planning software for mid-sized businesses. Epicor’s software integrates back-office applications for manufacturing, distribution and accounting with customer relationship management functions, including sales, marketing and customer support. The company’s software also includes collaborative applications that link employees, distributors and suppliers, encompassing operations such as supply chain management, sourcing and procurement. In October 2008 Elliott Associates (which holds a 10% stake in the company) made an unsolicited bid to acquire Epicor. Epicor has two similar POS software applications in its POS portfolio from companies that it acquired in 2005 (CRS Solutions) and 2007 (NSB). Epicor’s customer list includes companies such as JC Penney, Reitman’s, Aeropostale, American Eagle Outfitters, Ann Taylor, Zales, Zumiez, Liz Claiborne, inc., MGM Mirage, HoneyBaked Ham, Adidas Retail, Chicago White Sox and Four Seasons Hotels and Resorts.

**Observations**

When compared to the top performers in the POS applications space, Epicor outperforms the average score of POS software application providers on the Market Readiness criteria by a fair margin, but falls short on the Value Delivered to the retail customers.

In terms of the Market Readiness, as a vendor that deploys effective POS applications and associated maintenance, integration and support services, Epicor shows 26% higher Market Readiness when compared to the norm. On the other hand, it has underperformed by 43% on the value provided to its customers when compared to the average score attained by the average POS software provider. It is evident that when compared to the norm on Value Delivered to customers, Epicor needs to outperform the norm to a greater degree by further inducing their retail customers to focus on retail POS software performance benchmarks such as customer satisfaction at POS, uptime, timely price and promotion updates, and speed of check-out.

Epicor’s POS focus segments are specialty, general merchandise, leisure and hospitality retail segments. It has a diversified range of customers based on revenue size (small, mid-size, and large with a 75% in the small to mid-size segments) and geography (Americas, Europe, and an initial foray in the Asia-Pacific region). This reflects the scalability of its revenue and product mix. In terms of technology specifications, Epicor’s primary platform is built on the .NET architecture and supports open architecture for standards-based integration of software, hardware and peripherals. Epicor also supports multi-language product localization. This is reflective of both ease of configurability and extensibility POS software and hardware integration with varied POS peripherals such as 2-D scanning capabilities, electronic payment acceptance software upgrades such as contactless and mobile payments, and weight verification. Epicor is also providing the option for retailers to adopt on-demand POS capabilities that can potentially enable lower infrastructure costs.

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**AXIS Benchmark: Epicor**

<table>
<thead>
<tr>
<th>Market Readiness</th>
<th>Score: 37</th>
<th>Average Score: 31.75</th>
</tr>
</thead>
</table>

**Value Delivered**

| Score: 31 | Average Score: 53.97 |

“Store support for POS system uptime is critical for customer readiness in our stores. Depending on the nature of problems, we have established three levels of IS support on the phone, on-site, and depot repairs. We ensure consistent customer service and more than 90% uptime in a majority of our stores by following a diligent process of reviewing support call logs.”

- Director of Store Systems, Large Consumer Electronics Retailer, Americas (user of Epicor POS software and Fujitsu hardware)

“*We use Epicor as our POS solution, which is architectured with our CRM system. The POS system is linked through a VPN to call up specific "current" customer data so the stores can see purchase history, point balance, etc. Noting that customers shop in multiple stores of ours, the knowledge of more than just the "local" store is important. We reward customers on points earned so having this balance at the stores' fingertips is great for customer service.*”

- Doug Edwards, SVP Store Operations, Addition-Elle
Vendor Snapshot Supplement

Vendor Snapshots: Market Readiness (X-axis) Only
The vendor snapshots in this section include top vendors that provided the requisite Market Readiness information but did not achieve adequate market visibility within the context of Aberdeen surveys to create a Value Delivered score.

Radiant

Observations
Radiant Systems caters to the sports and entertainment, hospitality and retail industries. In 2007, Radiant Systems acquired another POS and back office solutions provider Quest’s retail technology to bolster presence in the sports and entertainment industry segments. The company’s touch-screen point-of-sale hardware and software link point-of-sale data with centralized merchandising functions, such as ordering and scheduling. The system also comes with a suite of solutions including ecommerce software to extend products to the web, enhanced credit card processing, and a comprehensive line of hardware offerings. Radiant also offers consulting and systems integration services. Radiant, which has traditionally charged one-time fees for its systems, has shifted toward a subscription-based model.

Radiant has 552 full-time support employees, out of a total head count of 1,350, or just over 40%, which is high for vendors in this space. They have a global presence, with offices in North America, Europe and Asia-Pacific. They have an evenly balanced revenue base of 57% product and 43% services. Combining this balanced revenue with their global presence and wide, dispersed customer base, Radiant appears poised for stable growth. They last posted annual revenue of $253M and cash reserves of almost $30M. They do, however, anticipate 20% of new release changes to be spent on bug fixes. Nevertheless they are out-performing the industry average by almost 30% in terms of Market Readiness.

AXIS Benchmark: Radiant

Market Readiness
Score: 39
Average Score: 31.75

Value Delivered
Score: N/A*

*Insufficient market representation to evaluate

"Since our new POS adoption in 2007, we are measuring and tracking key performance indicators such as speed of transaction, on-hand inventory, gross margin, and system uptime in an effective manner. Mahoney has attained 95% or more uptime for all their POS terminals. The new POS system ensures speed of transactions leading to extremely satisfied customers. Moreover, compared to the troubleshooting required on our legacy POS system, we need to use our help desk/depot services maybe once every couple of months."

-Martin Cawsey, CFO, Mahoney Garden Center (User of Radiant Systems POS)

Retalix

Observations
Retalix is a global provider of integrated software solutions for the food, fuel and consumer goods retail and distribution industries. Retalix solutions are installed in supermarkets, groceries, convenience stores, fuel stations and quick service restaurants, as well as foodservice, grocery, convenience products and fast-moving consumer goods distribution organizations. With a primary focus on the special needs of supermarkets, convenience stores and foodservice, Retalix has over 40,000 retail and distribution sites and 300,000 checkout lanes worldwide. Over half of the top 50 food retailers and food distributors in the US use Retalix software. The Retalix software portfolio consists of synchronized applications at the store, headquarters, warehouse and supply chain. They have over 1,000 customers, including Tesco, Sainsbury’s, Market Basket and Carrefour.

AXIS Benchmark: Retalix

Market Readiness
Score: 33
Average Score: 31.75

Value Delivered
Score: N/A*

*Insufficient market representation to evaluate
With their Market Readiness score of 33, Retalix outperforms the industry average by 4%. They do not have a diversified customer base, as they are tied almost exclusively to grocery, a segment in which they dominate. They are in a very strong financial position, with annual revenue of $221M, net income of $6M, and cash reserves of $29M. Their revenue mix is somewhat top-heavy on the services side, with 64% representing this source, and only 36% from products. The thinking behind this observation is that it is far easier to switch professional services providers than it is to switch products. Their product is reliable, as only 10% of changes to the next release are slated for bug fixes, while 90% are earmarked for new functionality and requests from their install base.

**Retail Pro**

**Observations**

Unlike other POS vendors, Retail Pro offers a variety of technology solutions that address different needs across different retail markets and industries. Since the company is not tied down to any single product, it is attentive to matching the needs and concerns of their clients to the appropriate software. Retail Pro's look and feel is user-definable; menus can be modified to include only the options the retailer uses, and each screen within the application can be set up to fit their particular business model. Of all the vendors evaluated, Retail Pro can most easily scale down to a single store. It is, however, available in editions that scale to a chain of stores as well. Useful features include the ability to process special orders, layaways, gift registry and sales order entry for mail order and catalog sales. An E-Commerce Integration (ECI) tool allows the merging of store-based and online activity into one cohesive operation. They operate at almost the exact industry average score for Market Maturity. Because they cater to much smaller chains, all the way down to single-store retailers, this may be a contributing factor to their not garnering enough user responses to rank on the full AXIS chart.

**Cornell-Mayo**

**Observations**

Since 1981, Cornell-Mayo has been developing software solutions for specialty, mass merchandise and department store retailers. Their offerings include point-of-sale software, professional services, consulting, design, system integration, implementation and testing. Built on an open systems platform, their POS solution can run on almost any operating system, including Windows XP, Windows 2000, Windows CE, DOS, 4690 OS and Linux. Built with configurability in mind, Cornell-Mayo’s solution is written in C++, with many components in the system isolated so that changes do not impact the entire system. Further, the POS solution supports a variety of personalization options and offers added value at three levels of store organization: individual stores, store groups and enterprise-wide. This makes it possible to make changes for single stores, for multiple groups of stores or for the entire chain. Examples of its extensibility are the various...
“LCBO acquired and deployed its POS solution from Cornell-Mayo in 2002. We have developed a customized solution due to our unique pricing model, business rules, and our chip and pin migration. We are very satisfied with our solution as it is well integrated with our inventory application, customer relationship management, and peripherals. We have worked closely with Cornell-Mayo to co-develop source code changes based on our reporting needs, changes to data interface, or functional improvements. We would like to see the next stage of evolution and migration path for our POS framework.”

-Patty Petterson, Manager, Retail Systems, LCBO, Canada

Vendor Snapshots: Emerging Providers

In this section, non-scored but emerging POS software solution providers are highlighted due to their innovative product mix, focus on retail pain points, and standards-based POS implementation methodologies. It is important to note that all three companies are likely to make traction in the rapidly evolving POS needs in small-to-medium retail segment.

CORESense

This retail applications provider has a detailed and feature-rich POS offering for Small to Medium Businesses (SMBs). The merit of the CORESense application is its ease of POS integration with its other cross-channel retail applications such as e-commerce, order management, fulfillment, merchandising, and customer relationship management (CRM). The other key differentiator for CORESense is its on-demand model and SMB domain expertise across different retail segments including specialty, sporting goods, and fashion.

Crossview

Crossview also focuses on the unique needs POS and cross-channel needs of SMB retailers. This cross-channel retail application provider’s POS solution offers all standard POS application features and functionalities such as customer relationship management, inventory functions, payment, loyalty, pricing, promotions, and returns. The single most important merit of Crossview’s solution is the high-level of integration of the POS application with cross-channel promotions, order management, and payments.

Retail Anywhere

Formerly known as AIM Systems, Retail Anywhere supports ARTS-mandated standards-based integrated POS application deployment. This retail applications provider specializes in fulfilling the needs of SMB retailers in several point-of-service areas including mobile POS, kiosks, traditional POS, and other retail applications such as customer relationship management, merchandising, inventory management, analytics, multi-store operations, and warehouse management applications. The merits of Retail Anywhere applications are its ecosystem relationships with Microsoft and...
IBM, its retail integration-based POS approach, as also its domain expertise in the deployment of several thousand POS applications as AIM systems.

### Vendor Snapshots: Hardware/Peripherals

In the context of providing Retail POS end-users with comprehensive guidance in selecting potential technology partners, in this section Aberdeen presents insight into the Value Delivered by providers of hardware and peripheral solutions that complement the software vendors described above. Market Readiness data was not compiled for these companies, as they fall outside the software-oriented focus of this report.

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Value Delivered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hewlett Packard</td>
<td>75</td>
</tr>
<tr>
<td>Ingenico</td>
<td>66</td>
</tr>
<tr>
<td>Fujitsu</td>
<td>63</td>
</tr>
<tr>
<td><strong>AVERAGE SCORE</strong></td>
<td><strong>60</strong></td>
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<tr>
<td>Hypercom</td>
<td>58</td>
</tr>
<tr>
<td>IBM</td>
<td>57</td>
</tr>
<tr>
<td>Wincor-Nixdorf</td>
<td>53</td>
</tr>
<tr>
<td>Verifone</td>
<td>46</td>
</tr>
</tbody>
</table>

* Average score represents Value Delivered averages among Hardware/Peripheral providers

* Insufficient market representation to evaluate

Source: Aberdeen Group, Q4 2008

### Hewlett Packard (HP)

**Observations**

HP’s relationship with retailers has been built upon its stack of consumer electronics products such as computers, printers, paper and ink products. HP has gradually positioned itself in the POS market, first launching its POS portfolio in 2003. When compared to the average POS vendor, HP is delivering 43% higher value to its customers. HP’s POS stack is primarily built on open standards for extensibility and targeted towards large (retailers with >$1 billion in revenues) to mid-size ($50 million to $1 billion in revenues) retail segments.

HP, with its lower price positioning, is attempting to create a sizeable share in the small-to-medium (SMB) retail market by competing with other major POS ISVs that provide POS systems, software and peripherals. HP will have to counter competitive offerings in terms of feature, functions and price of POS hardware providers that focus on the needs of SMB retailers such as IBM, NCR, Fujitsu, Dell, Radiant and Wincor Nixdorf. From an ecosystem standpoint, HP does partner with POS software and peripheral providers. HP’s hardware capabilities complement the POS software strengths of companies such as Retail Pro, Oracle, Retailis, Microsoft, JDA, MICROS, PC...
America and Torex. For peripherals, HP partners up with TPG, Cherry and APG, among others.

**Ingenico**

**Observations**

Ingenico Corporation is a provider of electronic payment solutions and value-added services at the point-of-transaction for retailers and other industry verticals. Their offerings include electronic transaction terminals, peripheral devices such as payment pin pads, transaction networking devices, transaction management systems, application software, and information delivery services. Ingenico does out-perform the average POS payment-enabling peripheral provider by a margin of 10%.

Ingenico’s prime competitors are VeriFone and Hypercom. All these companies offer similar POS solutions in the peripheral hardware, software and services product groups. The uniqueness of the competitive conditions in this POS sub-segment is the fact that most payment peripheral technology platforms are integrating at a fast pace due to the common standards for payment acceptance and consumer interface required in retail settings. For instance, the PCI-compliant pin entry device combines consumer signature capture, credit, contactless, and debit pin entry functionality with cross-vendor integration capabilities enabling integration with POS terminals of major POS terminal hardware manufacturers such as NCR and IBM. One of the key improvement areas for Ingenico includes the product innovation and development in the areas of advanced payment systems including contactless payments, mobile NFC, and other open-loop and closed-loop pre-paid applications.

**Fujitsu**

**Observations**

Fujitsu’s offering includes point-of-sale hardware technology, POS software, self-checkout systems, self-ordering systems, and multi-vendor lifecycle services. Aberdeen’s results indicate that Fujitsu is delivering 5% higher value to the market when compared to the average POS solution provider. Fujitsu is one of the four dominant POS hardware providers globally, the others being IBM, NCR, and Wincor Nixdorf. Fujitsu does possess a strong partner ecosystem for POS platform architecture, and operating system with the likes of Microsoft (.NET, Windows Mobile, Embedded OS, Windows Server 2003, and Windows SQL Server 2005). In the area of POS peripherals as well as advanced payment systems (i.e. contactless payments), Fujitsu is providing retailers with several checkout system upgrade options through partnerships with companies such as Acceltec, AJB software, Epson, and Metrologic. One of the areas of improvement for Fujitsu is to increase a focus on providing their point-of-service customers with SaaS-based and thin-client capabilities. Such capabilities enable retailers to operate with lean POS and minimal IT infrastructure in stores that can prove cost-effective for retailers.
Hypercom

Observations
Hypercom’s product portfolio is similar to that of its prime competitors, Ingenico and VeriFone, all providers of electronic payment solutions and value-added services at the point-of-transaction for retailers and other industry verticals.

Hypercom’s offerings include electronic transaction terminals, peripheral devices such as payment pin pads, transaction networking devices, transaction management systems, application software, and information delivery services.

The uniqueness of the competitive conditions in this POS sub-segment is the fact that most payment peripheral technology platforms are integrating at a fast pace due to the common standards for payment acceptance and consumer interface required in retail settings. For instance, the PCI-compliant pin entry device combines consumer signature capture, credit, contactless, and debit pin entry functionality with cross-vendor integration capabilities enabling integration with POS terminals of major POS terminal hardware manufacturers such as NCR and IBM. Another key trend in this sub-segment is the rapid consumer need for advancement in the payment form factors as well as proximity payment acceptance at POS.

Just as in the case of Ingenico, one of the key improvement areas for Hypercom includes the product innovation and development in the areas of advanced payment systems including contactless payments, mobile NFC, and other open-loop and closed-loop pre-paid applications.

IBM

Observations
IBM offers large and mid-size retailers both fixed and wireless POS solutions (hardware, peripherals and software) for traditional checkout, self checkout and other small foot-print checkout kiosks for convenient checkout in high-traffic retail formats. The primary segments in which IBM targets its POS solutions are specialty, food service, hospitality, convenience and retail petroleum. Aberdeen’s analysis shows that IBM delivers slightly lower value to its retail customers when compared to the average POS vendor in the retail and hospitality industry. When compared to its core competition, while IBM scores outperform Wincor Nixdorf (53.33), IBM attains lower scores than those attained by NCR (81) and Fujitsu (62.73).

IBM, NCR, Fujitsu, and Wincor Nixdorf have dominated the POS hardware market share on a global basis. While NCR has several specific POS software products for retail segments such as grocery, IBM has largely focused on its core proprietary hardware strengths. Exceptions to its POS hardware portfolio are software offerings that include self checkout software, Linux operating system, remote data management and other middleware applications. From a POS software and peripherals standpoint, one of IBM’s strengths is its vast ecosystem of partners. IBM does possess
several legacy POS deployments in the retail industry. The prospective POS upgrades for these legacy systems within the next 12 to 36 months such as the IBM 4690 is both a revenue opportunity for IBM as well as a point of entry for its competitors such as NCR or Fujitsu.

**Wincor-Nixdorf**

**Observations**

Wincor Nixdorf has underperformed when compared to NCR, Fujitsu, and IBM as well as the average POS solution provider by 11%. Despite the fact that Wincor is one of the top four POS hardware providers globally, lately Wincor’s positioning in the retail space is questionable due to a lack of focus on organic growth, product development, and innovation towards customer-centric POS enhancements such as loyalty and CRM.

This solutions provider primarily focus on its Advanced Teller Machine (ATM), point-of-sale, and self service kiosk business targeting retail and banking industries primarily in EMEA, Asia-Pacific and more recently in the Americas. Wincor’s applications are primarily based on .Net architecture and the windows embedded point-of-service platform solutions.

In the 2007 and 2008, this company has focused on providing some of its customers with updated self-service checkout solutions, point-of-service solutions for integration of peripherals into the existing in-store legacy hardware, retail migration of legacy point-of-sale to modern POS system, cash management solutions, and Personal Digital Assistant (PDA) for in-store applications such as line busting and inventory management.

**VeriFone**

**Observations**

VeriFone has underperformed when compared to Ingenico and Hypercom as well as the average POS payment peripheral provider by 26%. The competitive environment within the POS payment peripheral hardware, software, and services segment has global proportions as the industry is well spread across key economies: Americas, European and Asia-Pacific. In the US market alone, Hypercom Corp. and Ingenico are prime competitors for VeriFone. The Lipman acquisition in 2006 has provided VeriFone with a diversified bundled offering in the payments market and more specifically in the areas of integrated contactless products and solutions.

VeriFone hopes to use the enhanced scalability in research and development, marketing and financial strategies in the US and overseas market. However, despite the economies of scale advantages for VeriFone, the rapid advancement in electronic payments and adoption rate of closed-loop and open-loop non-traditional payments applications such as contactless payments, pre-paid, and mobile payments within the payments industry should provide revenue and growth opportunities for Hypercom and Ingenico as well. The major business challenge in the electronic payments industry is not so much the solutions that these companies
present, but aside from merchants or retailers, how effectively these enterprises will scale the needs of the payment processors, the Independent Sales Organizations (ISOs) and credit networks. The success of integration and adoption of contactless payment systems in traditional retail would require a balanced approach amongst all partners.
Appendices

Aberdeen AXIS Methodology

About this Aberdeen AXIS
Focused on Aberdeen’s POS research, this AXIS Report is based on 1,036 respondents from six benchmark studies conducted between mid-2007 and fall 2008. Follow-up interviews were conducted with the evaluated vendors in September 2008. Validation interviews were conducted with the vendors and their clients in October 2008.

About Aberdeen
Since 1988, Aberdeen’s research has been helping corporations worldwide become Best-in-Class. Having benchmarked the performance of more than 644,000 companies, Aberdeen is uniquely positioned to provide organizations with the facts that matter — the facts that enable companies to get ahead and drive results. That's why our research is relied on by more than 2.5 million readers in over 40 countries, 90% of the Fortune 1,000, and 93% of the Technology 500.

As a Harte-Hanks Company, Aberdeen plays a key role of putting content in context for the global direct and targeted marketing company. Aberdeen's analytical and independent view of the "customer optimization" process of Harte-Hanks (Information – Opportunity – Insight – Engagement – Interaction) extends the client value and accentuates the strategic role Harte-Hanks brings to the market.

For additional information, please visit Aberdeen Group at www.aberdeen.com or call (617) 854-5200. To learn more about Harte-Hanks, please call (800) 456-9748 or go to www.harte-hanks.com.

The Aberdeen AXIS Methodology
The Aberdeen AXIS is an objective and fact-based vendor assessment methodology designed to assist organizations in making technology purchasing decisions. The Aberdeen AXIS assesses vendors using two criteria: 1) Best-in-Class status (Value Delivered) based on key performance indicators drawn from Aberdeen’s domain-specific body of primary fact-based research; and 2) Market Readiness of the vendor organization determined by over 250 evaluation criteria, including: vendor questionnaires, public records, vendor briefings and customer interviews.

- **Vendor Selection** – Vendors appearing on an AXIS have been identified by Aberdeen and the marketplace as having a relevant solution.
- **Vendor Omission** – Vendors may not appear on an AXIS for typically one of three primary reasons: 1) the vendor failed to supply requisite data for analysis; 2) the vendor failed to have sufficient market representation as part of the analysis (i.e.
insufficient customers identified the vendor as a provider); or 3) the vendor’s solution or service did not align with the particular AXIS.

- **Data Collection** – Data for the Y-Axis (Value Delivered) is extracted from relevant Aberdeen benchmark research reports published in the proceeding twelve months (typically). All of the benchmark reports are predicated on Aberdeen’s PACE methodology, using primary field research in which end-users are polled via standardized survey. Information collected is analyzed using Aberdeen’s formulaic approach to determining Best-in-Class performance. Data for the X-Axis (Market Readiness) is a by-product of a vendor-fielded questionnaire containing over 200 key questions, public records, customer interviews and vendor briefings. A weighting algorithm, maintained in confidence to prevent response gaming, is applied to determine respective vendor scores.

- **AXIS Recommendations** – The relative positions of the vendors on the AXIS, as well as the insight provided in the report, represent an assessment of the vendor score for Market Readiness and Value Delivered, interpreted via published methodology and analyst insight.

An Aberdeen AXIS is published typically once a year for each of the 22 research practices covered by Aberdeen.

**Further Reading**

- **Mobile Payments in Retail: Next Wave in Customer Centricity;** September 2008
- **Migrating to Customer-Centric Point of Service;** February 2008
- **Killer Kiosks: Redefining the Customer Experience Through Self-Service;** July 2007
- **The New Retail Differentiator: Making Extended Points of Service a Reality;** April 2006

For information on updates or publication schedules, please contact: AXIS@aberdeen.com.

More information about Aberdeen AXIS is available at: http://axis.aberdeen.com

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Authors: Sahir Anand, Senior Analyst, Retail, sahir.anand@aberdeen.com
Ben Ream, Analyst, Retail, ben.ream@aberdeen.com
Chris Cunnane, Research Associate, chris.cunnane@aberdeen.com