

## Transform Your Stores: Enhance Customer Interactions With Advanced Selling Technologies

*by Robert Garf, Sriram Thodla, and Joyce McGovern*

Traditional operating procedures and legacy store technology limit retailers' ability to differentiate the in-store shopping experience. To improve operational efficiencies, increase conversion and total market baskets, and keep customers satisfied, retailers must alter existing store processes and invest in new technology. Integrating current retail systems with advanced selling technologies will revolutionize your customer's store experience and brand your organization as a retail leader.

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# Transform Your Stores: Enhance Customer Interactions With Advanced Selling Technologies

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Retailers committed to transforming the store experience must develop a Pervasive Interaction model, supported by Advanced Selling Technology, to satisfy customer expectations, increase sales, and garner long-term loyalty.

The  
Bottom  
Line

## Executive Summary

Traditional in-store applications such as Point-of-Sale (POS), inventory management, and replenishment systems help ensure product availability and transaction efficiency, but retailers need to complement these investments with customer- and employee-facing advanced selling technologies. New technology, along with revamped processes, creates a closed-loop selling strategy that leverages customer and product insights to empower employees and provide customers with timely and relevant information. This Pervasive Interaction (PI) provides personalized content, influences customer behavior, and breeds knowledgeable store associates—ultimately contributing to increased revenue and an improved bottom line.

This Report addresses the following:

- The importance of transforming the store
- A model of PI through the five interrelated shopping stages, and the PI maturity model
- The Advanced Selling Technology (AST) framework for enabling PI
- The seven imperatives based on early adopters
- The technology vendors that market to the AST space

## Customers and competitors will force you to transform the store

Retailers spend an estimated \$113B annually developing and executing advertising, marketing, and promotions to increase store traffic. With 70% of actual buying decisions made only after the customer is inside the store, retailers risk missing an opportunity to increase investments that enhance the brick-and-mortar shopping experience and significantly increase conversion rates. Retailers must look beyond supply chain efficiencies and focus on the customer and their store experience as a brand differentiator.

However, becoming customer-centric is more than just adding headcount or carrying excess inventory—it's about creating an in-store environment that consistently fulfills customer expectations. Retailers that fail in these efforts will watch their customers defect to their competition that has embraced this new way of doing business. In fact, Wal-Mart claims that each lost customer is worth \$200K in lifetime sales.

### Consumers expect better interactions with retailers

Pleasing the customer—and getting them to part with their money—is the moment of truth for retailers. But with retail overcapacity, both in the physical world and online, and the ability to quickly gather information on competitive offerings and locations, retailers can't afford to ignore customer demands.

- **Shoppers expect more from retailers.** According to a 2004 AMR Research survey of nearly 1,000 consumers, shoppers say that rude staff, high prices, long checkout lines, poor product quality, and out-of-stock merchandise are the most significant reasons for driving them away.
- **They can only be disappointed a few times.** The checkout process is often the first and only point of customer-retailer interaction. At this point, it is too late to influence behavior and effectively service the shopper. According to consumers, it only takes an average of 2.7 negative experiences with a store to send shoppers to a competitor.

Because expectations will certainly differ by segment and be unique based on specific brand promises, retailers must understand their target market and identify opportunities to improve customer expectations.

## Retailers enhancing stores report real benefits

Retailers willing to invest in enhancing customer interactions are improving operational efficiencies and increasing market share. Examples of how retailers have directly or indirectly enhanced the store experience include the following:

- **Tying online sales to in-store deliveries**—One specialty recreational retailer reports close to \$90 per order in incremental store sales from customers coming in to pick up their online orders. In addition, its in-store kiosks allow it to lower inventory and increase conversion rates by offering an endless aisle of products that it may not carry in the store.
- **Delivering electronic promotions in store**—An apparel retailer sends personalized promotions to customers' cell phones while they are in the store. This resulted in a 20% increase in spending and more frequent customer visits—up 15%.
- **Creating a store of the future**—Offering myriad customer-facing devices, such as portable shopping devices, kiosks, and self-checkout, a German supermarket reported a 60% increase in customer satisfaction and a 30% to 43% increase in share of regular customers. Up to 90% of the respective users rate the benefit of the individual technology offers as “high” to “medium.” (Source: The Boston Consulting Group, 2003.)
- **Better educating and training associates**—A UK-based chain drug store increased service levels by providing easy access to product information, training materials, process guides, and human resources data. This enabled store associates to spend 25% more time in the front of the store with customers.

## Pervasive Interaction: AMR Research's model for enhancing the store experience

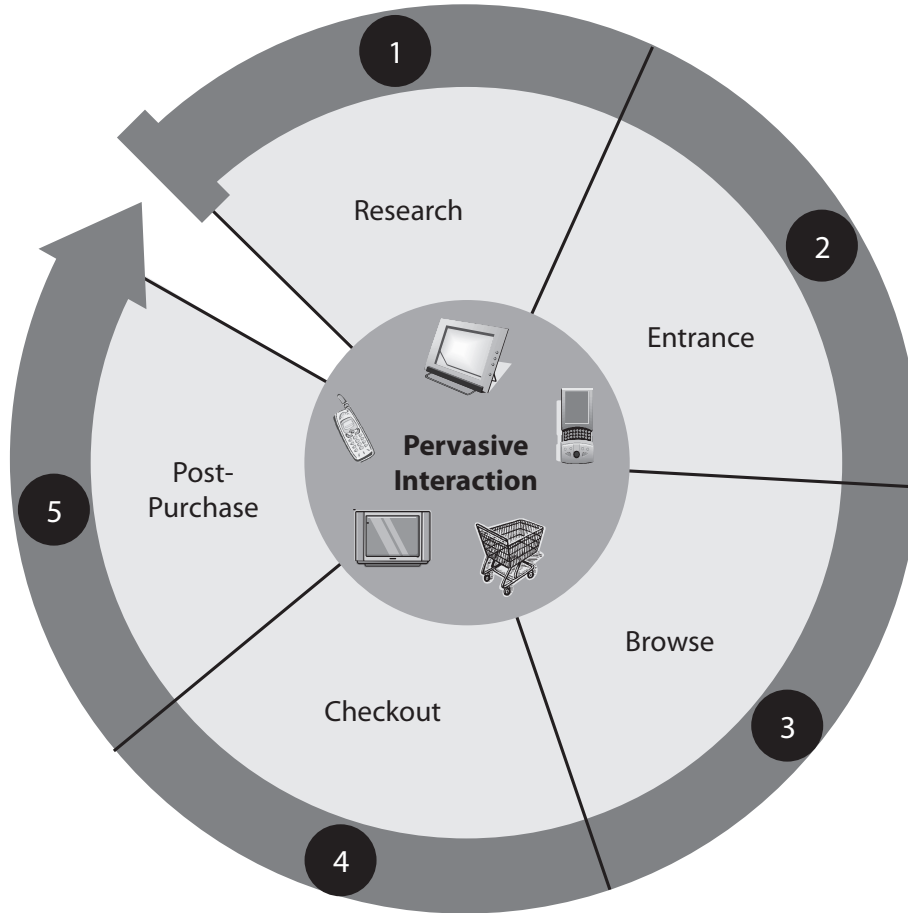
There are numerous ways to enhance the store experience, from improving associate training to investing in shopping assistant devices. Rather than trying a variety of disjointed efforts, retailers need to create a model that can guide these initiatives and determine if they are meeting the overall goals.

### The basis for the new model is understanding today's shopper

Before creating a new model, retailers need to understand the current shopper and what level of interactions they expect. Use your brand—what your company stands for—to set priorities and translate that into new operating procedures that support these promises. Specifically, retailers should focus on two areas:

- **The five-stage store shopping process**—While the focus should be on the store, understand how each stage of the closed-loop selling process interrelates versus just improving discrete parts. Determine the handoffs among the stages, bridge the interactions, and be sure to have employees or devices available to provide service at the appropriate times. The first of the five stages is *research*, which often occurs on the Internet prior to entering the four walls of the store. The next stages are *entering* the store, *browsing* where the consumer locates and determines what to buy, *checkout*, and finally *post-purchase* activities, such as product assembly and warranty submission (see Figure 1). Each of these stages represents an opportunity for a retailer to improve upon customer interactions.
- **The influence of online shopping**—While North American consumers do the bulk of their shopping in stores, they spent \$75B online in 2004 and will spend over \$100B in 2005. The convenience, service, and usability of the growing online shopping channel have influenced their buying behavior, so determine how to best integrate these functions into the store. For instance, in the research stage, consumers are using the Web to compare models, read reviews, and consult with trusted sources before even entering a physical store location. Most online stores also tell consumers whether something is in stock, so consumers will not be satisfied with in-store out-of-stocks. Leverage rich customer insights gathered during their online activities to provide better service in stores.

**Figure 1:** Five interrelated stages of the shopping experience



Source: AMR Research, 2005

### **Pervasive Interaction: Exceeding your customers' in-store expectations**

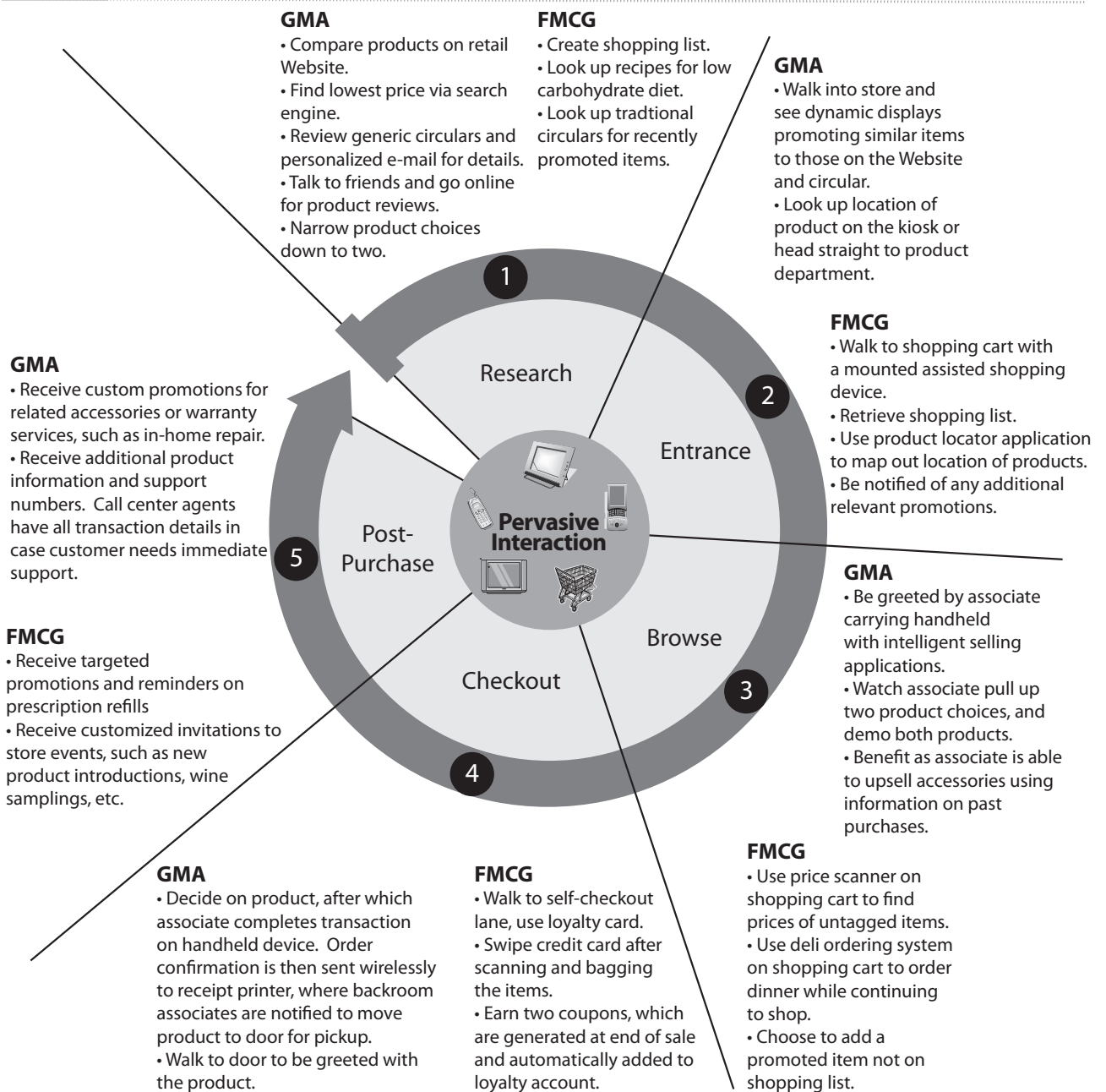
To successfully deliver an enhanced shopping experience, retailers need a strategy to guide them in their decisions. We call this new model Pervasive Interaction. This model leverages customer insights from cross-channel shopping interactions, provides access to consistent product content, and enables the timely and relevant delivery of information to employees and customers. It changes the shopping paradigm by establishing a closed-loop interaction model that supports employees and services customers through each stage of the cross-channel shopping process. The PI model includes the following key elements:

- **Provides contextualized, personalized information from a single data source**—PI delivers information that is relevant and timely to a shopper. This requires a single view of real-time customer information (name, address, demographics, e-mail, transactional history, loyalty cards, and registry/wish lists) and product information (description, size, style, color, warranties, and digital images) across all channels.

With mature customer and product data management, retailers will use customer segmentation, purchase analytics, and merchandise characteristics integrated with marketing execution systems to provide a personalized shopping experience, influence behavior through targeted promotions, and provide customized self-service capabilities. For example, a shopper's profile may include information about a printer they previously purchased. The sales associate, using a device with real-time access to this purchase history, can proactively offer additional supplies or drive upsell opportunities for new products that would work well with this printer (e.g., a new laptop).

- **Is voluntary and unobtrusive**—The ability to offer, but not mandate, self-service and personalized help will extend the convenience of the Internet to the store shopping experience. Customers will browse products, view promotions, access order history and status, and interact with automated self-service technology—all while shopping at their own pace. This will not only reduce operational expenses, but could also guide customers toward higher margin and complementary products by automatically presenting cross-sell opportunities.
- **Is multichannel-aware**—To ensure a consistent brand and service level across channels, as well as provide or capture accurate and reliable information, retailers must link store-based PI activities with online capabilities. For example, the same, up-to-date product information on an HDTV monitor should be available online or on an in-store kiosk, and a wish list saved in store on a portable handheld device should be available from the shopper's home PC. Retailers must integrate processes and data so cross-channel interactions and shopping patterns, demand analytics, transaction logs, and marketing data can be used to drive in-store efforts.
- **Is not tied to a specific device**—With the right security, personalization, and usability, PI should be consistently delivered to employees and customers through whatever physical device makes shopping more convenient. That device may be a PC, a digital display at the store entrance, a portable shopper device, a self-checkout station, a kiosk, or some other device or display. Don't limit future initiatives by tying current PI projects into specific hardware; rather, create an architecture that enables your organization to efficiently deploy new devices as it makes sense for your business.
- **Improves associate performance**—Instant access to consolidated enterprise data—customer data, product information, inventory and shipping details, etc.—will enable employees to proactively help customers. Associates will find it easier to locate, evaluate, and upsell associated products and learn policies and procedure while remaining on the sales floor. Three-ring binders, catalogs, and computers in the backroom don't count as knowledge management tools. Associates need real-time access to critical information while they are servicing the customer.

**Figure 2:** Pervasive Interaction through each of the five interrelated stages



GMA=General Merchandise and Apparel  
 FMCG=Fast-Moving Consumer Goods

Source: AMR Research, 2005

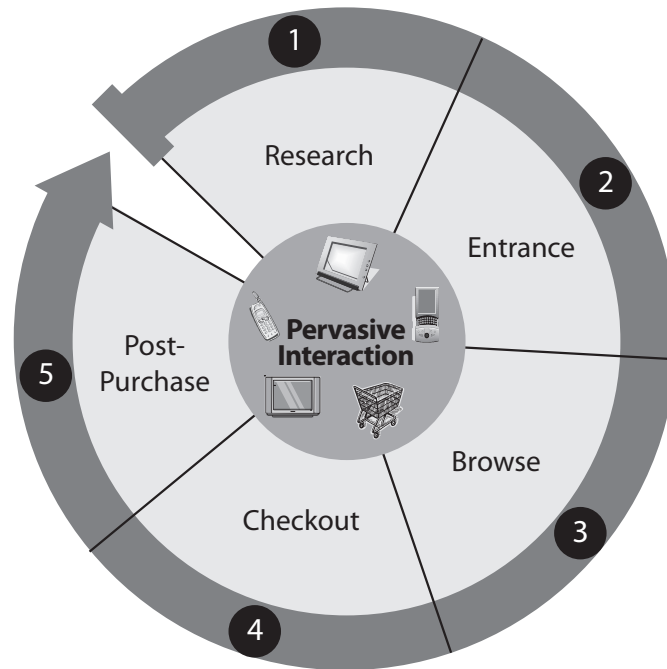
## Advanced Selling Technology enables Pervasive Interaction

Financial benefits don't magically appear with the flip of the interactive shopping technology switch. Retailers must build a technology architecture that extends functionality from existing systems such as POS while at the same time creating a foundation that allows for future expansion and the introduction of a variety of customer-facing devices and software. We collectively call the architecture (the servers, databases, infrastructure, and other back-end technology) and customer-facing solutions (the devices and software applications) advanced selling technology (see Figure 3).

In reality, many retailers will simultaneously roll out customer-facing devices with the requisite back-end solutions that enable them, but retailers should think of these two components as separate investments. The architecture should be hardware-agnostic and provide the foundation for enabling the customer-facing solutions of today and those that will emerge tomorrow.

**Figure 3:** Advanced Selling Technology framework

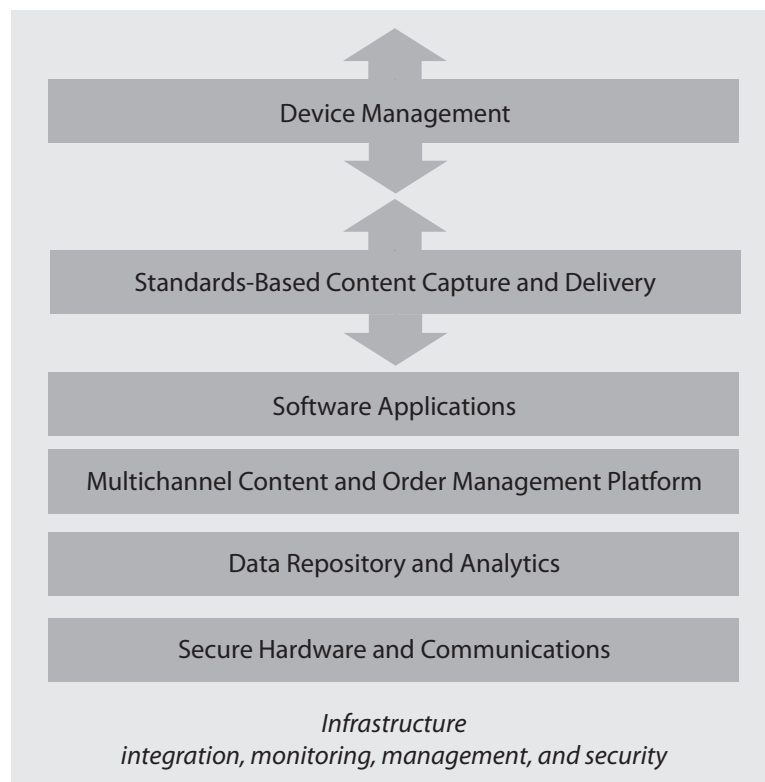
**Interaction**



**Devices**



**Architecture**



Source: AMR Research, 2005

## A standards-based architecture to enable customer-facing technology

This advanced selling technology underpinning should be integrated with existing retail systems, such as customer and product databases, and be chosen to enable the maximum flexibility of customer-facing technology deployment. Key components of the AST architecture include the following:

- **A device management abstraction layer**—This layer manages customer- and employee-facing in-store devices. To better manage the myriad store hardware, middleware should support remote system and asset management and diagnostics of every device and easily enable the introduction of new devices.
- **Standards-based content delivery and capture services**—Back-end applications should send and receive content and software applications to multiple devices and preformat the information based on physical limitations of the delivery mechanism. For example, a widescreen, high-definition plasma monitor, a kiosk, and a handheld device may receive the same video content, but in different formats or resolutions tailored to their screen.
- **Multichannel content and order management platform**—Retailers should leverage next-generation e-commerce platforms to synchronize content and order management functions across all channels. These systems will be integrated into core POS systems and available at multiple access points to bring the power and convenience of the Internet to the store. For more information on the specific functionality provided by this technology, see the *AMR Research Report* “Next-Generation Retail E-Commerce Platforms: Key to Seamless Multichannel Execution,” May 2005.
- **Data repositories and analytical tools**—For retailers that have not centralized merchandising data, they should plan to represent disparate data from multiple transactional systems in a logical data model that delivers a unified view of customers, transactions, and inventory. Product data should always be managed in an enterprise data repository, which receives external product information from partners, stores it in a single location, and syndicates it to internal and store applications in real time. These products will churn through the raw data to segment customers for targeted or loyalty-based programs, optimize local store assortments, report key metrics for store and home-office dashboards, cluster similar products for upsell opportunities, and monitor Internet and store shopping behaviors.
- **Secure hardware and communications**—Retailers will need to continue to invest in the underlying physical computing and networking infrastructure, including servers, networks, and wireless technologies for communication within the four walls of the store and between the corporate headquarters. This investment will provide each store with the necessary bandwidth for associates and customers to instantaneously access information from local and centralized applications and databases.

- **Infrastructure**—Composed of several different capabilities, this infrastructure is the glue that connects the various layers of the technology architecture together. Capabilities include device management, standards-based application and data integration, transaction monitoring, and granular data security. The wide deployment of distributed retail selling devices will force retailers to deploy bullet-proof, store-level infrastructure to lower management costs and drive the efficient transport of critical retail content and insight for display through any number of store-based hardware delivery platforms.

### **Now available: A range of customer-facing and employee-assisting technology products**

Retailers will need to invest in a variety of store-centric technology to improve customer satisfaction within the five shopping stages. There is no single vendor that offers the entire range of hardware and software capabilities needed to transform the in-store experience, and, in fact, there are a number of powerful customer-centric AST products that haven't yet been introduced, but are on the horizon. Customer-facing AST deployments should be based on short-term goals, such as experimenting with tools that other retailers have found effective or trying out new solutions that will set you apart from the competition. There are two categories of customer-facing AST:

- **Physical devices**—Devices such as mobile handhelds, cart-based tablets, kiosks, self-checkout systems, electronic shelf labels, electronic signature capture peripherals, digital signage, scales, and traffic monitors are examples of the newer hardware being used to deliver personalized and contextualized information to shoppers as well as store employees. The key with these devices is that they must be retail-hardened, placed in convenient locations, and above all, be easy to use. Rather than use generic PCs that contain so many capabilities that they confuse your average customers or employee, look for devices that are tailored to the task at hand. While breadth of device capabilities is important, usability and operational effectiveness are much more critical in creating an efficient store experience.
- **Software applications**—While mobile AST devices often get the most attention, retail customer-facing solutions are always powered by software applications. The most useful applications will be ones that can be delivered on multiple platforms. Examples include guided selling, personal shoppers, product locators, dynamic promotion displays, customer profiles and loyalty, customer surveys, and traffic-tracking applications. The software will leverage the continual AST investments made at the infrastructure level to ensure it can communicate with the proper data sources and be displayed through multiple media.

## Moving forward with Pervasive Interaction

To begin improving the in-store shopping experience, retailers need to embrace the concept of PI and plan for the incremental and tiered investment in the underlying AST. To help with the process, we provide a list of imperatives that will help you manage the transition to a PI-based strategy; a maturity model to help you understand where you are today and the steps required to fully realize the benefits of PI; and an overview of the vendors that deliver the customer-facing and architectural technology.

### The seven imperatives that will keep you on the most efficient path toward Pervasive Interaction

In order to successfully roll out PI-based store enhancements, AMR Research has identified seven imperatives for retailers to use as guidelines for embracing PI and investing in AST. While some of these tenets can be applied to any business process or technology initiative, these imperatives provide details regarding what helped early adopters succeed or drove projects off track:

- **Focus on usability.** The user interface for all devices must shield the user from the complex integration and analytics buried in the technology architecture. Useful device benchmarks include the iPod interface, and for user experience, the process flow at Amazon.com is thought-leading. Success will require retailers to spend significant time during the requirements stage to understand the most effective design, workflow, and range of functionality that will entice volunteer customers and reluctant associates to embrace the new shopping and selling tools.
- **Embrace and budget for change management.** Home office and store management must train and empower associates so they embrace the ever-evolving store experience. Poorly trained associates with conflicting priorities lead to low customer service levels and impede the execution of store strategies. Without proper training, the shiny new devices will gather dust, or worse, impede associates from doing their job. Many retailers should look to professional service providers to not only implement new systems, but coach store associates on how to interact with customers.
- **Deliver enhancements that appeal to your customers.** Although retailers can learn about AST solutions and best practices from cutting-edge competitors in other retail segments, companies should be careful to simply mimic the success of others. Because consumers have varying expectations in different retail segments, you should reach out to your specific customers with focus groups, in-store and online surveys, and other feedback mechanisms to see what they like and dislike about old, new, and proposed shopping enhancements in your store.
- **Rely on standards.** Retailers must embrace solutions and vendors that support industry standards, such as Association for Retail Technology Standards (ARTS).

With numerous best-of-breed vendors dotting the store solutions landscape, demanding standards-based solutions (both device and infrastructure) whenever possible will enable retailers to deploy devices and applications from a variety of vendors, ease the time and cost of integration among the disparate solutions, and otherwise future-proof AST investments.

- **Proactively address security and privacy issues.** A continuous spate of security breaches has brought data security concerns into the public spotlight, and privacy concerns follow the introduction of most new technologies. As a result, retailers need to be vigilant in guarding their customers' personal information. In addition to complying with the recent Payment Card industry mandate spearheaded by Visa and MasterCard, retailers should engage with vendors to ensure the highest levels of data and communications security.
- **Ensure cross-channel consistency.** Technical shortfalls and a lack of cross-channel operational efficiencies result in inconsistent branding, marketing, merchandising, and promotions across channels as well as poorly trained sales associates. Retailers must integrate processes and data so cross-channel interactions and shopping patterns, demand analytics, transaction logs, and marketing data can be used to drive in-store efforts.
- **Leverage legacy technology whenever possible.** Current store technology consists primarily of homegrown or highly customized packages, making it difficult to access information and integrate into other applications. While these limitations add complexity to extending functionality or feeding other applications in real time, the reality is that retailers cannot simply rip and replace these critical systems. Retailers should look to standards-based integration solutions based on Web services and Extensible Markup Language (XML) to help ensure new and legacy systems can communicate and support the PI initiative.

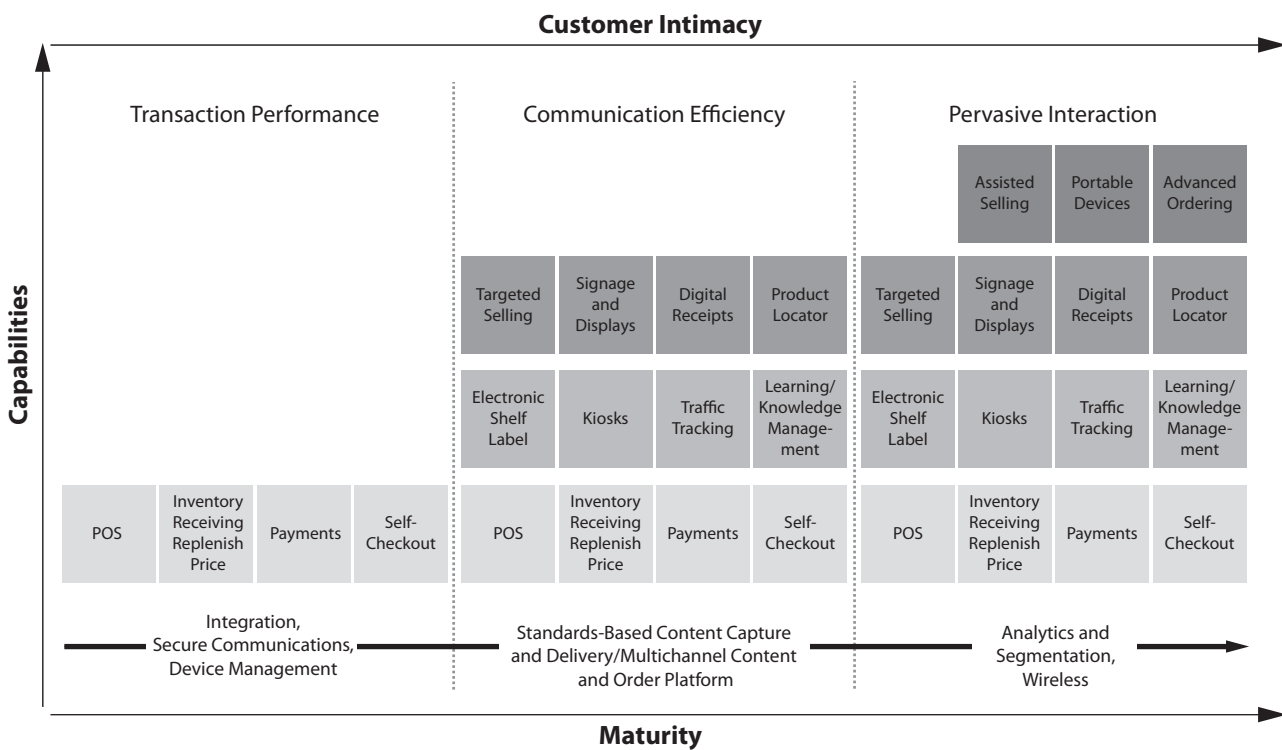
### **The Pervasive Interaction maturity model: Charting your journey**

While the vision and philosophy should remain constant, the maturity of retailers toward PI will evolve over time. Use the following phases to chart your organization's implementation of PI-based store enhancements (see Figure 4):

- **Phase 1: Transaction performance**—The goal in this phase is to reduce queue length and checkout time. Payment processing time and cost are a focus. There will be limited integration among store systems, and no real-time integration to home office or other channels.

- **Phase 2: Communication efficiency**—During this phase, retailers should aim to deliver consistent and timely one-way communication to customers. Transaction-focused POS will be tightly coupled with global inventory and a distributed order management hub. Product and customer data will become more consolidated and centralized. Cross-channel shopping history will be accessible, but there won't be sophisticated analytical tools available. Knowledge and learning management applications will become more dynamic. Most information will be accessed through a stationary kiosk (for customers and associates) or PC in the backroom (for associates only).
- **Phase 3: Pervasive Interaction**—The objective in this final stage is to create full-channel transparency, leveraging past customer interactions to proactively provide promotions and service directly to the customer and assist associates. A robust AST architecture will enable critical information from disparate systems to be integrated in real time, and instantly accessed through a variety of customer-facing devices and software.

**Figure 4:** Advanced Selling Technology maturity model



Source: AMR Research, 2005

## The Advanced Selling Technology vendor landscape buyer's guide

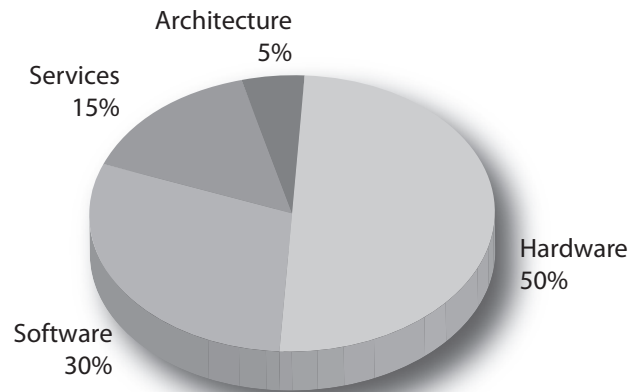
The following graphics list the vendors that can help you on your PI journey. As this is a best-of-breed marketplace, each vendor is placed into at least one technology category that corresponds to the overall AST framework. Expect hardware and network expenditures to be a big portion of the initial investment, but over time these costs will level off. Figure 5 shows a typical percentage breakdown for each major investment area.

**Table 1:** Vendors by Advanced Selling Technology category

Category	Subcategory	Vendors
<b>Architecture</b>	Content Capture and Delivery	AccessVia, Netkey, Real Digital Media, St. Clair, Visual Circuits
	Data Repository and Analytics	Epiphany, Fujitsu (Corema), IBM, NCR (Copient), SAS, Unica
	Device Management	AccessVia, IBM, Microsoft, Netkey, St. Clair
	Hardware and Communications	Cisco, GoRemote, MegaPath, Netifice, Symbol
	Infrastructure	Ascential, HP (OpenView), iAnywhere (XcelleNet), IBM, Informatica, Microsoft, Netkey, SeeBeyond, St. Clair, TIBCO, webMethods
<b>Device</b>	Biometric Payment	Biometric Access, BioPay, PayByTouch
	Contactless Payment	ExpressPay, MobileLime, Paypass, VIVotech
	Digital Display	CoolSigns, IBM (Everywhere Display), Planar Systems
	Electronic Shelf Label	Eldat, Gyricon, ImpulseLogic (formally SignIQ), NCR, Wincor Nixdorf
	Kiosk	IBM (Anyplace Kiosk), NCR, Netbooth, Netkey, Powercart, Radiant Systems, St. Clair
	Mobile Selling Device	Fujitsu, IBM, Intermec, NCR, Symbol, Xperience/Xybernaut
	Payment	Hypercom, Ingenico, VeriFone
	Scale	METTLER TOLEDO
	Self-Checkout	Fujitsu Transaction Solutions, IBM, NCR, Wincor Nixdorf
<b>Software Application</b>	Assisted Selling	Active Decisions, Blue Martini, Cuesol, Fujitsu, Retaligent, ScanAps, Symbol
	Digital Receipt	AfterBOT
	Mobile Point of Sale	360Commerce, CRS Retail, Datavantage, GERS, NSB, Triversity
	Product Locator	Storepointer, TreoSystems
	Survey	Mindshare, TalkingPoint
	Traffic Tracking	Brickstream, Shoppertrack, Videominig

Source: AMR Research, 2005

**Figure 5:** Illustrative spending breakdown on AST



Assumption: Various types of hardware devices, multiple software applications per store. Services include consulting, integration, and implementation.

*Source: AMR Research, 2005*

## Closing Comments

In this hyper-competitive retail environment, retailers must establish an operating model that ensures customer satisfaction and loyalty. The store experience is the opportunity for the greatest impact. Recognize ever-evolving consumer demands, create an environment that optimizes customer interactions through each of the five interrelated shopping stages, and develop a PI strategy that fulfills brand promises and expectations. Winning retailers will be those that embrace this revolution, while losers will ultimately disappear, having not adopted a mindset that caters to customers' ever-changing demands.

**Table 2:** Advanced Selling Technology vendors

Vendors	AST Product Description
<b>360Commerce</b> <a href="http://www.360commerce.com">www.360commerce.com</a>	360Commerce provides retailers with core J2EE-based POS functionality in addition to multiple applications in both store and HQ including workforce management. 360Commerce's Unleashed application provides retailers with mobile POS capability and is currently deployed at Home Depot.
<b>AccessVia</b> <a href="http://www.accessvia.com">www.accessvia.com</a>	Known for its paper-based shelf-label applications, AccessVia also markets the Presentation Management Platform, which broadens the company's footprint by providing a set of tools to manage, format, and publish back-end product data in various forms, such as printed labels, digital displays, or electronic shelf labels. The platform is designed to integrate back-end pricing and merchandising systems with other retail systems such as POS, employee-facing handheld devices, and shelf-planning systems. Retailers Big 5 and Harris Teeter are using AccessVia's application.
<b>Active Decisions</b> <a href="http://www.activedecisions.com">www.activedecisions.com</a>	The Advisor suite of products provide guided selling applications for sales associates and customers via handheld and self-service via kiosk. This private company founded in 1997 has 3 retail customers.
<b>AfterBOT</b> <a href="http://www.afterbot.com">www.afterbot.com</a>	AfterBOT's TransAccess uses Web services tools to capture item-level transaction information and retrieves the data for digital receipts, customized offers, and supplier portals. This venture-backed company was founded in 2000, and has Smart & Final as its one retail client, while citing more than 10 consumer product supplier clients.
<b>Ascential</b> <a href="http://www.ibm.com">www.ibm.com</a>	Ascential's Enterprise Integration Suite integrates store IT infrastructure with centralized corporate systems and provides real-time data transformation of transactions among systems. The company had \$271M in 2004 sales revenue and was purchased by IBM in March 2005.
<b>Biometric Access</b> <a href="http://www.biometricaccess.com">www.biometricaccess.com</a>	Biometric Access's Touch-n-Pay product provides biometric identity verification to enable secure electronic financial transactions. Biometric Access also offers biometric payroll check cashing and employee time and attendance applications. This private company was founded in 1996 and counts Kroger as a client.
<b>BioPay</b> <a href="http://www.biopay.com">www.biopay.com</a>	This company uses fingerprint identification to enable customers to pay from their checking account, and helps retailers fight fraud. The BioPay reader required for this service is installed by retailers at POS. The company, based in Herndon, Virginia, was founded in 1999 and has 1.8 million registered users.
<b>Blue Martini</b> <a href="http://www.bluemartini.com">www.bluemartini.com</a>	Blue Martini's products include Clienteling, a guided selling application, and Messages@POS, a personalized marketing application for POS and other devices. Blue Martini also offers a gift registry application for cross-channel deployment. With 2004 revenue of \$28M, this vendor lists Carrefour, Kohl's, and Sprint as customers.
<b>Brickstream</b> <a href="http://www.brickstream.com">www.brickstream.com</a>	Brickstream's customer behavior analysis application, BehaviorIQ, is sensor agnostic, allowing retailers to input data from already existing camera networks. The company, founded in 2000, launched its product in 2002 and today lists Best Buy, CVS, and Office Depot as customers.
<b>Cisco</b> <a href="http://www.cisco.com">www.cisco.com</a>	Cisco provides wired and wireless networking solutions for many industries including Retail. Cisco's Store Connectivity and Store Mobility applications are targeted at improving transactions and allowing employees and customers access to enterprise data. Cisco also provides products for IP communication and RFID.
<b>CoolSign Media</b> <a href="http://www.clarityvisual.com">www.clarityvisual.com</a>	CoolSign markets a digital signage unit with integrated hardware as well as software to define and control the content delivered through various devices. CoolSign was recently acquired by Clarity Visual Systems, a provider of digital signage and wall solutions based in Wilsonville, Oregon.

Source: AMR Research, 2005

**Table 2:** Advanced Selling Technology vendors (continued)

Vendors	AST Product Description
<b>CRS Retail</b> <a href="http://www.crsretail.com">www.crsretail.com</a>	CRS Retail Systems is a retail software vendor with a suite of products that extend from store to retail HQ. Its MobileStore product is an employee-facing PocketPC-based .NET application and includes Inventory Management, Item Lookup, Remote Manager Authorization, Retail Mail, and Live EJ Viewer.
<b>Cuesol</b> <a href="http://www.cuesol.com">www.cuesol.com</a>	Cuesol's Cart Companion is a wireless tablet application designed to increase customer loyalty and basket size through guided selling. Cuesol also offers a queuing integration for the deli and real-time traffic tracking. Cuesol's first customer, Stop and Shop, is currently beginning phase 2 of a pilot, and expects it to be rolled out to over 100 stores by end of 2005.
<b>Datavantage</b> <a href="http://www.datavantagecorp.com">www.datavantagecorp.com</a>	Datavantage, a subsidiary of MICROS Systems, provides store management software and systems for the specialty and general merchandise retail markets, as well as convenience stores, groceries, and food service stores. Its store management applications, Store21 and Tradewind, can be deployed on Tablet PCs, allowing the retailer to deploy mobile functionality such as line busting or on-floor inventory lookup.
<b>Eldat</b> <a href="http://www.eldat.com">www.eldat.com</a>	Eldat is an Israel-based company established in 1994 that develops IR-based electronic shelf labels. Eldat's clients include large European retailers Auchan and E.Leclerc. Eldat is currently focusing on both the European and North American markets.
<b>Epiphany</b> <a href="http://www.epiphany.com">www.epiphany.com</a>	Epiphany combines analytics and channel intelligence to identify customer needs with its Advisor suite of products and the Customer Relationship Backbone. This public company had 2004 revenue of just under \$80M.
<b>ExpressPay</b> <a href="http://www.americanexpress.com">www.americanexpress.com</a>	ExpressPay from American Express is a contactless payment system using a RF key fob to speed transactions by allowing customers to swipe the key fob across an RF receiver at checkout. Early benefits from research conducted by American Express show 30% larger market baskets and faster transactions in a secure manner. Current retailers and merchants supporting ExpressPay include Chevron, Cold Stone Creamery, Sheetz, and Carl's Jr.
<b>Fujitsu Transaction Solutions</b> <a href="http://www.fujitsu.com">www.fujitsu.com</a>	Klever Kart is a personal shopping solution using an intelligent shopping cart with wireless technology developed in partnership between Fujitsu Transaction Solutions and Klever Marketing. Klever Kart's wireless capability allows retailers to offer context-sensitive promotions while the customer is walking through the store. Fujitsu's Corema application portfolio is a combination of an underlying architecture and several applications that allows retailers to engage with their customers in a more targeted manner by providing loyalty, analytics, customer segmentation, and CRM capabilities. U-Scan is Fujitsu's self-checkout system, acquired from Optimal Robotics. U-Scan is offered in several different configurations to cater to large and small format retailers across multiple segments. Fujitsu's IPAD is the company's latest handheld device supporting the deployment of enterprise applications into the hands of a retailer's store associates. The IPAD contains a card reader, VoIP capability, and a large screen allowing retailers to deploy applications such as inventory management, price verifications, and line-busting capabilities among others.
<b>GERS</b> <a href="http://www.gers.com">www.gers.com</a>	GERS, based in San Diego and part of the Symphony Technology Group, provides retailers with the ability to deploy mobile applications with both customer-centric and back-office capabilities with its Mobile Store product. In partnership with Intermec for the hardware, GERS's solutions range from price lookup, gift registry, receiving, and merchandise lookup.

Source: AMR Research, 2005

**Table 2:** Advanced Selling Technology vendors (continued)

Vendors	AST Product Description
<p><b>GoRemote</b> www.goremote.com</p>	<p>GoRemote's Branch Office Solution is a managed data, voice, and video system that manages communications among retail stores and headquarters. The secure network is designed to lower costs versus legacy frame relay services and provide faster bandwidth. Retail clients include The Wet Seal, The Schwan Food Company, and Real Mex Restaurants.</p>
<p><b>Gyricon</b> www.gyriconmedia.com</p>	<p>Gyricon's product, SmartPaper, is a reusable material that is electronically writeable and erasable, and designed to display product and promotional information to customers. Gyricon is a subsidiary of Xerox Corporation.</p>
<p><b>Hewlett-Packard</b> www.hp.com</p>	<p>HP OpenView is an IT service management offering that allows retailers to deploy new solutions on a common platform. OpenView also provides tools that help give IT managers visibility into the performance of these applications and allow them to monitor and manage them remotely. OpenView creates a standard method of integration, allowing third-party software providers the ability to create compliant enterprise applications that integrate into the OpenView architecture.</p>
<p><b>Hypercom</b> www.hypercom.com</p>	<p>Hypercom focuses on facilitating electronic payments with products that include secure card payment terminals, Web appliances, networking equipment, software applications for e-commerce, smart cards, and traditional payment applications. In 2003, Hypercom discontinued its POS leasing businesses. This public company posted 2004 earnings of \$255M and has increased headcount by more than 40% 2003 over 2004.</p>
<p><b>iAnywhere (XcelleNet)</b> www.ianywhere.com</p>	<p>XcelleNet's (now part of iAnywhere) solutions provide retail IT managers the ability to monitor and manage customer- and employee-facing applications and devices. XcelleNet's two products, RemoteWare and Afaia, facilitate the exchange of data with remote locations and allow IT staff to manage mobile devices remotely. This former division of Sterling Commerce has been acquired by the iAnywhere division of Sybase. iAnywhere provides retailers solutions to deploy and secure wireless devices and remotely manage and patch applications.</p>
<p><b>IBM</b> www.ibm.com</p>	<p>IBM's Anyplace Kiosk combines computing power, 12- or 15-inch infrared touchscreen display, and optional peripherals into a slim display that makes it easier to place anywhere in the store.</p> <p>Powered by IBM SurePOS, the self-checkout system integrates with software from IBM and other providers, existing scanners, scales, and electronic payment devices.</p> <p>Store Integration Framework is a store-based infrastructure offering based on WebSphere that uses an industry-standard J2EE platform to integrate existing and new systems. IBM WebSphere Remote Server provides the core components of SIF, including WebSphere Application Server, WebSphere MQ, DB2, and Tivoli middleware. IBM WebSphere Business Integration connects stores to the enterprise, and WebSphere Systems Management Accelerators allow for remote monitoring and management. SIF includes an ecosystem of hardware and software partners to provide packaged solutions such as personal shopping assistance, guided selling, interactive kiosks, Everywhere Display, and On Demand Workplace.</p>
<p><b>ImpulseLogic</b> www.signiq.com</p>	<p>ImpulseLogic (previously SignIQ) provides retailers with software solutions that enable targeted selling messages through a variety of key consumer touchpoints. The SignIQ solution provides a complete workflow for designing, distributing, producing, and managing compelling printed signage, labeling, ticketing and other in-store advertising material. Current customers include CompUSA, Pathmark, PETCO, and Value Drug Mart.</p>
<p><b>Informatica</b> www.informatica.com</p>	<p>Informatica's PowerCenter is an enterprise data integration software suite that can access, integrate, migrate, and consolidate enterprise data across systems and processes. This public company had 2004 revenue of just under \$220M, and lists Best Buy and The Gap as retail customers.</p>

Source: AMR Research, 2005

**Table 2:** Advanced Selling Technology vendors (continued)

Vendors	AST Product Description
<b>Ingenico</b> <a href="http://www.ingenico.com">www.ingenico.com</a>	Ingenico is a large POS peripheral manufacturer with 2004 revenue of \$526M from sales of both hardware and software. The company was founded in 1980 and is headquartered in France with North American offices in Atlanta. Retailers using In-Touch, the flagship product for electronic payments, include Wal-Mart and Safeway.
<b>Intermec</b> <a href="http://www.intermec.com">www.intermec.com</a>	Intermec, a subsidiary of UNOVA and the inventor of the bar code symbology, was founded in 1966. Known for its significant market share in distribution center handheld technology, today it provides handheld computers, RFID systems, printers, networking infrastructure, and bar code scanners to retailers for both stores and distribution centers.
<b>MegaPath</b> <a href="http://www.megapath.net">www.megapath.net</a>	MegaPath delivers managed network solutions that enable businesses of all sizes to connect branch offices, mobile workers, and home-based workers to centralized corporate resources. Privately held and founded in 1999, MegaPath is headquartered in Pleasanton, California. MegaPath's clients include Radio Shack, Jamba Juice, and Jenny Craig.
<b>METTLER TOLEDO</b> <a href="http://www.mt.com">www.mt.com</a>	Founded in 1973 and headquartered in Switzerland, METTLER TOLEDO is a global company that acquired U.S.-based SofTechnics. Its UC-CW scale offers retailers both self-service deli-scale capability, as well as providing the means to display promotions. Its UC-Touch self-service scale incorporates a camera that captures and detects the type of produce.
<b>Microsoft</b> <a href="http://www.microsoft.com">www.microsoft.com</a>	Smarter Retailing Initiative is an architecture built on Microsoft's .NET, the Microsoft Windows Server System, Microsoft Office System, and BizTalk Server to integrate data and processes across multiple systems. Retailers are using this platform to leverage current investments in traditional store technology such as POS, while expanding customer- and employee-facing application usage. Microsoft, in conjunction with its hardware and software partners, offers applications focused on three main areas: Smarter Shopping, Smarter Selling, Smarter Operations.
<b>Mindshare</b> <a href="http://www.mindsharetech.net">www.mindsharetech.net</a>	Mindshare's Connect and SmartLogic applications provide personalized surveys that allow retailers to gain insight regarding customer satisfaction.
<b>MobileLime</b> <a href="http://www.mobilelime.com">www.mobilelime.com</a>	The MobileLime application transforms any phone into a payment and loyalty device. Consumers can link existing payment cards—Visa, MasterCard, American Express, or any store credit/debit card—to a cell phone as a secure source of funds. And, consumers can load an account with cash at any participating merchant. In addition to payments, merchants use MobileLime to provide consumers with promotions, instant savings, and rewards.
<b>NCR</b> <a href="http://www.ncr.com">www.ncr.com</a>	<p>NCR had \$5.9B in 2004 revenue. NCR FastLane is a self-checkout application. NCR EasyPoint kiosks allow customers to perform transactions from bill payment to deli ordering, and serve as a way for customers to search and compare product information. The company's offerings in electronic shelf label are also of note, boasting the most U.S. deployment for this emerging technology.</p> <p>NCR Copient is a hardware and software solution that enables the development, delivery, and tracking of interactive direct-marketing sales promotions. It is currently being used by Food Lion in its Bloom Stores. The company also offers professional and support services.</p>
<b>Netbooth</b> <a href="http://www.netbooth.com">www.netbooth.com</a>	Formed in 1995, Netbooth sells kiosk products and has established a niche in the gaming, amusement, and petroleum/convenience sector. The company's software application offers security and remote administration of embedded applications on kiosks. The private company's business model is to sell services and software but also to resell components in networking infrastructure.
<b>Netifice</b> <a href="http://www.netifice.com">www.netifice.com</a>	Netifice provides a range of connectivity products across multiple industries. Its Retail Connect VPN solution allows retailers to deploy managed hotspots, offer satellite access, and support merchant services such as IP credit card processing and loss prevention. Its current customers include Cache, Champs, and Unos.

Source: AMR Research, 2005

**Table 2:** Advanced Selling Technology vendors (continued)

Vendors	AST Product Description
<b>Netkey</b> www.netkey.com	The Netkey Platform provides a robust infrastructure to enable retailers to develop, configure, secure, integrate, and deploy in-store applications on an array of hardware. In addition, retailers use the platform to monitor, manage, and update in-store hardware, including kiosks, digital signs, PC workstations, and handhelds. The company was founded in 1983 and lists Bank of America, Target, and JCPenney as some of its customers.
<b>NSB</b> www.nsbgroup.com	NSB is based in Pointe-Claire, Quebec and purchased STS Systems several years ago. It provides a suite of software capabilities and services in supply chain management, store operations, and HQ. NSB's Mobile POS solution, deployed at WHSmith, also supports inventory lookup by store associates using handhelds from partners Symbol and Fujitsu. In addition, NSB provides a mobile CRM application that allows retailers to pull up customer data on preferences and past purchases wirelessly.
<b>PayByTouch</b> www.paybytouch.com	Payment service with a finger scan is what this vendor offers retail customers that enroll for free to its network. Retailers must purchase biometric scanning devices and pay a fee per transaction. The company, founded in 2002, lists Piggly Wiggly and Albertsons as customers.
<b>Paypass</b> www.paypass.com	Paypass is MasterCard's answer to contactless payment systems targeted at traditional, cash-only environments such as fast-food restaurants, convenience stores, and pharmacies where speed of transaction is essential. Paypass uses a proprietary card and scanner from MasterCard, allowing customers to complete transactions as much as 64% faster than traditional methods in recently completed trials.
<b>Planar Systems</b> www.planar.com	Planar sells display-based hardware and software products. This public company manufactures in the United States and Finland and had 2004 revenue of \$256M.
<b>Powercart</b> www.powercart.com	Powercart sells mobile POS carts that run on battery-equipped devices. The company's headquarters is in Markham, Ontario.
<b>Real Digital Media</b> www.realdigitalmedia.com	Real Digital Media's NEOCAST software allows retailers to manage and schedule content on the appliance-based narrowcasting solution through digital in-store displays. The company was founded in 2002 and lists 24 retailer customers of the NEOCAST product.
<b>Retaligent Solutions</b> www.retaligent.com	Retaligent offers Clariance 1:1, a guided selling software application, and eSP1:1, a rules engine. Together, the offering is designed to drive sales associate productivity through better upselling, cross-selling, and suggestion selling. The company is a spinoff of Symbol and was founded in late 2004. Retaligent does not currently have an installed instance of its product.
<b>SAS</b> www.sas.com	SAS Customer Intelligence for Retail works with data across all customer interaction points. SAS's strength in data analytics enables retailers to segment customers and determine patterns in customer behavior. SAS is the largest private software company with 2004 revenue of \$1.53B.
<b>ScanAps</b> www.scanaps.com	Interactive Smart Card is an optical key ring device. ScanAps' grocery and mass merchant-specific interactive loyalty card and digital promotion management product delivers differentiated offers at POS without detailed integration to POS. The company, founded in 1999, debuted its product at NRF in January 2004 but does not currently have a fully installed instance.
<b>SeeBeyond</b> www.seebeyond.com	SeeBeyond's EAI product, ICAN, is a device-independent, service-oriented architecture framework for integrating software applications, RFID data, and automating manual processes and workflow. The public company names Target, Sainsbury's, and Carrefour as retail customers.

Source: AMR Research, 2005

**Table 2:** Advanced Selling Technology vendors (continued)

Vendors	AST Product Description
<b>ShopperTrak</b> <a href="http://www.shoppertrak.com">www.shoppertrak.com</a>	ShopperTrak's Orbit, Retail Intelligence, National Retail Traffic Index (NRTI), and National Retail Sales Estimate (NRSE) applications help retailers understand trends, the impact of store and staff performance on company revenue, labor efficiencies, advertising and marketing efforts, store design and remodeling programs, merchandise changes, associate training programs, and other budget-intensive initiatives. The privately held company is headquartered in Chicago and operates 7 satellite offices throughout the United States, Asia, Australia, Europe, and South America.
<b>St. Clair</b> <a href="http://www.stclairsoft.com">www.stclairsoft.com</a>	St. Clair is an Ontario, Canada-based company that specializes in delivering retail applications through kiosks. In addition to providing a set of presentation layer templates customized to various retail segments, St. Clair also functions as a service provider through its partnerships with both software and hardware vendors.
<b>Storepointer</b> <a href="http://www.storepointer.com">www.storepointer.com</a>	The StorePointer solution includes in-store kiosks, Web guides, Web services, and messaging services that assist customers in finding products across various selling channels.
<b>Symbol</b> <a href="http://www.symbol.com">www.symbol.com</a>	Symbol is a one of the leaders in designing and manufacturing handheld mobile computers, kiosks, and payment devices. Symbol's portfolio also includes wireless networking services. The public company also markets consulting services to its clients and had 2004 revenue of \$1.7B. Symbol's hardware is used in Food Lion's Bloom stores.
<b>TalkingPoint</b> <a href="http://www.talkingpoint.com">www.talkingpoint.com</a>	The TalkingPoint solution collects customer insight/research from device at POS or in-store kiosks and uses the data for real-time marketing. This company founded in 2002 and lists Dairy Queen as a retail client.
<b>TIBCO</b> <a href="http://www.tibco.com">www.tibco.com</a>	TIBCO's applications integrate customer identification technologies with profile, buying history, and preferences to support targeted promotions and micro segmentation through the coordination of corporate applications and data warehouses. TIBCO lists Limited Brands, Smart & Final, and Circuit City as retail clients and had revenue of \$44M for 2004.
<b>TreoSystems</b> <a href="http://www.treosys.com">www.treosys.com</a>	TreoSystems' iPAL product locator software tracks the location of product throughout the store and displays information via kiosks, terminals, handhelds, PDAs, or cell phones for both customer and associate assistance. iPal has been deployed as part of Food Lion's well-publicized Bloom Store Advanced Retailing pilot.
<b>Triversity</b> <a href="http://www.triversity.com">www.triversity.com</a>	Triveristy provides J2EE- and .NET-based POS and related applications such as sales audit for retailers in the general merchandise, apparel, and grocery segments. Its Transactionware GM POS system contains a Mobile POS module that allows retail store associates to check out merchandise using handheld devices. In addition, store associates can look up prices and inventory in the backroom.
<b>Unica</b> <a href="http://www.unica.com">www.unica.com</a>	Unica provides enterprise marketing management applications for catalog and store retailers. The Affinium Suite enables retailers to gather and analyze knowledge from multiple data sources to execute and manage tailored programs for interactions through multiple touch-points and measure marketing effectiveness. Customers include Best Buy, Kohl's Department Stores, and Nordstrom.
<b>VeriFone</b> <a href="http://www.verifone.com">www.verifone.com</a>	VeriFone Holdings, formally a division of Hewlett-Packard, provides secure electronic payment technologies including hardware and a full range of services for debit, credit, checks, and smart cards. The company has shipped more than 10 million electronic-payment systems worldwide and targets financial retail, multi-lane retail, and petroleum/convenience store segments in more than 100 countries.
<b>Videomining</b> <a href="http://www.videomining.com">www.videomining.com</a>	The Customer Traffic/Activity/Segmentation and Queue Management suite of software applications analyzes in-store behaviors and traffic patterns of shoppers and assists retailers with the optimization of customer-facing elements. The company was founded in 2000 as a spinoff of Penn State University and is headquartered in State College, Pennsylvania.

Source: AMR Research, 2005

**Table 2:** Advanced Selling Technology vendors (continued)

Vendors	AST Product Description
<b>Visual Circuits</b> <a href="http://www.visualcircuits.com">www.visualcircuits.com</a>	Visual Circuits develops integrated hardware, software, and network solutions that schedule, distribute, store, and present digital video in a range of industrial media applications. With retail customers such as Best Buy and Wal-Mart, the company's partners included IBM, Hitachi, Fujitsu, and Pioneer. Visual Circuits was acquired by FOCUS Enhancements in June 2004.
<b>ViVOtech</b> <a href="http://www.vivotech.com">www.vivotech.com</a>	The ViVO platform enables contactless payments with RF-enabled credit cards, access cards, and infrared cell phones at existing POS systems by upgrading existing magnetic stripe POS terminals to accept contactless payments. This private company is partnering with MasterCard, American Express, and other major companies in contactless payment trials.
<b>webMethods</b> <a href="http://www.webmethods.com">www.webmethods.com</a>	webMethods' Fabric Integrated Store Solution enables near real-time visibility into store sales and operations and facilitates data movement among disparate systems in the enterprise. The public company posted sales \$200M for 2004 and has over 150 customers with retailers 7-Eleven and Office Depot among them.
<b>Wincor Nixdorf</b> <a href="http://www.wincor-nixdorf.com">www.wincor-nixdorf.com</a>	<p>Wincor is a leading POS systems manufacturer with its flagship BEETLE family of devices. The iSCAN self-checkout solution augments existing POS systems. StoreForward, a new content platform, manages data among various in-store devices, allowing retailers to interact with customers throughout the shopping experience.</p> <p>Wincor Nixdorf also markets an electronic shelf-label offering call Synthesis. The product is from European market leader SES that touts clients such as Carrefour and Casino. In fiscal 2003/2004, the German company posted earnings of \$2B.</p>
<b>Xperience/Xybernaut</b> <a href="http://www.xybernaut.com">www.xybernaut.com</a>	Xperience is based in the UK and provides business solutions to corporate and small and midsize organizations. In partnership with Xybernaut Corporation, which provides wearable/mobile computing hardware, software, and services, Xperience offers retailers the ability to deploy applications to store associates for both customer- and employee-facing tasks. Xybernaut's Atigo wireless Web tablet has integrated bar coding and Wi-Fi solution for in-store use. Xybernaut has offices and subsidiaries in Europe (Germany) and Asia (China, Japan, and Korea).

Source: AMR Research, 2005

## Company List

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360Commerce	<a href="http://www.360commerce.com">www.360commerce.com</a>
AccessVia	<a href="http://www.accessvia.com">www.accessvia.com</a>
Active Decisions	<a href="http://www.activedecisions.com">www.activedecisions.com</a>
afterBOT	<a href="http://www.afterbot.com">www.afterbot.com</a>
Ascential	<a href="http://www.ibm.com">www.ibm.com</a>
Biometric Access	<a href="http://www.biometricaccess.com">www.biometricaccess.com</a>
BioPay	<a href="http://www.biopay.com">www.biopay.com</a>
Blue Martini	<a href="http://www.bluemartini.com">www.bluemartini.com</a>
Brickstream	<a href="http://www.brickstream.com">www.brickstream.com</a>
Cisco	<a href="http://www.cisco.com">www.cisco.com</a>
CoolSign Media	<a href="http://www.clarityvisual.com">www.clarityvisual.com</a>
CRS Retail	<a href="http://www.crsretail.com">www.crsretail.com</a>
Cuesol	<a href="http://www.cuesol.com">www.cuesol.com</a>
Datavantage	<a href="http://www.datavantagecorp.com">www.datavantagecorp.com</a>
Eldat	<a href="http://www.eldat.com">www.eldat.com</a>
Epiphany	<a href="http://www.epiphany.com">www.epiphany.com</a>
ExpressPay	<a href="http://www.americanexpress.com">www.americanexpress.com</a>
Fujitsu Transaction Solutions	<a href="http://www.fujitsu.com">www.fujitsu.com</a>
GERS	<a href="http://www.gers.com">www.gers.com</a>
GoRemote	<a href="http://www.goremote.com">www.goremote.com</a>
Gyricon	<a href="http://www.gyriconmedia.com">www.gyriconmedia.com</a>
Hewlett-Packard	<a href="http://www.hp.com">www.hp.com</a>
Hypercom	<a href="http://www.hypercom.com">www.hypercom.com</a>
iAnywhere (XcelleNet)	<a href="http://www.ianywhere.com">www.ianywhere.com</a>
IBM	<a href="http://www.ibm.com/industries/retail">www.ibm.com/industries/retail</a>
ImpulseLogic	<a href="http://www.signiq.com">www.signiq.com</a>
Informatica	<a href="http://www.informatica.com">www.informatica.com</a>
Ingenico	<a href="http://www.ingenico.com">www.ingenico.com</a>
Intermec	<a href="http://www.intermec.com">www.intermec.com</a>
MegaPath	<a href="http://www.megapath.net">www.megapath.net</a>
METTLER TOLEDO	<a href="http://www.mt.com">www.mt.com</a>
Microsoft	<a href="http://www.microsoft.com">www.microsoft.com</a>

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## Company List

Mindshare	<a href="http://www.mindsharetech.net">www.mindsharetech.net</a>
MobileLime	<a href="http://www.mobilelime.com">www.mobilelime.com</a>
NCR	<a href="http://www.ncr.com">www.ncr.com</a>
Netbooth	<a href="http://www.netbooth.com">www.netbooth.com</a>
Netifice	<a href="http://www.netifice.com">www.netifice.com</a>
Netkey	<a href="http://www.netkey.com">www.netkey.com</a>
NSB	<a href="http://www.nsbgroup.com">www.nsbgroup.com</a>
PayByTouch	<a href="http://www.paybytouch.com">www.paybytouch.com</a>
Paypass	<a href="http://www.paypass.com">www.paypass.com</a>
Planar Systems	<a href="http://www.planar.com">www.planar.com</a>
Powercart	<a href="http://www.powercart.com">www.powercart.com</a>
Radiant Systems	<a href="http://www.radiantsystems.com">www.radiantsystems.com</a>
Real Digital Media	<a href="http://www.realdigitalmedia.com">www.realdigitalmedia.com</a>
Retaligent	<a href="http://www.retaligent.com">www.retaligent.com</a>
SAS	<a href="http://www.sas.com">www.sas.com</a>
ScanAps	<a href="http://www.scanaps.com">www.scanaps.com</a>
SeeBeyond	<a href="http://www.seebeyond.com">www.seebeyond.com</a>
ShopperTrak	<a href="http://www.shoppertrak.com">www.shoppertrak.com</a>
St. Clair	<a href="http://www.stclairsoft.com">www.stclairsoft.com</a>
Storepointer	<a href="http://www.storepointer.com">www.storepointer.com</a>
Symbol	<a href="http://www.symbol.com">www.symbol.com</a>
TalkingPoint	<a href="http://www.talkingpoint.com">www.talkingpoint.com</a>
TIBCO	<a href="http://www.tibco.com">www.tibco.com</a>
TreoSystems	<a href="http://www.treosys.com">www.treosys.com</a>
Triversity	<a href="http://www.triversity.com">www.triversity.com</a>
Unica	<a href="http://www.unica.com">www.unica.com</a>
VeriFone	<a href="http://www.verifone.com">www.verifone.com</a>
Videomining	<a href="http://www.videomining.com">www.videomining.com</a>
Visual Circuits	<a href="http://www.visualcircuits.com">www.visualcircuits.com</a>
ViVOtech	<a href="http://www.vivotech.com">www.vivotech.com</a>
webMethods	<a href="http://www.webmethods.com">www.webmethods.com</a>
Wincor Nixdorf	<a href="http://www.wincor-nixdorf.com">www.wincor-nixdorf.com</a>
Xperience/Xybernaut	<a href="http://www.xybernaut.com">www.xybernaut.com</a>

# Acronyms and Abbreviations

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ARTS Association for Retail Technology Standards

AST Advanced Selling Technology

FMCG Fast-Moving Consumer Goods

GMA General Merchandise and Apparel

PI Pervasive Interaction

POS Point of Sale

XML Extensible Markup Language