# Smarter Retailing: Innovation at the Edge of the Retail Enterprise

## Business Overview

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Microsoft®

# SMARTER RETAILING

## Innovation at the Edge of the Retail Enterprise

Leading enterprise retailers are changing the rules of engagement fundamentally with their customers in the store. They are embracing innovations that create new opportunities to collaborate with customers, understand their shopping preferences and tailor the consumer experience to the specific shopping intentions for that visit. This change is not incremental. It is not an optimization of processes or formats. It is the rebirth of the store. It is the definition of a new relationship between the retailer and the customer that was simply not possible without recent advancements in technology.

Microsoft Corp.'s retail industry focus stems from the company s belief that there are many opportunities for retail industry innovation and value creation now but that they primarily lie on the "edges" where retailers interact with customers, manage their supply chains and weave in new technologies, such as digital assistants and self-checkout terminals. Microsoft believes this will be the focal point of integrated innovation and the redefinition of the customer value offer.

The edge of the retail enterprise — the store — is where most of the labor in a retail enterprise is deployed, where much of the capital is spent and (of course) where the customers are. The edge is the visible face of the retailer where true branded differentiation is articulated in the store's layout, in the product merchandising and in the customer's shopping experience. Leading retailers are constantly seeking ways to be different from everyone else, to be the best at satisfying customer needs and to be smarter about accomplishing these outcomes. The ultimate goal is to deliver such compelling value that alternative outlets do not matter in light of the intimate relationship that a particular retailer has developed with its customer.

Achieving these goals has been difficult for retailers because of several fundamental store-based issues. These issues are rooted in the fact that retail stores represent two decades of capital investment based on a design created in the 1970s and 1980s. The consequences have been numerous.

**Customer Detachment**

- Customer lines are longer for the highest-value shoppers but shorter (e.g., 10 items or less) for the lowest-value shoppers.
- Customers are unwilling to commit to an increasingly intimate relationship with their retailers because there is no perceived exchange of value for that intimacy.
- The increasing anonymity and animosity of the retailer-customer relationship is the antithesis of what that relationship embodied in the first half of the 20th century.
- Customer loyalty toward the retailer has been reduced, causing an increased focus on cost (the only remaining visible differentiator), in turn causing all retailers to play neatly into the hands of the low-cost retailers.
- Steadily increasing loyalty programs are designed to keep remaining customers through deep discounting that dramatically impacts gross profit margins. The loyalty is, however, not considered by the customer to be "real" loyalty because everybody gets loyalty discounts.
- Customers are more knowledgeable about products and competitors, which increases customers' tendency to shop across retailers more frequently.
- Inefficient and poorly trained staff negatively impact the customer experience.

**Problematic Store Layouts**

- Dozens of checkout lines (typically lightly staffed) take away the most valuable space on the store floor for selling more product.
- Employees must constantly monitor rows of aisles to ensure that product is in place, which takes their time away from serving the customer.
- Larger and larger stores are increasingly diffi cult to navigate.

# Leading Retailers Are Fundamentally Changing the Rules of Engagement With Customers

- Static visual displays require costly and manual effort to update.

**People Problems**

- Employee turnover has soared to 120 percent (and greater in some segments), creating training, hiring, customer service and management issues that negatively impact customer loyalty.
- Labor-intensive stores eat up 30 cents of each store revenue dollar.
- Store employees are more focused on securing and stocking product than on serving the needs of customers.
- Employees are increasingly ambivalent, poorly trained and do not value customer satisfaction. They ignore opportunities to improve the store and lack the basic knowledge, skills and infor mation to support customer requests.
- The store staff is inefficient, which results in signage inaccuracy, price inaccuracy and increasing out-of-stock positions.
- Internal shrink has increased because of dis affected employees.

**In-Store Capital Drain**

- Point-of-sale (POS) systems cost retailers vast capital sums to roll out systemwide with increasingly complex integration problems. The systems require even more money to support, yet yield surprisingly little customer insight.
- Miles and miles of cable for power and data are needed to run a store.
- Proprietary infrastructures impede the adoption of truly innovative and less capital-intensive technologies.

**Management Constraints**

- Increasingly harried managers have to schedule labor, order and receive product, manage high labor turnover, and determine "who is going to mop up aisle 10."
- Increasingly underpowered managers lack the information, insight or authority to make the decisions that impact store performance in real time.
- Managers are unable to understand what is happening inside the store until the end of the day (or worse), when it is too late to do anything about it.
- The shortage of trained or skilled store managers negatively impacts the retailer's ability to aggressively roll out additional stores.

**Store Operations Inefficiencies**

- Real-time visibility to out-of-stock situations inside the store is lacking.
- Inventory received versus inventory ordered must be reconciled manually.
- Discipline in conforming to planograms is lacking.
- There is a lag time in responding to increased customer traffic, in specific areas of the store and in checkout lanes.
- Employees do not understand when high-value, high-loyalty customers are in the store and cannot provide them with differentiated service.
- Retailers cannot understand who their high-value customers are, which results in higher switching rates.

Enterprise retailers historically have been leery of remodeling basic operations and processes. The value-to-risk ratio has driven them to make other investments in core operations, enterprise resource planning (ERP) and supply chain solutions. The result has been the commoditization of retailers and an even greater emphasis on price competition.

Without excitement and a compelling differentiator, the retailer will never be able to truly win in the marketplace. Gary Hamel in his book, "Leading the Revolution," related this phenomenon to the basic Economics 101 concept of "perfect competition." When everyone in an industry follows an identical strategy, the textbook result is inevitable — every company makes just enough marginal profit to muddle along and survive but no more. The outcome is the business equivalent of a subsistence economy.

This white paper focuses on creating imperfect competition by enabling the retailer to create a differentiated customer experience that will drive greater economic value from the retail store. Although this white paper is targeted at larger retail enterprises, most of the concepts discussed also apply to small and medium-sized retailers. The paper will discuss research, concepts and solutions that enable a retailer to compete based not on price but on innovation — something called "Smarter Retailing."

# SMARTER RETAILING

## Success at the Edge Will Be Driven by Smarter Retailers

**Smarter Retailing**
Microsoft's Smarter Retailing Initiative (SRI) is an approach to retailing grounded on three core themes: Smarter Shopping (for customers), Smarter Selling (by employees) and Smarter Operations (for management). These themes provide focus for innovation and are the areas where Microsoft thinks retailers can make major incremental investments during the next three to five years. Microsoft believes these areas are the value levers that will drive improved store contribution margin over the next five years. Let's explore each one in turn.

### Smarter Selling

- Sharper Salespeople
- Customers as individuals
- Real-Time Retailing
- Multiple Checkout options

### Smarter Operations

- Enterprise Agility
- Execution Excellence
- Capital Efficiency
- Stores without Wires

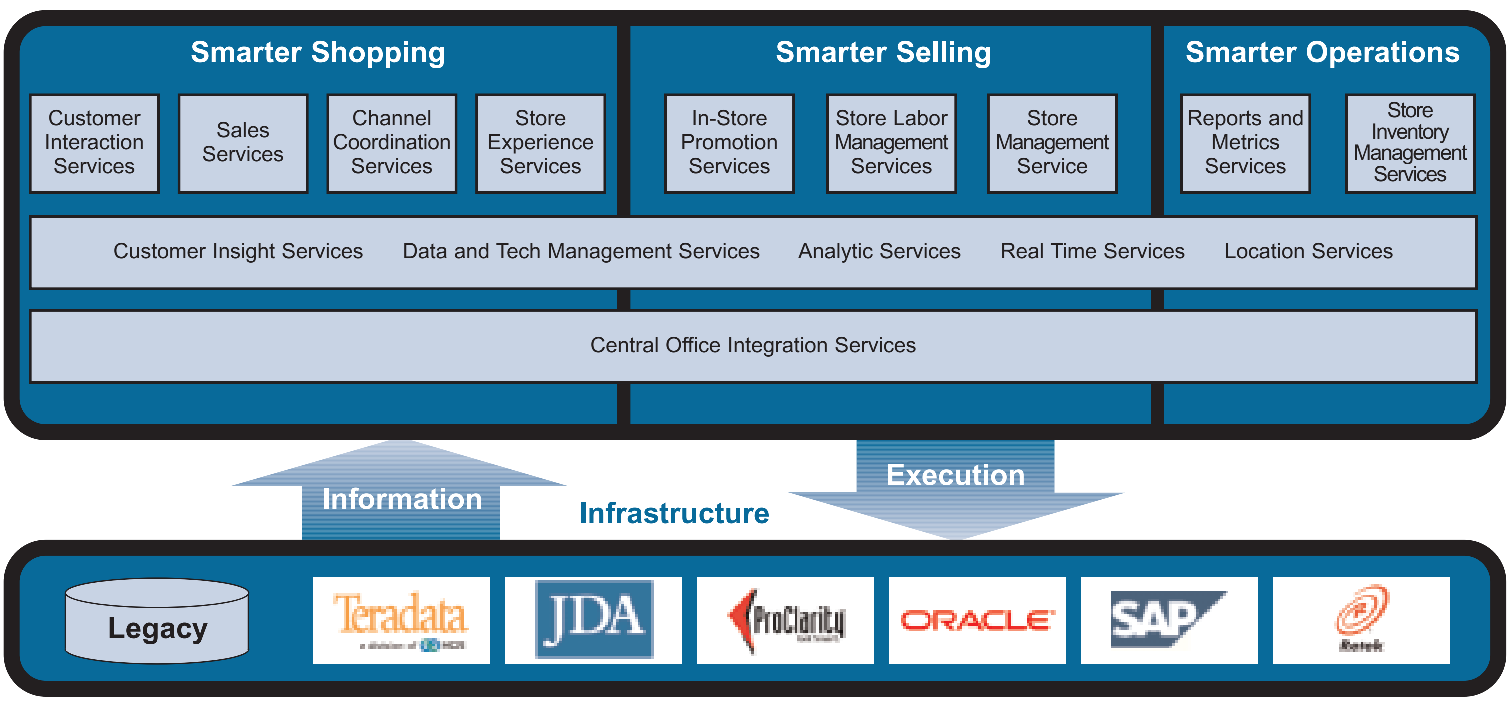
### Smarter Shopping

- The Perfect Experience
- Give them what they want, When they want it
- In-Store Information

# Connecting Customer Interaction and Decision-Making With Enterprise Information and Capabilities

This framework provides a focal point for understanding how Smarter Retailing will drive improved performance in its three core areas and the value-added services through which solutions will be developed.

In addition, the framework identifies core services, such as customer insight, analytic, real-time, location-based and data-technology management, that are necessary to help filter information appropriately, customize it and integrate it into the value-added services. The framework also structured so that the SRI Architecture will enable ISV applications to more easily integrate with key enterprise solutions.



# SMARTER SHOPPING

**Smarter Shopping** is about creating the perfect shopping experience. Retailers that implement Smarter Shopping give customers what they want, in the right way, in the right amount, in the right location where it is convenient, easy and compelling to buy (online, in the store or over the phone). The experience must be differentiated, unique and inviting. The shopping environment needs to be inspiring, provocative and ultimately attractive to the retailer's target customers.

Smarter Shopping transforms the store from a fancy warehouse where the customer is a surrogate "stock picker" into a destination where customers go because of the value the store gives them. Smarter Shopping is the perfect alignment of customer intent with retailer content. Microsoft® research indicates that customers want the following:

**Inspiration** – Customers look for gift-giving ideas (electronic signage, video advertisements, displays, fixtures and products) placed in the perfect location and assorted in a way that makes them easy to find.

**Entertainment** – The use of technology to provide imagery, sound and movement make the shopping experience fun.

**Information** – With readily available information through an easy-to-use kiosk or delivered to the customer's own device (e.g., a wireless PDA), a customer can draw on the retailer's wealth of information and from other customers who have added comments via the Internet and made available at the store.

**Good-Service** – Customers enjoy being catered to, having every need and want "taken care of," and feeling wanted, desired and valued.

Retail is the only industry that tries hard to treat every customer the same way; other industries distinguish their services by type of customer. The airline industry, for example, has frequent flyer programs that reward higher-revenue customers with varying levels of benefits. Premier, Premier Executive and 1K designations for United Airlines flyers obtain preferred seating on the plane, board with the first-class passengers, have access to shorter lines at the counter and through the security checkpoint, and earn desirable class-of service upgrades.

Hotels and car rental agencies offer similar programs to their best customers. Call centers, for instance, provide shorter wait times for higher-value and more loyal customers. Financial services organizations, such as Morgan Stanley, provide more personalized services to customers that conduct more business with them. These perquisites create aspiration for everyday customers. They want to achieve the loftier status — and that results in higher visit frequency and, ultimately, fierce loyalty. Smarter Shopping solutions incorporate these concepts into the store environment to drive loyalty, not just at checkout but also at a new venue — check-in.

Everyone has seen loyalty cards in grocery stores that are used to provide a discount during checkout. Smarter Shopping solutions could enable loyalty program services to be offered when customers walk into the store (or even at their home or office when they decide to go to the store). Customers check in at airports and hotels, even when they go into their office. Why not check in when entering a store? This concept is not foreign in retail. Membership clubs such as Costco and Sam's Club require check-in at the front of the store today, but they do not leverage the fact that customers are identifying themselves at this point.

Critical to more widespread deployment of this capability is the exchange of value that customers receive for identifying themselves through check-in. Smarter Shopping solutions create that value by using insight about checked-in customers to enhance their shopping experience. Value can be delivered by identifying a customer's preferences, retrieving shopping lists, selecting targeted promotions or discounts, and presenting them at the beginning of the shopping event.

These actions provide a much greater opportunity to materially influence the shopping experience and create the inspiration, delight, insight and ultimate service that customers are craving. Microsoft believes technology, such as Solidus' Networks Pay-by-Touch solution, now is available to enable this self-identification in a nonintrusive and value-added manner.

Microsoft believes customer use of Microsoft-centric technology will become a key enabler of Smarter Shopping. Much of the technology that resides on smart phones, personal digital assistants (PDAs), the desktop marketplace and in homes through the Xbox® video game system and the MSN® network of Internet services is already integrated with the retail enterprise's base infrastructure. Retailers can leverage the investment customers have made in their own technology as an information distribution channel within the store to support transformation of the

*Smarter Shopping is about creating the perfect shopping experience.*

customer-to-store relationship. This transformation represents an opportunity for retailers to begin to reduce technology capital investment in the store. This element of Smarter Retailing can significantly impact the top-line revenue of the store and improve balance-sheet utilization.

Another Smarter Shopping solution is for music stores. Rather than maintain racks and racks of music CDs that take up hundreds of linear square feet, music retailers can strategically place multidisplay kiosks with a friendly customer interface around the store. Shoppers can browse by title, artist and genre or get suggestions based on their customer profile captured from their loyalty card swipe. The multidisplay kiosk presents a music video for a particular artist on one screen, shows the jacket covers on another and displays music reviews from a variety of sources including feedback from other customers who have bought the album. In essence, the kiosk gives shoppers the rich universe of information they are used to when purchasing on the Web — with the added benefit of being able to walk out of the store with the actual product.

Taken a step further, the Smarter Shopping solution will interface directly with customers' PDA or smart phone devices when they walk into the store. Retailers will not have to expend the capital to create the information kiosks, and customers will get relevant content through a wireless connection. Customers' devices will not only serve as information kiosks but could even become the POS device enabling checkout functions or product information lookup. The implication for capital reduction is enormous, and the technology is in place now to begin to deliver on this promise.

Not all Smarter Shopping scenarios require advanced technology. For example, the role of the greeter can be enhanced with simple technology. A greeter welcomes a customer walking into a large department store and asks how he may help. The shopper asks for directions to the garden department. The greeter then asks if there is something specific the customer is interested in. The shopper says he is looking for garden hoses. The greeter gives directions and offers to escort the customer if he wishes. The greeter then contacts the sales associate in the garden department via an in-store messaging system to let the associate know a customer is on his way. The shopper is delighted by the responsive service and pleased that his trip today was efficient and productive and exactly met his needs.

# SMARTER SELLING

Smarter Selling is at the center of retail business — daily face-to-face interactions with customers on the floor, meeting their needs and treating them as individuals. This personal, focused relationship has been declining over the past 50 years as retailers have evolved from locally owned proprietorships into global enterprises with thousands of locations. Salespeople once knew their products intimately and knew their customer's preferences and shirt sizes. High-touch service was once the norm, but today's retail environment is generally homogenized, sterile and impersonal, with a bewildering mix of products (and services) matched up with poorly trained and lightly staffed store personnel.

Smarter Selling changes the current retail environment by leveraging technology to recreate the sales experience of generations ago. Smarter Selling solutions enable sales associates to understand the products they are selling, to have detailed information about the products' content and its various uses, as well as an understanding of the additional products and services that could add value to the purchase.

Smarter Selling means sales associates know more about the customers themselves — about their product preferences and what they may have purchased in the past, which enables them to make more intelligent suggestions on the spot. Smarter Selling is proprietary: It is drawn from a retailer's own knowledge base, a custom product assortment, a unique customer list and a set of business rules that only the retailer possesses.

A Smarter Selling solution anticipates the customer's needs even before they are expressed. Transaction patterns grounded in hundreds, if not thousands, of past purchases reflect product purchase correlations that can drive value in the customer interaction. Amazon.com's "Customers who purchased this item purchased these items" feature is a good example of this capability. Taken to the next level and brought into the retail store, sales associates can use this technique with customers to suggest cross-sell and up-sell products, to tie in Internet customer feedback (providing an informal "customer report") and to suggest a complete solution based on the customer's past purchase history.

Cross-channel integration that leverages the Internet to capture a customer's intent can create powerful capabilities in a Smarter Selling environment. For grocery stores, customer-created online shopping lists that are automatically communicated to the local store can become a powerful tool in anticipating customer needs. Customers signal their intent — big ticket replenishment visit versus a quick milk stop — through the online platform and the store reacts accordingly by sending staff to help with the big-ticket visit and perhaps opening up a separate lane especially for that customer with the $250 grocery tab.

Over time, collection of this data can enable smarter store layouts that position key products based on the intentions of customers at different times of the day and on different days of the week. Sainsbury's in the United Kingdom has created a capability that allows customer profiles to follow them across channels. When the customers check into a physical Sainsbury's store, their Internet profile, store profile and complete customer preferences are made available to store employees, allowing a higher level of customer service. Smarter Selling is all about making it easy to sell products that align with customer preferences to drive a purchase decision.

## Integrated Innovation

Smarter Selling must take advantage of "integrated innovation," which is powered by adherence to standards. One way to achieve this is with the SRI Architecture, based on industry standards for data integration, application integration and supply chain integration to support new technology that retailers implement. This standards adherence will enable vital information about the store, its products, its financials and other core enterprise information to be easily integrated with customer-facing innovations. Retailers will be able to reap the complete benefit stream that integrated innovation promises.

# SMARTER OPERATIONS

Smarter Operations let managers make faster, more accurate decisions to enable higher performance in the retail environment. In a fast-paced, highly competitive world, retailers that can keep pace in real time to changing market conditions are more likely to be successful than their competitors. Smarter Operations require enterprise agility at all levels of the organization – especially in the store. This agility applies to both capital-intensive expenditures (layout, fixtures, store controllers and point-of-sale terminals) and operating expenses, especially in the highest cost center for any retailer – labor.

Capital efficiency is critical to retailers involved in heavy competition. One of the most significant cost components is the physical infrastructure within the store, including the fixtures, cabling, electrical wiring, lighting, HVAC, furnishings and signage. These elements can be a major capital drain for a retailer, and in a traditional store environment, the fixed nature of this infrastructure creates rigidity – the antithesis of innovation.

Capital efficiency is often equated with getting more for less with the emphasis squarely on spending less. However, in the context of Smarter Operations, Microsoft has focused on the "more": more innovation, more value, more results. Microsoft believes a store without wires marks the beginning of enabling this vision. In the ideal scenario, retailing technology should be deployed wherever it will help address the needs of a particular situation. This technology ultimately enhances each customer's store experience, then is redeployed for the next customer transaction.

What if a retailer leveraged wireless technologies to deploy mobile POS devices? (Think about how Avis executes the checkout function when you return your car.) Imagine if all the valuable real estate at the front of the store were converted to support the sale of convenience products or to highlight new merchandise. What if the POS function was redeployed throughout the store where the customer is shopping? This "mobile POS" model brings the sales associate face to face with the customer, creating an opportunity to enhance the sale and close the deal when customers are ready rather than force them to wait in line to pay.

Smarter Operations solutions free store managers from the back office and bring them to the store front to serve customers. A typical task such as overseeing the receipt of new product is automated through the use of advanced radio frequency identifier (RFID) readers in the loading dock. Receipt acknowledgment and confirmation is a click on the mobile store manager workbench (delivered to a wireless PDA). Store managers can quickly examine in-store inventory positions on the shelf to identify products that have low quantities. Assigning employees to specific tasks (such as restocking) can be done quickly and efficiently through in-store instant messaging capabilities that send task assignments through the wireless network to the store associate's communication device.

Microsoft believes these labor-intensive processes should be done when necessary as opposed to when scheduled. This exceptions-based management model will be the cornerstone of SRI and the converse of today's process-based management model. Labor use will be more specific. The amount of labor will be optimized. Manager time will be more productive. Employees will be freed to wait on customers. The customer wins and the retailer wins.

Smarter Operations benefit the effective management of the store "plant," including temperature control, electricity usage and even the security infrastructure. Large retailers have hundreds of locations spread across a region or, in many instances, across the country. These locations in aggregate are large consumers of energy and drive electrical and gas usage, which accounts for a sizable percentage of operating costs.

What if retailers could leverage their network of stores to create a more holistic view of weather patterns and the impact on store traffic and shopping patterns? Temperature gauges, barometers, and wind speed and direction indicators installed at store locations could be used to build a much tighter picture of weather microclimates to directly influence the use of energy. For example, if sensors in stores predict a warm front coming, air conditioning could be gradually raised in the building overnight (when energy costs are lower) to ensure that the building is cooler in time for the shopping day. Many office buildings already use this practice in cooling (and heating) their locations.

Smarter Operations solutions can address shrink, a well-known issue for the retail industry. Many shrink management solutions are available that enable retailers to analyze the root causes of this problem. What if a retailer could not only analyze and evaluate the causes of shrink but also leverage POS and other sources of data to forecast when shrink might occur at specific stores in the future? Forecasting and planning tools exist today that enable retailers to anticipate shrink patterns. A Smarter Operations solution could leverage advanced forecasting solutions to

## *Smarter Operations let managers make faster, accurate decisions to enable higher performance in the retail environment.*

predict when shrink is likely to occur, define the causal behaviors that could lead to product theft, and instruct store managers on specific actions to address a potential theft.

Smarter Operations solutions need not be complex. If a relatively higher volume of foot traffic enters a store during a given window of time, a simple solution would predict the need to activate more POS terminals at some predetermined interval after the spike in entrance traffic. Similarly, sensors in one department – say, women's shoes – could detect that foot traffic is high and that only one sales associate is on duty in that department. A Smarter Operations solution would detect the staffing imbalance and dispatch an alert to the store manager who could reallocate staff from a slower department.

Signage is a simple solution for promoting product, advertising sales and communicating a variety of messages including pricing. Yet, signage incurs a burdensome cost to a retailer every day. Aside from the cost of designing, developing, printing and distributing the signage to hundreds or thousands of store locations, the actual installation and removal of signage involves a fairly large amount of labor. On top of that, the signs themselves are flat, communicate simplistic messages and evoke little if any emotion or interest from the customer.

A Smarter Operations solution would deploy electronic signage to create movement, color and even sound to accompany displays. This enhanced visual merchandising capability could use sophisticated content management facilities, have integrated scheduling functions, be networked with corporate headquarters for updates, and enable configuration capabilities to meet local requirements based on the store manager's delegated discretion. Technologies for large-format signage are available today with many new enhancements coming in the near future to make the management of signage a store manager dashboard function rather than a labor-intensive daily exercise.

Smarter Operations can drive improved revenue through reduced out-of-stock positions. Microsoft imagines a Smarter Operations solution that integrates the digital planogram with a digital X-Y grid of the store. This would be built on top of the store's data warehouse, which is integrated with an analytics engine and real-time alert capability. In the future, this capability will allow a store manager to see product location compliance status in real time and other issues through real-time access to the store planogram. The store manager will be able to place product in locations where it can drive more value for the store.

Taken one step further, the store manager would be able to receive store performance alerts regarding products that are not driving the gross margin dollars in a particular section of the store where they normally would. The store manager could then make a trip to that section to see if the labor mix is correct, signage is appropriate and inventory position is accurate. This access to real-time store performance information (and the ability to take action based on that information) will transform the store manager into a true "sense-and-respond" decision-maker, helping the store achieve higher levels of business performance.

# SMARTER RETAILING

## Innovation at the Edge of the Retail Enterprise

**The Value Smarter Retailing Can Bring**
So what? Interesting concepts, interesting stories, but what does all this innovation really mean for a retailer? What levers does deploying Smarter Retailing impact? Many of these levers are clearly quantifiable, others are more subjective. All, however, are tangible and relevant to high-performing retailers.

**Customer Loyalty.** Smarter Retailing drives greater loyalty by creating a store experience that the customer finds different and exciting. Better service, improved item availability matched to customer expectations, more focused product promotions targeted at an individual's preferences, and improved information access makes customers feel like they actually have a relationship with a retailer. Add to this relationship the powerful exchange of value that an innovative (smart) loyalty program can add, and the customer is committed. The lifetime value of that committed relationship is improved directly by lowering overall customer retention costs and increasing store visit frequency.

**Revenue Uplift.** Smarter Retailing will fundamentally improve a retailer's ability to enlarge basket size and increase customer visit frequency. Larger basket size will come through improved information in the hands of customers, allowing them to make better decisions about purchasing products. In addition, a more differentiated and customized customer service experience can drive larger basket sizes. Increased visit frequency can come from the customer's perception of the improved offer from a service, product information and convenience aspect and greater customer loyalty comes from a tighter, more intimate and more collaborative shopping experience.

**Store Manager Productivity.** Smarter Retailing helps store managers make better decisions through the availability of enhanced, real-time information. The availability of accurate information can decrease the need for managers to direct and execute tasks. In addition, it can increase the time the store manager spend serving customer needs. This simple principle can tremendously impact overall customer satisfaction as well as store efficiency. By automating many back-office administrative functions and delivering relevant information in real-time to the mobile workbench, managers can be more efficient. This ultimately enables them to manage the store rather than manage paperwork.

**Employee Productivity.** Emerging innovations such as enhanced store-level business intelligence, third-party information sharing through Web services, and supply chain and inventory management improvement through RFID give retailers greater access to information, which results in greater employee productivity. Rather than expend energy and resources to manage mundane tasks, such as monitoring in-store inventory positions, retailers can direct their labor force much more efficiently and toward activities that can drive incrementally greater revenue and profitability.

Smarter Retailing can empower employees through improved information access, increased confidence and better product knowledge. The outcome is not only a more effective sales closure rate, but also a changed basket size because of improved cross-selling and up-selling activities. This empowerment benefits customers directly with the availability of better information when making purchases, a more efficient shopping occasion and, ultimately, the ability to purchase products that exactly meet their needs.

# Realize The Value Smarter Retailing Can Bring.

**Employee Satisfaction.** Empowering employees through better training and more effective tools is a tremendous motivator for the retail work force. Satisfied employees means reduced training costs and a reduction of the costs created by high turnover (recruiting, hiring and training). Improved employee satisfaction also can have a net positive impact on internal shrink.

**Inventory turns, out-of-stocks and gross margin.** Increased inventory transparency through the prudent use of innovation enables more effective tools is a tremendous motivator for out-of-stock merchandise. Not only can retailers take advantage of this insight to drive volume purchases from vendors more efficiently, but these insights can also enable more effective, fact-based pricing negotiations with vendors, resulting in incrementally stronger gross margins.

**Store IT Capital and Support Cost Takeout.** The SRI Architecture allows for increased consolidation of store-based technology that can reduce in-store capital expenditures related to technology. Also, the SRI technical architecture has a managed operations aspect that enables improved remote support for in-store technology to reduce the need for in-house IT support, in turn reducing the technology store support/store ratio. Finally, leverage of the customer's electronic devices can augment the store's POS environment and, over time, lessen the store's reliance on POS systems.

## Capital Investment Shift

Smarter Retailing can leverage the customer's technology investment to execute basic in-store functions, such as product information lookup, POS checkout and product location. This shift of capital investment to the customer can greatly reduce technology investment in the store, making available prime store real estate for merchandising (therefore increasing sales per square foot) and improving labor productivity by transforming checkout sales clerks to value-added personal sales associates. Microsoft, in conjunction with industry partners, is working to create devices such as PDAs, tablets and smart phones that customers can carry in their pockets, handbags and backpacks. Retailers can leverage the functionality and intelligence of these devices to enable Smarter Retailing outcomes and capabilities without the prolonged store rollout process and large capital investment.

# HOW DO YOU GET THERE?

## Innovation at the Edge of the Retail Enterprise

**Base Infrastructure.** At its most basic, Smarter Retailing is process led and technology enabled. Critical to the deployment of new and innovative technologies is the establishment of a base infrastructure that is positioned for future innovations. Standards-based technologies that leverage Web services for integration and interoperability are a strong starting point. Even more fundamental, the deployment of current releases of existing operating system platforms positions the retailer well for new solutions that can take advantage of the underlying services of the latest versions.

The adoption of a retail application framework such as Microsoft's SRI Architecture provides a solid foundation for identifying and positioning the landscape of retail solutions. The justification for upgrading to these new releases is already substantial. A retailer's innovation agenda integrated with a thoughtful value-led technology agenda can make that justification into a burning platform for immediate action.

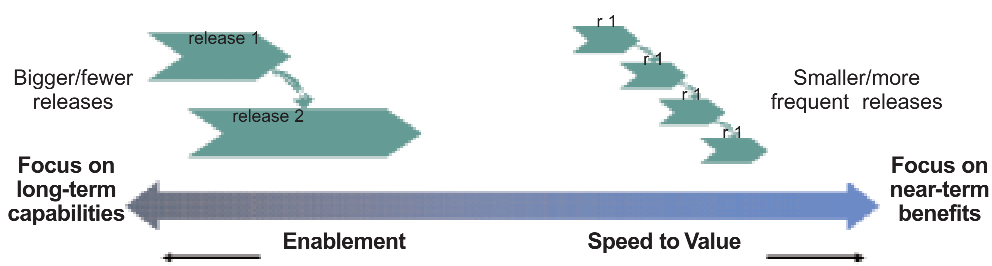
Web services can transform the ability of third-party organizations to interact with the retail enterprise to enable seamless information sharing, which, in turn, can enable tremendous changes in store replenishment and inventory management. Microsoft is building RFID capabilities into its SRI Architecture so that when (not if) RFID becomes more widespread, the retailer's architecture will not need to be retooled to take advantage of this breakthrough technology. Microsoft believes that pallet and case-level RFID will be broadly affordable in 12 to 24 months and that customers need to be confident that Microsoft technology will enable them to exploit this capability in their supply chain and warehousing functions.

**Release Strategy.** Once a retailer has decided what innovations to implement, it faces the daunting task of deciding the overall release strategy. Imagine a spectrum ranging from bigger, fewer releases to smaller, more frequent releases.

Bigger, fewer releases enable more long-term capabilities, which requires significant amounts of development, testing and overall change management coordination. The focus is on building sustainable business benefits, enhancing people capabilities and facilitating fundamental business process change. This release strategy is typically used when the change is big, complex and profound in its implications to the retail enterprise and the store.

develop and deliver multiple pilots and prototypes and accrue benefits in the short term to fund the next set of programs. When innovation opportunities are more compartmentalized, this approach works well and builds momentum along with a track record for success.

Many organizations will find success in leveraging the "quick-win" strategy of shorter releases to generate the business benefits and, ultimately, the funding for larger, more complex programs. This combination of implementation approaches effectively creates a self-funding innovation engine, which will simplify financial justification of Smarter Retailing programs.




A core hypothesis of Smarter Retailing is that future release strategies will be more iterative and based on value. A core principle of the SRI Architecture is that it should allow a retailer to implement flexible architecture that gradually introduces new capabilities in a more componentized fashion than previous architecture models.

Smaller, more frequent releases are targeted in their approach to driving business benefit. This release strategy prioritizes specific benefit goals and first addresses opportunities that have the greatest value-to-risk ratio. The implication is to

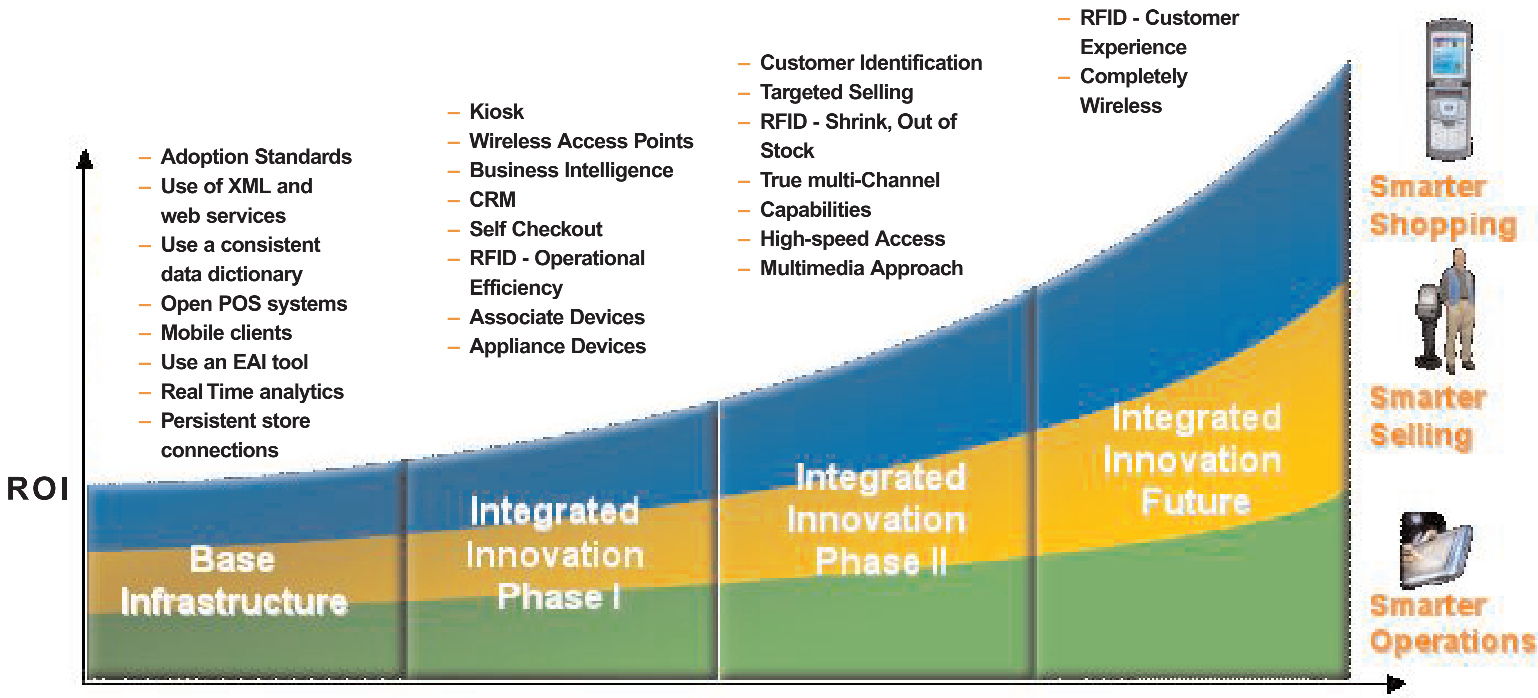
Microsoft believes that building this "quick-win" strategy can be based on an approach called "value targeting." These short-duration analyses can help retailers understand the matrix of the feasibility and timeline of implementation execution along with the time to value and amount of value for various capabilities. This information allows retailers to target, or prioritize, the features that drive value most quickly at the lowest amount of risk. This approach to value targeting will be critical to quickly unlocking the operating and gross margin dollar improvement that is available in today"s store environment.

# *Infrastructure Through Innovation: Microsoft's Value for the Retail Industry.*

## How Do You Get There?

Clayton Christensen wrote in "The Innovator's Dilemma" that the biggest struggle organizations face in introducing new and disruptive technologies to the enterprise is the discontinuity that change can bring to the current operating norms. How can a retailer make radical changes to its store environment without killing year-to-year same store sales numbers? Every retailer will have a different road map for innovative change. Microsoft has identified five critical components of the road map that a retailer should consider: the base infrastructure, release strategy, deployment model, partnering strategy and underlying technology infrastructure. (The deployment model and technology infrastructure will be covered in a separate technical white paper.)

## Solutions for the Future



# PARTNER STRATEGY

## Innovation at the Edge of the Retail Enterprise

**Partnering Strategy.** Choosing the right partners can be a critical success factor when pursuing a value-driven innovation agenda. These partners should have a stake in the overall success of the program and have the right combination of flexibility, tolerance for risk and innovative "horsepower" to contribute to the mix. Partners take a variety of forms:

- **Technology partners.** Again, Smarter Retailing is process led and technology enabled. A retailer's roster of technology partners must lead the pack in developing new and innovative hard ware and software solutions to enable the desired innovations in the store.
- **Implementation partners.** Choosing the right implementation partner will mean the careful matching of the retailer's innovation agenda with the assets, capabilities, experience and leader ship that a consultant can provide. Microsoft will be working with several systems integrators to deliver the programs that have been described in this white paper.
- **Business partners.** Smarter Retailing may mean that vendors, suppliers, distributors and even other retailers become partners. Recruiting these partners will require a shared vision for the use of innovation and a win-win value proposition that drives benefit for all parties.

The partnering strategy will require full-time management throughout the Smarter Retailing program and is generally a skill set not found in traditional retailers. This innovation alliance role is time consuming but can drive enormous leverage to enable new capabilities for the retailer more cost effectively and quicker than with internal resources.

**Independent Software and Hardware Vendors**
An important, though perhaps hidden, value to Smarter Retailing is the ability for all Microsoft independent software vendor (ISV) and independent hardware vendor (IHV) partners to develop to a consistent architecture and framework. Microsoft is committed to working with all its retail ISVs and IHVs to help ensure that they develop hardware and software solutions consistent with this vision and framework.

Microsoft plans to publish a detailed architecture blueprint that will give its industry partners a deep understanding of how to build their solutions. The company also plans to announce specific standards that Microsoft intends to leverage into the architecture. The ARTS XML data model, the XML data dictionary, the recently agreed-upon Web services standard and RFID specifications are a few examples of Microsoft's commitment to ensuring a consistent approach to application integration, data integration and application development consistency.

**Getting Started** Microsoft, in collaboration with its key implementation partners, plans to host Smarter Retailing Initiative Days. These SRI days will explore the issues that retailers face; highlight the breakthroughs that are available in the marketplace or coming out of research labs; conduct "anthropological," real-time field research; and discuss and prioritize ideas to address retailers' business challenges today. The outcome will be to create a game plan for identifying a store performance improvement value targeting agenda and action plan.

In addition to SRI Days, Microsoft also plans to provide architectural workshops to assist the retailer's technology organization to understand the technical underpinnings of the SRI Architecture. Finally, Microsoft will publish a set of technology white papers and technical specification documents to accompany this white paper for retailers to review.

**Conclusion** Smarter Retailing is not just a concept but an emerging reality for leading retailers in the marketplace today. The infrastructure to develop the underpinnings of how the customer experience will transform itself is now available. Many retailers have substantial portions of the necessary infrastructure already deployed in their technology environments. New solutions are available in the market with increasing frequency. Standards definitions for new breakthrough capabilities such as Web services, data integration and RFID have become more clear.

Retailers are deploying new capabilities and realizing improved performance. The value proposition around increased customer loyalty, improved work-force productivity and streamlined store operations is being proven in the marketplace. The need for competitive differentiation through a more intimate connection with the customer has never been a more clear imperative for the retail enterprise.

Microsoft understands retailers' business issues and has a vision of how to bring more value to customers. Microsoft believes a number of innovative "disruptive technologies" will come to market in the next 12 to 36 months that must be integrated with retailers' infrastructure. Microsoft has core strengths in customer, store and enterprise technologies. With Microsoft systems integration and consulting partners, the company knows how to get retailers started. Through a combination of technology and industry partners, Microsoft is dedicated to bringing technology innovation to the retail enterprise to enable store-based business innovation and to transform the store environment into a high-performing operation.