

EXTENDED RETAIL SOLUTIONS

Transforming the Shopping Experience



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What frustrates shoppers most? Congested checkouts? Out-of-stock products? Difficulty locating items? How retailers address these crucial issues can be the key to transforming the shopping experience – and driving sales and profitability in the process. New technology that can elevate the shopping experience is available today and more is on the horizon. Consumers say they are ready for it; Cap Gemini Ernst & Young, Intel, Cisco Systems and Microsoft are ready to help retailers embrace it.

Does this sound familiar? A consumer enters a huge store with no idea where to find the product he's seeking. When he finally locates the product, the only employee he can find to help him determine which item would best fit his needs responds with "that's not my department." Or, how about this? A customer walks into a fast-food restaurant and places an order to go, but as she pulls out of the parking lot discovers she has been given the wrong order. Or, maybe this? A shopper reaches the checkout in a store, only to find the line is 10 people deep.

Typical shopping experiences? Unfortunately, yes. And while consumer frustration is not "new news," it may come as a surprise to learn that consumers who face these kinds of frustrations are likely to walk out the door without making a purchase. And the next time they shop, it's unlikely they'll return to the same store.

Confronting Consumer Frustrations

In a recent survey of 1,000 U.S. consumers, Cap Gemini Ernst & Young (CGE&Y), Intel and Cisco Systems found that consumer frustration with the shopping experience is more than just talk. These frustrations are causing a significant number of consumers to walk out the door without a purchase or to shop at another retail outlet. Solving this problem requires a new approach to the shopping experience – one that puts lead-

ing-edge technology tools into the hands of consumers, sales associates and other retail employees. The goal: Leveraging new technology to address consumer frustrations while lowering IT and operating costs.

Our research identified significant frustration with the shopping experience among supermarket, mass merchandiser, drugstore, department store, specialty store and quick-serve/fast-food restaurant shoppers. The most frequently cited frustrations were: difficulty getting through the checkout; lack of visible prices on products or shelves; and difficulty finding employees to answer their questions or assist in a purchase.

Other top frustrations include a lack of employee knowledge about products and the store, out-of-stock products and difficulty locating items in the store. Most significantly, nearly two-thirds of consumers said problems like these caused them to stop shopping or to shop less frequently at the store.

How important are these issues? An overwhelming number of consumers in the survey said it is "very important" to:

- Have products priced the same at checkout as on the item or shelf.
- Get respectful treatment from employees.

- Have prices visible on products or shelves.
- Have products available in stock.
- Be able to return products to the store without difficulty.

Further complicating matters is the reality that consumers can find virtually any product they want from a wide range of retailers in multiple channels. As a result, customer loyalty often hinges on a retailer's ability to provide value through differentiated service or a unique shopping experience.

Changes on the Horizon

At the same time that retailers are struggling to address consumer frustrations and differentiate themselves in a brutally competitive environment, they also face a number of key

Top Five Frustrations Customers Face

1. Difficulty getting through the checkout.
2. Lack of visible prices on products or shelves.
3. Difficulty finding employees to answer questions or assist in purchase.
4. Lack of employee knowledge about products and/or store.
5. Products out of stock.

SOURCE: Cap Gemini Ernst & Young, Intel, Cisco Systems, 2002



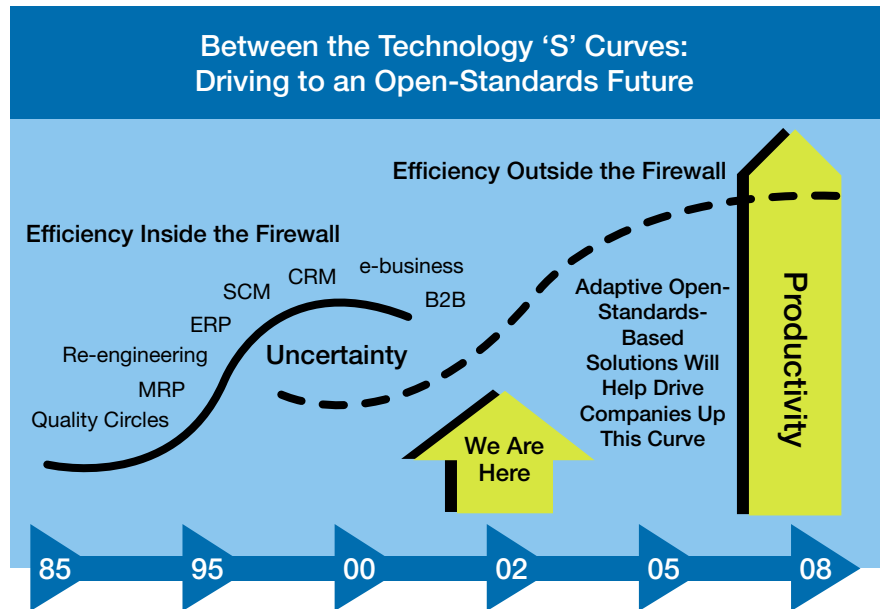
Among the solution providers in the Extended Retail Solutions (ERS) ecosystem is Symbol Technologies, bringing wireless in-store functionality.

technology-related opportunities on the horizon – opportunities that promise to have a significant impact on enterprise-wide systems.

New industry standards are emerging, such as 13-character and 14-character product codes, Global Data Synchronization and better encryption for credit card transactions. New technology for POS, Radio Frequency Identification (RFID), self-service, wireless networking and rich-media applications hold the promise of lower operating costs and an improved customer shopping experience. In addition, the benefits associated with vendor-managed replenishment and advanced merchandising capabilities are driving the need for a near-constant two-way flow of information between the store and the enterprise all the way out to the vendors.

Yet, the retail industry may fail to realize this tremendous potential. Why? Because the current technology infrastructure at many retailers is ill-equipped to handle these developments. Consider, for example, that 40 percent of today's POS systems still run on DOS.¹ And given their current architecture, retailers cannot afford the costs of "bolting on" new devices and applications that elevate the consumer experience and create differentiation, nor can they take advantage of the anticipated efficiencies offered by future advances such as RFID.

The fact is that many of the complications that drive the challenges and costs of upgrading technology and achieving the accompanying business benefits are related to the age and proprietary nature of existing platforms. Retailers are locked into the pace and price dictated by the proprietary-system vendor, yet the costs of switching can be prohibitive. Despite the limitations of a proprietary approach, many retailers that are cur-



Future value in retail will be realized via collaboration between open in-store systems and open supply chain systems. The first step is to take an adaptive architecture approach to building an open-standards-based in-store infrastructure.

rently contemplating an in-store technology refresh are, in fact, considering "new" proprietary solutions, a move that will likely land them in the same challenging position seven years from now.

Extended Retail Solutions: The Open-Standards Difference

How can retailers reach the desired future state? One answer lies in an adaptive approach built on a foundation of open standards and embodied in Extended Retail Solutions (ERS), a joint initiative from Cap Gemini Ernst & Young, Intel, Cisco Systems and Microsoft.

With ERS, retailers have the ability to move into a world characterized by real-time, data-driven, best-in-class solutions that are connected to and through the enterprise. ERS represents a collective vision, architecture, set of solutions and ecosystem that combines the expertise, resources and deep retail knowledge of Cap Gemini Ernst & Young (CGE&Y), one of the world's largest management and IT

consulting companies; Intel, the world's largest chip maker; Cisco Systems, the worldwide leader in networking for the Internet; and Microsoft, the worldwide leader in software, services and Internet technologies for personal and business computing. ERS is based on Intel and Microsoft technology, linked through Cisco and delivered by CGE&Y.

The open-standards architecture of ERS forms the foundation on which real-time solutions are built. Open standards seek to lower costs, reduce implementation times, and allow computing capability to grow with future business demands without overhauling the entire system. In addition, the adaptive nature of ERS' open architecture makes it better equipped than proprietary solutions to handle new requirements placed on the enterprise by external entities such as consumers, vendors, electronic payment networks and the government. Finally, the combination of the ERS open architecture and in-store wireless technology can lay the foundation necessary for RFID implementation.

¹ Forrester, "Picking a POS System," November 2001.



Using workforce management solutions from Radiant Systems, a key member of the ERS ecosystem, store managers can manage employee schedules using “drag and drop” scheduling, helping them to reduce labor costs through accurate, efficient scheduling and employee sharing.

What Sets ERS Apart

While ERS combines the best of what CGE&Y, Intel, Cisco and Microsoft have to offer, it is the adaptive and open nature of the solutions that can drive value for retailers in ways that other solution providers cannot.

Better selection: First, open standards can enable a “best-in-class” approach to hardware, software, peripheral and service selection. Proprietary devices and applications limit retailers’ choices to the vendor’s suite of compatible products and approved service providers. With open standards, retailers can purchase the components that best meet their requirements.

Lower cost and increased functionality: Second, open standards make technical requirements and specifications transparent, lowering barriers to entry for new vendors with improved products and value propositions. Greater competition forces new and existing manufacturers to continually enhance functionality and/or lower costs, or risk substitution of their products for better ones developed by rivals (similar to the PC industry over the past 10 years).

Adaptability: Third, open standards create the foundation for adaptability. As manufacturers improve existing devices and applications or release new ones, retailers have the option of

migrating to the new releases without completely gutting existing systems because all products must adhere to the requirements of the open standards. In addition, retailers can postpone implementing solutions that do not solve a current business problem. For example, existing store layouts may not accommodate plasma screens. However, as the retailer grows and acquires new locations, the company may find that rich-media solutions are a necessity. ERS allows the

retailer to easily incorporate the devices. Another example is the Intel EmbeddedATX motherboard specification. Retailers can upgrade the motherboard in their POS device without disruption to the rest of the device, POS software or peripherals.

Who Can Benefit From ERS

ERS can be employed by a wide range of retailers, including: food stores and supermarkets, drug stores, superstores/warehouse clubs, department

THE RETAIL TECHNOLOGY SITUATION

Situation

Current infrastructure is hampering retailers’ ability to connect with customers and prohibiting the benefits of new technology.



Technical Horizon

- Exciting new rich-media self-service applications and devices with cinema-quality graphics providing game-like interaction.
- Wireless networks to connect all in-store devices, with more mobile devices entering the scene.
- New standards such as 13-character and 14-character product codes, Global Data Synchronization and better encryption for credit card transactions.
- RFID is coming.



Action Required

Simplify connectivity and embrace new technology to strengthen relationships with customers and lower operating costs.

stores, specialty stores including category killers, mass merchandisers, convenience stores, bars and restaurants, and quick-serve/fast-food restaurant outlets. The ERS solutions match multiple retail sub-category needs. For instance, card-swipe integration may be applicable across most retail channels, while a wireless line-buster would be more appropriate for supermarkets, superstores/warehouse clubs, specialty category killers and mass merchandisers.

Self-Service Comes of Age

For a number of years, retailers have attempted to incorporate in-store self-service solutions, with varying degrees of success. Today, however, both the technology – in the form of rich-media customer service terminals, smart screens and dynamic, interactive signage – and the consumers are ready.

Our research makes it clear that consumers are very open to using these devices. For example, about two-thirds of consumers surveyed said they would use self-checkout, as well as in-store technology to order a product not available in the store.

Consumers also had a positive response to self-service applications throughout the store. Almost three-quarters of those surveyed would use devices providing location of prod-

ucts in the store; and more than two-thirds would use devices showing products needed for a specific project and displaying product information. Surprisingly, this acceptance crosses age barriers. For example, about half of those aged 65 and older said they would use self-service computer screens, if available, to locate product in the store and to display product information.

Our research findings also indicated that the presence of such features and tools would impact consumers' shopping habits in a variety of ways. For example, close to half said they would be more likely to shop in a store that offered these kinds of services, and more than half would spend more time in the store during each visit. And almost 50 percent said these features might lead them to spend more money in the store.

ERS allows retailers to make the most of consumers' willingness to use in-store technology.

Real Solutions Ready for Retail

The ERS approach makes it possible to build true best-of-breed solutions, something that we believe cannot be achieved with a proprietary system. A number of OEMs and Independent Software Vendors (ISVs) have committed to becoming part of the ERS

Self-Service Applications Consumers Would Use If Available in Stores

| Customer service terminals: | % Saying |
|---|----------|
| 1. Displaying location of product in the store. | 73% |
| 2. Showing products needed for a project. | 70% |
| 3. Delivering special promotions and discounts. | 69% |
| 4. Displaying product information. | 68% |
| 5. Showing how to use particular products. | 61% |

SOURCE: Cap Gemini Ernst & Young, Intel, Cisco Systems, 2002

Impact of Service-Oriented Applications/Devices

| Consumers... | % Saying |
|---|----------|
| Would be more likely to spend more time in the store during each visit. | 59% |
| Would tend to spend more money. | 48% |
| Would be more likely to shop in that store. | 44% |

SOURCE: Cap Gemini Ernst & Young, Intel, Cisco Systems, 2002

ERS: SOLUTION FRAMEWORK

| | |
|-------------------------------|---|
| Strategy | The right consumer-centric strategy and business and technology goals. |
| Process | Redesign and transformation to implement strategy. Customer Self-Service Processes Joint Customer/Employee Processes Employee-Only Processes |
| Applications | Deliver information/content; present experience/customer affinity; capture data/transactions; increase efficiency. |
| Devices | Customer service terminals, servers, smart screens, POS, hand-helds, etc. |
| Integration | Connecting data, transaction history (Customer Relationship Management, Supply Chain Management, multichannel, back-office). |
| Network Infrastructure | Scalable, secure, always-on wired or wireless connectivity inter-store and intra-store. |

ecosystem. These companies include EMN8, NCR, HP, Triversity, Symbol, Fujitsu, Zebra, Radiant, Dell, Wincor Nixdorf and NCR-Teradata. The individual solutions are integrated in real time with enterprise applications via A4R (Accelerator For Retail), an XML, business rules and data flow logic designed by Intel and Microsoft.

THE OPEN-STANDARDS OPPORTUNITY

Extended Retail Solutions' open-standards approach can offer a number of advantages, including:

- Flexibility to meet changing business needs.
- Improved customer service and experience supported by rich media.
- Real-time, two-way data flow.
- Ability to easily integrate to provide new Web functions, support multichannel retailing and extend POS to the point of decision.
- Single platform for kiosk, wireless and POS.
- Open choice, vendor selection.
- Support for standards such as XML, ARTS, UCC, RosettaNet, Java, Bluetooth, DUKPT, among others.
- Lower total cost of ownership, lifecycle costs.

THE ERS ECOSYSTEM

Among the solution providers in the ERS ecosystem are:

- EMN8 (rich media)
- NCR, Triversity HP, Fujitsu, Dell, Wincor Nixdorf, Radiant (POS)
- Symbol, Fujitsu, Zebra (wireless in-store functionality)
- Radiant (workforce management)
- NCR-Teradata (CRM loyalty rewards, retail decisions, loss prevention)

Cisco Systems uses its technology innovation and expertise to deliver a highly connected back-office and in-store retail experience that scales up or down with a retailer's business application and consumer requirements.

ERS solutions are ready for the real world of retail, having been built and tested in the CGE&Y ERS Lab. Each ERS solution consists of a solution definition, business model, reference architecture and lab implementation.

Putting the ERS vision into practice can be achieved through an incremental, staged approach that makes the transition manageable and affordable. This approach can allow retailers to reap benefits whether they choose to replace existing systems in a large-scale fashion or to gradually migrate systems over a period of time.

How To Get Started

What are the options for an individual retailer? How do you decide what solutions best fit your company's particular needs? The first step to understanding and implementing ERS is to take part in an ERS Lab session. In the lab, new solutions are demonstrated in a hands-on environment where you can begin to customize the solution to help address your specific needs.

Part of the lab session is conducted in CGE&Y's unique Accelerated Solutions Environment (ASE). The development and implementation of an effective, tailored ERS program involves complex considerations and collaboration among diverse stakeholders. The ASE is an effective method to seek this collaboration and move forward quickly. In the ASE a cross-functional client and consulting team drives solutions tailored to a particular company's own ERS strategy in an intensive, highly collaborative, fully facilitated setting. Most of all, the ASE methodology drives speed to consensus, which has resulted in effective working plans developed in compressed time spans.

Meeting New Market Demands

Facing stiffer competition and razor-thin margins, retailers must juggle cost containment with demands for increased customer service. As companies look for ways to reduce operating costs and improve the total customer experience, new technology is a prime consideration to help address business challenges such as out-of-stocks and congested checkouts. But that technology must be flexible and adaptive. Extended Retail Solutions offers an approach based on open standards that can provide both flexibility and a lower total cost of ownership, while helping retailers address today's crucial business and technology issues.



NCR, an ERS solution provider, offers consumers interactive capabilities in compact, flexible POS devices.



Rich-media customer service terminals from EMN8 are among the individual best-in-class solutions that comprise the ERS solution set.

ERS IN ACTION: SAMPLE SOLUTIONS

Providing a differentiated experience while lowering costs has never been easy in retail. But today, because service is often a critical differentiator and success factor, it's more important than ever. Extended Retail Solutions (ERS) can transform the shopping experience and reduce labor, IT and operating costs. Consider how ERS can be applied in two different areas of retail — Specialty Category Killers (SCK) and Quick-Service Restaurants (QSR).

SPECIALTY CATEGORY KILLERS

Specialty category killers are having a huge impact on the way consumers shop today, but consumers often can't distinguish one category killer from another. Is one DIY/home-improvement center really different from another? Does one electronics retailer offer something that others don't?

Imagine Denzel Washington on call to introduce the hottest DVDs; Tom Clancy describing his newest novel; or Bob Vila available to give advice on projects and tools.

By using rich-media, interactive customer service terminals and in-store flat-panel video screens to display deep content and product knowledge over a wireless IP network, SCKs can help reduce consumer frustration over employee unavailability to answer questions or inability to provide on-the-spot product information and guidance.

Multilingual customer service terminals throughout the store can allow retailers to connect with consumers on their terms. Other ERS components include: smart signs, wireless connectivity, IP telephone applications, e-learning, an upgradeable POS platform, workforce management applications and line-busting hand-helds.

The benefits to SCKs can include:

- Increased traffic due to elevated consumer experience.
- Better margins from up-selling and cross-selling capabilities.
- Reduced IT expense with upgradeable POS vs. complete replacement.
- Reduced deployment and operating costs due to vendor funding.
- Greater store layout flexibility from a wireless environment.
- Foundation infrastructure for RFID.

QUICK-SERVICE RESTAURANTS

According to Dow Jones News Service, as many as 11 percent of the customers of a leading global fast-food retailer are dissatisfied each day. The QSR industry faces several critical issues:

- Staff turnover — particularly in consumer-interaction positions.
- Rising labor expense.
- Poor cross-sell and up-sell performance, which can prevent a store from realizing increased store revenues of 2 percent or more.

Extended Retail Solutions can help QSR/fast-food companies improve the customer experience and reduce labor concerns.

Imagine walking into a fast-food restaurant and seeing a commercial on today's specials, and then an explanation of the difference between "Chicken Deluxe" and "Chicken Supreme." Imagine being able to order in your preferred language and select items exactly as you want them — all from a self-service terminal; or if you know your choices, you can jump directly to placing your order, and use cash, credit or debit card payments to complete your transaction.

A rich-media customer service terminal solution can enable QSR/fast-food companies to serve customers more efficiently. It can improve order accuracy, increase up-sell and cross-sell volume, enhance the visual and thematic retail environment and provide the consumer with an enticing, positive interactive experience. The consumer has the option of interacting in multiple languages. The terminal allows affinity card swipe for rewards and recall of a favorite order. In addition, it can incorporate new promotional and marketing themes through real-time or near-real-time two-way data flow. What's more, with the elimination of menu boards the QSR retailer has an abundance of new advertising space that can be used to drive additional revenues.

Other ERS solution components for QSRs include: smart signs, wireless connectivity, IP telephones for HR and payroll services, and e-learning.

The benefits to QSRs can include:

- Reduced labor costs due to increased self-service.
- Less waste from increased order accuracy.
- Increased traffic due to an elevated consumer experience.
- Better margins from up-selling and cross-selling.
- Reduced deployment costs due to vendor funding.
- Greater store layout flexibility from a wireless environment.



Extended Retail Solutions from Cap Gemini Ernst & Young, Intel, Cisco Systems and Microsoft.

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About Microsoft Corporation

Founded in 1975, Microsoft (Nasdaq "MSFT") is the worldwide leader in software, services and Internet technologies for personal and business computing. The company offers a wide range of products and services designed to empower people through great software – any time, any place and on any device.