A SUPPLEMENT TO RIS NEWS MAY 2007

17TH ANNUAL

# RETAIL TECHNOLOGY STUDY

# The Customer-Driven Enterprise

THE BENCHMARK REPORT ON RETAIL TECHNOLOGY TRENDS

FINDINGS

- Top Technology Initiatives for 2007
- Key Action Items for the Next 18 Months
- Major Challenges in the Next 3 Years
- IT Obstacles That Stand in the way of Productivity
- Current and Future Investment Plans by IT Category
- Multi-Channel Trends and More!

RIS Gartner

Presented By ORACLE

RETAIL TECHNOLOGY TRENDS
Supplement to RIS News, May 2007

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# Who Responded?

Gartner Research, a leading provider of research and analysis about the global information technology industry, partnered with *RIS* for this study, which was conducted during the first two months of 2007. In conjunction with the *RIS* editorial team, Gartner created the survey and posted it online. Gartner performed the analysis of the data and was then interviewed by *RIS* on the meaning of the data. Gartner was not paid for its involvement and *RIS* did not involve any of the advertisers in the report during the preparation or analysis phases.

The respondent pool consists of 212 senior-level executives in retailing who have significant responsibility for IT decision making. Job title breakdown is as follows: 39% C-level executive (including CEO, CIO, CFO and CMO), 35% director/manager of IT, 14% departmental manager, 6% SVP/VP of IT and 6% other IT.

By retail category the breakdown is as follows: 34% Specialty, 18% Apparel/Footwear/Accessories, 12% Grocery/Supermarket, 10% Department Store/Mass Merchandise, 8% Drug/Convenience, 8% Hardware/Home Center/Automotive, 5% Electronics and 5% Furniture/Home Furnishings.

Respondent breakdown by revenue is as follows: 31% less than $50 million, 26% from $1 billion to $10 billion, 13% from $50 million to $250 million, 10% more than $10 billion, 10% $500 from million to $1 billion, and 10% from $250 million to $500 million. ■

BY JEFF ROSTER

# It's about the Customer, Stupid

## THIS TIME AROUND CUSTOMER CENTRICITY IS MORE THAN A MARKETING SLOGAN

If a handful of leading adopters took up the banner of customer-centric retailing over past few years, then 2007 is the year when a focus on the customer emerged on the radar screens of mainstream retailing – not just in name only, but in quantifiable technology investment.

But what is really new about this? One only has to look back through past IT and retailer marketing campaigns to see customer centricity popping up as a major goal. What's different now is the level of investment in technologies and strategies that focus on understanding and serving the customer better. This time around it is much more than a marketing slogan.

Results-Driven Tools or Strategies That Are Key Action Items in Next 18 Months

Among the findings in this year's study, highlighted here and analyzed in greater detail in the following pages, are:

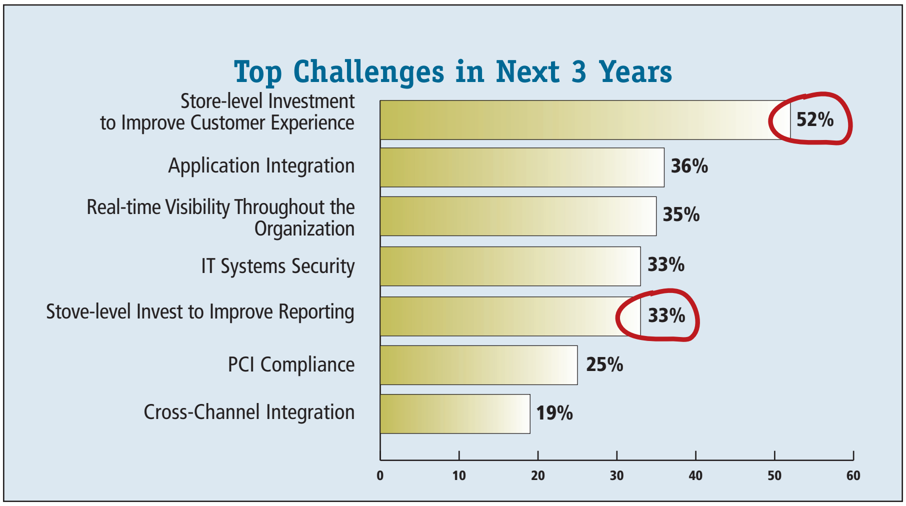
- Customer satisfaction is by far the leading results-driven tool or strategy over the next 18 months.
- Store level investment to improve the customer experience is the number one retailer challenge and the area where merchants are investing most.
- Lack of analytical tools and technologies continue to be an obstacle standing in the way of productivity for retailers, but not as important as the perennial leaders – insufficient skills and people resources and capital constraints.
- Overall IT spending in retailing continues to grow.

### THE CUSTOMER IS KING

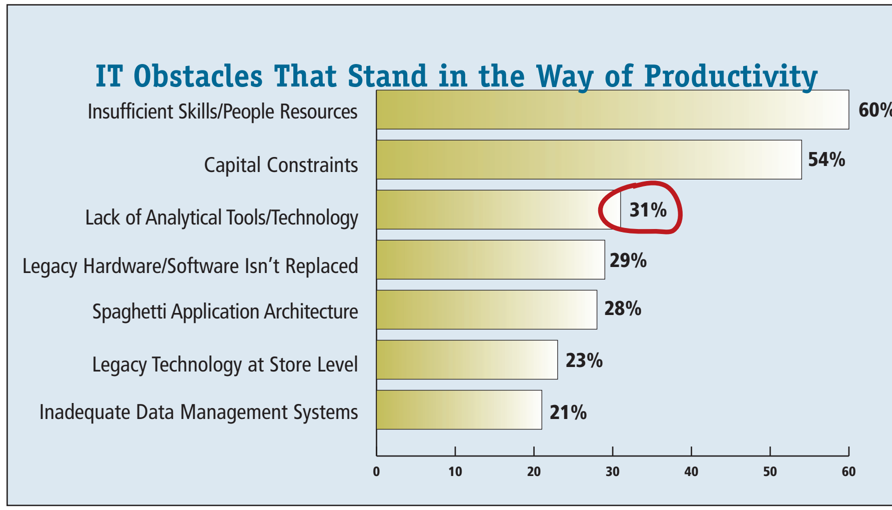
Heading up this year's list of key action items for results-driven tools and strategies is Customer Satisfaction. What is significant about the top response is that it was selected by 75% of respondents, which is more than 50% higher than the second option Workforce Efficiency (49%). Any given data point can be interesting, but when you see a pattern develop in multiple questions across the entire study that identifies investment in technologies that support a customer-centric strategy, then you know you are confirming a widespread trend.

Just a few years ago customer satisfaction and workforce efficiency also appeared at the top of the action item list, but respondents gave them relatively equal weight. Now, however, retailers realize the only way to differentiate against the big box retailers is to focus on customer service and to improve their knowledge of their customers. No retailer can differentiate today on operational efficiency alone. Bringing the customer to the forefront of store strategy, as well as making it the central point of IT strategy, is the key to future growth.

Not shown in the results-driven tools



Top Challenges in Next 3 Years




and strategies chart are In-Store Tracking (16%) and Web Metrics (10%), which appear at the bottom of the list. However, these are technologies to watch. Both will become increasingly significant as in-store IT investments continue to grow and multi-channel retailing continues to move into the next phase of its maturity matrix.

## WHERE WILL THE DOLLARS GO?

There is no question that we are in the middle of a massive technology makeover at the store level. It started with POS systems and then spread to kiosks, self-checkout and now various mobility devices. Not surprisingly, Store Level Investment to Improve the Customer Experience (chosen by 52%) leads the pack in areas where retailers spend IT budget to solve their top challenges for the next three years. When you add to this the high ranking given to Store-Level Investment to Improve Reporting (33%), you see the emergence of a significant investment cycle for store-level technologies.

The rising levels of interest in Real Time Visibility (35%) and Application Integration (36%) are both strong indicators of a similar transformation occurring at the headquarters level. Real Time Visibility has been moving up the retail CIO's priority list for years, and it is a hallmark of a sophisticated supply chain. Applications Integration has always been a lower level priority, but it is a necessary step to building real-time visibility.

**Top 10 Technology Initiatives for 2007**

| | | |
|---|---|---|
| 1 | Data Warehouse/ Data Storage | 44% |
| 2 | Workforce Management/ Education & Training | 43% |
| 3 | Assortment Planning | 42% |
| 4 | Labor Scheduling | 41% |
| 5 | Forecasting | 39% |
| 6 | Standards Based Platform | 39% |
| 7 | Centralized Customer Data/Intelligence | 39% |
| 8 | Workforce Optimization | 38% |
| 9 | Services Orientated Architecture | 38% |
| 10 | Security & ID Management | 37% |

It's no surprise that IT Systems Security (33%) and PCI Compliance (25%) make the list for top challenges in the next three years. No retailer can afford to have their most valuable resource — their brand and image — tarnished in the headlines and among their customers.

Although Cross-Channel Integration (19%) comes in at the bottom of the challenges chart, it is clearly a strategy destined to gain more attention as the boom in e-commerce continues and potential revenue figures get too large to ignore.

## NO SHORTAGE OF OBSTACLES TO OVERCOME

The top two obstacles that stand in the way of improving efficiency are genuine retail classics – Insufficient Skills/People Resources (60%) and Capital Spending (54%). No retailer ever believes it has enough skilled resources and certainly no retail CIO believes he has enough cap ex dollars to accomplish all the tasks on his to-do list.

While the top two obstacles will most likely never be resolved, the third option, Lack of Analytical Tools/Technology, is on the road to resolution. Retailers are currently investing heavily in business intelligence capabilities, and over the next three years retailers will have the analytical tools they need in place and this will become less of an obstacle to efficiency.

If there is any good news to come out of analyzing a chart filled with obstacles, it is that Legacy Hardware and Software (29%), Spaghetti Application Architecture (28%) and Legacy Technology at the Store (23%) are not major problems for the majority of retailers. Although a significant minority still consider these obstacles to be problem areas, the vast majority have moved on, which is a good indication of the progress retailers have made in their technology refresh initiatives.

Fortunately for retailers, there is ample evidence that the industry is addressing many of these obstacles with aggressive investment in appropriate technologies. While some retailers are still deeply involved in POS refresh initiatives, many others have moved on and are now free to focus on new customer-centric strategies. When these systems are in place, retailers will be much smarter about customers wants, needs and interests, and, therefore, in a much better position to deliver the ultimate shopping experience — customer satisfaction. ■

*Jeff Roster is research vice president/ global industries for Gartner.*

# Big-Picture Trendlines

## IT SPENDING AND INTEGRATED APPLICATION SUITES CONTINUE TO CLIMB

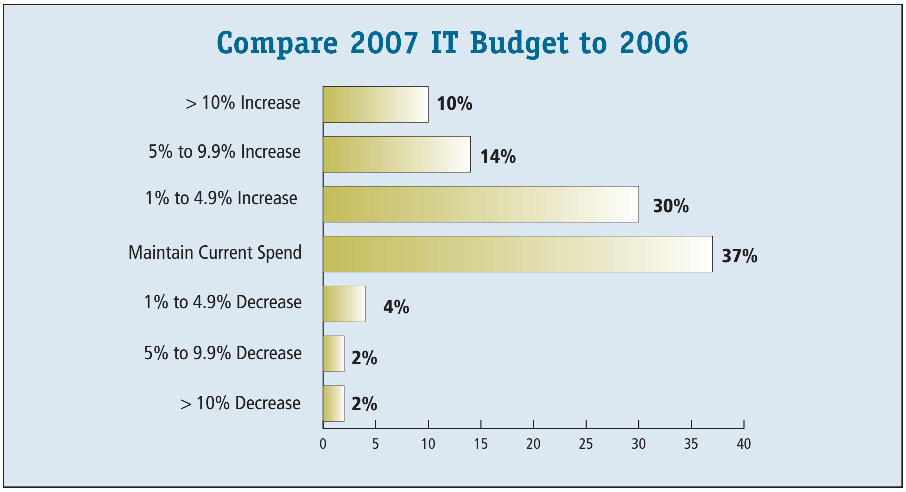
With the increasing emphasis on e-commerce, this year's survey included more online titles and pure-play retailers in the respondent pool than ever before. Less affected by the costs of brick-and-mortar stores, these cyber retailers tend to skew budget numbers upward when viewed from a year-over-year perspective.

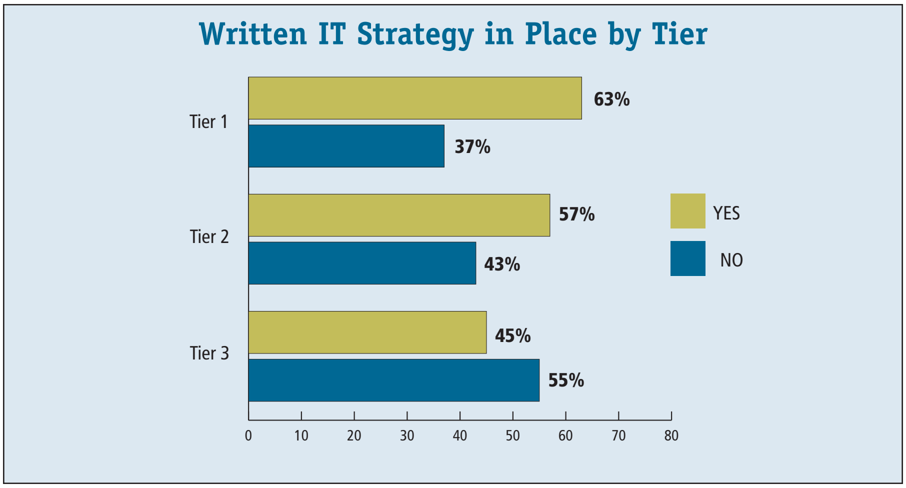
But this segment is a growing force in retailing and the way these retailers play the game is having a major impact on the industry as a whole.

According to this year's pool of respondents, IT budgets are going up year over year, which has been a consistent trend since the decline that occurred after the dot-com bust and 9/11. Adding up the numbers for retailers who say their budgets will decrease in 2007 produces a total of just 8%, which is a slightly lower number than any tracked in the study this century. No doubt it is partly attributed to the addition of e-commerce executives to the respondent pool.

Adding up the numbers for retailers who say their budgets will increase in 2007 produces a total of 54%, which history tells us is usually an optimistic figure. As all retailers know, things frequently change after the budget is set and events of the year start to unfold. Postponement is often a way of life for IT budgets.

Perhaps the 37% who say their budgets will remain the same are the realistic ones. Realism is a good thing, especially when IT funding is pegged to a percentage of revenue. In this scenario, as revenue rises so too will IT funding.




### WHO NEEDS IT STRATEGY?

Why is it important to have a written IT strategy? Because if you have a clear IT strategy you can achieve alignment between your IT department and your business departments. Also, you can engage in multi-year, multi-phase projects that resolve big problem areas like re-engineering the data warehouse, sun setting legacy systems, untangling spaghetti architecture and moving to a standards-based architecture.

Without a written IT strategy, these problems remain choke points that slowly strangle the organization until it begins running out of air.

According to the figures in this year's study, there has been little progress among respondents in putting a written IT strategy in place. It hovers around 50% of the retail landscape year in and year out.

However, the numbers are sharply divided if you break them out by revenue category. Nearly two thirds (63%) of Tier 1 retailers (defined as having revenue greater than $1 billion) have written IT strategies in place, and well over half (57%) of Tier 2 retailers (with revenue between $250 million and $1 billion) also have formal IT strategies in place.

The big disconnect occurs among Tier 3 (less than $250 million in revenue) retailers. At this level, IT is considered more of a necessary evil and the cost of doing business rather than a strategic enabler of innovation and differentiation.

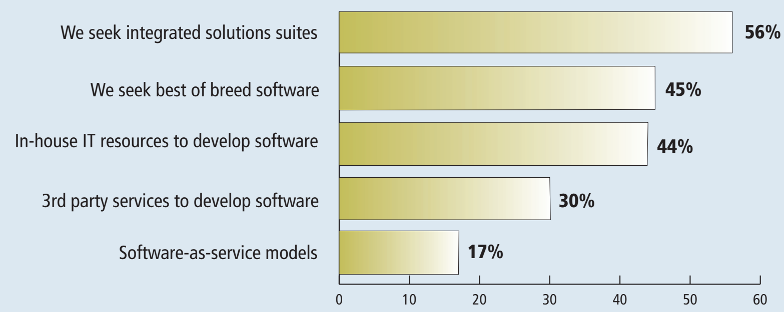
### VALIDATING INTEGRATED SUITES

For the past decade, the standard impression among analysts was that retailing was a best-of-breed industry. Prior to that retailers were known for favoring in-house application development. At that time, the lowest option on the list was considered to be prepackaged apps, which didn't fit well into the retailer's complex world of proprietary systems and unique business processes.

But that was yesterday and this is today. Retailers are now more favorably inclined toward integrated solution suites than any other option.

There are several reasons for this phenomenon. The software industry has matured and developed highly focused apps that can be woven together into well defined suites. Retailers can install them in phases, initially as a point solution and then bolting on additional components, or as fully integrated suites. And, finally, retailers don't have to absorb the problems associated with being their own software developer.

**Integrated Solution Suites and Software-as-Service Move Ahead as Architecture Strategies**




We uncovered this change in architecture strategy last year and the numbers this year provide validation for this trend.

However, the numbers also indicate that developing software either in-house or through third-part services is not going away any time soon. A significant amount of resources are being devoted to development, and best-of-breed is not dead yet either. But it is worth noting that an inflection point has occurred in the acceptance of integrated suites among retailers and it has been confirmed for the past two years.

One final point, software-as-service or on-demand software is steadily gaining ground. Although we have only been tracking it for two years, it is clearly in emergent status and an option CIOs are moving toward. It's not likely to become the dominant architecture any time soon, but its adoption curve is on the rise in retailing and other industries.

### ENTERPRISE INFRASTRUCTURE

Attempting to peek under the technology hood in a retail organization is a little like asking a question of the Wizard of Oz – the answer you get isn't clear and pulling back the curtains reveals even less.

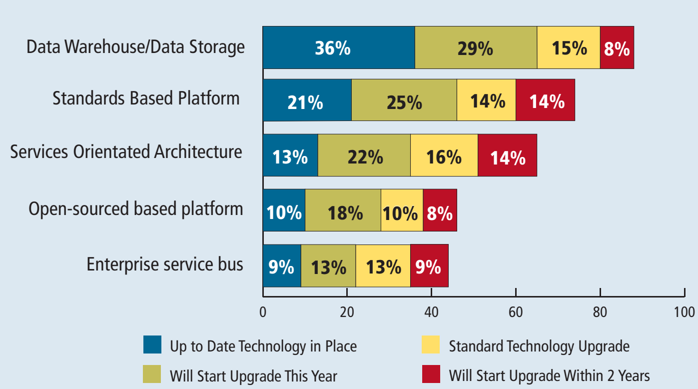
No doubt the retail tech stack is built on a solid database foundation and study respondents indicate strong levels of current investment in the Data Warehouse/Data Storage area. But beyond this layer, the future is not clear, or more accurately, it is divided.

Standards Based Platforms show solid interest in current and future spending as does Open-Source Based Platforms, which in most cases refers to Linux. These latter two have been around for a number of years, but they are still evolving and not yet mature.

Even further from maturity are the Services Oriented Architecture (SOA) and Enterprise Service Bus alternatives. Both of these can be viewed as a way for retailers to extend the life of their legacy applications while taking advantage of new functions. They also allow retailers to make a gradual transition to either a standards-based or open-source platform as they retire legacy systems and untangle spaghetti architecture.

Perhaps the best way to view a retail tech stack is as multiple-choice question and the most accurate answer is all of the above. ■

**Enterprise Infrastructure and Architecture Investment Plans**



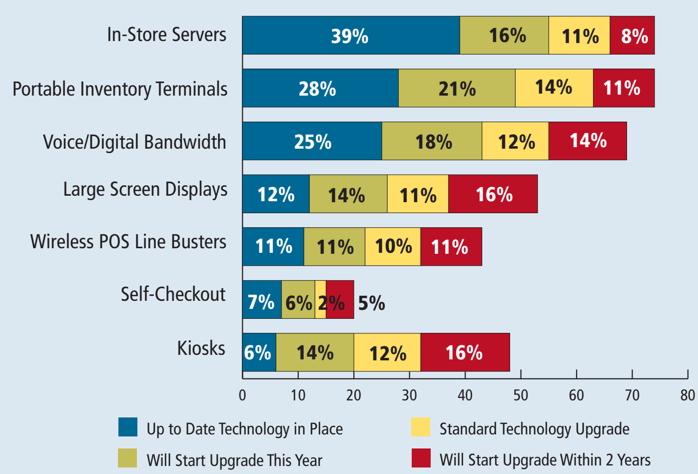
# Where the Rubber Meets Road

## INCREASING STORE-LEVEL IT INVESTMENT IS A NO-BRAINER

The reason store-level spending on technology continues to show consistently strong current and future investment plans is that it is a no-brainer. The store is where the rubber meets the road in the retailing industry. If you get this component right from a business process and technology perspective, good things are sure to follow.

As we've seen in previous findings, providing better tools for associates is a top goal for 2007. This shows up not only in strong numbers for POS upgrades that make checkout quicker and easier, but also in significant up ticks in deployment plans for kiosks, portable inventory terminals and store manager workbenches, to name a few items on the CIOs menu of initiatives for 2007 and beyond.

Strong Gains Ahead for Kiosks and In-Store Displays




### UNDERSTANDING THE POS CYCLE

While current POS investment plans are incredibly robust in 2007, well over 60% of respondents either have up-to-date technology in place or have already begun an upgrade, the numbers show a sharp drop off when looking toward the future. From the data we have this year and what we have tracked over the past several years, it appears the POS replacement cycle is hitting its peak now and activity will fall off in the next two years when a quarter of respondents indicate they plan to initiative a POS upgrade.

For less critical technologies, this number for future upgrade plans might be considered high, but for POS, which is one of the most active areas in retail technology, it is actually on the low side. This confirms a trend the study detected two years ago, which is that the quick adopters and fast followers have already completed their POS projects and the rest of the industry is in the process of catching up.

From a retailer perspective, it is good news that POS upgrades will soon be behind them, because POS replacements are expensive projects and once they are completed many new IT opportunities can open up. Some of these will layer on top of the new software, such as real-time inventory look up or online purchase with in-store pickup, and some will become possible due to the freeing up of the POS budget dollars.

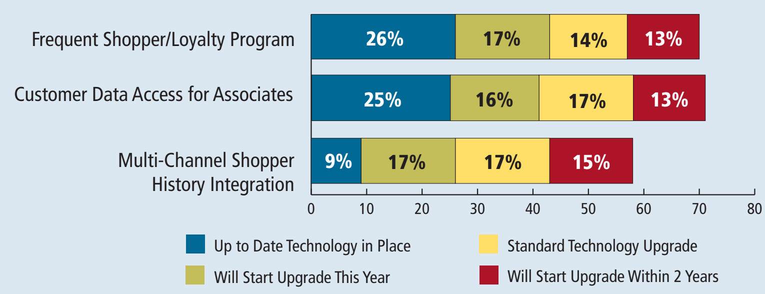
History tells us that once the POS cycle drops off its peak it will soon begin to rise again as systems begin aging for early adopters. This is likely to happen again, but the bell curve may look a little different in the future. Looking ahead, a shift is likely to occur where hardware is replaced but software, which has entered a mature plateau, remains largely in place.

### KIOSKS FINALLY SET TO ARRIVE

The first generation of kiosks served more as drink holders and dust collectors than critical customer touchpoints, but retailers and customers alike have changed considerably during the 20 years or so since kiosks have been developing. For the first time in this survey, kiosks show robust numbers for future investment plans, with 28% of retailers saying they plan to begin a kiosk project either this year or within the next two years.

These are strong numbers because not every retailer is a good candidate for a kiosk rollout. Digital media retailers, such as Virgin Megastore and Trans World Entertainment (which operates such brands as f.y.e. and Suncoast Video), have undertaken massive kiosk projects, and the sales lift from them has exceeded expectations. But high-touch retailers like those in luxury goods or fashion will probably not be able to deliver the kind of serv-

**Cross-Channel Integration a Key to Store-Level CRM**




ice their customers expect through a kiosk and will be slow to adopt.

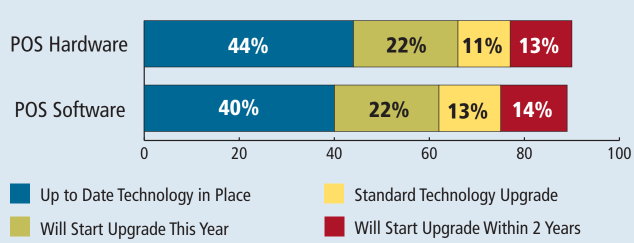
Kiosks are not a major weapon in the IT arsenal for retailers, but there is no doubt their penetration in the market is growing.

A more critical piece of hardware at the store level is the server, so it's not surprising to see that 39% consider their server technology to be up-to-date and another 16% have already begun an upgrade. What is a little surprising is that future investment plans are not higher for something so essential to running a store.

No doubt the reason for this is that centrally hosted applications are making significant inroads into the retailer tech stack and there is less need to install new servers even when new applications are rolled out to stores. This is not to say that retailers are moving toward the eradication of store-level servers. Although this may eventually occur in the future, it is not going to happen any time soon.

The major trend here is that prices

**POS Replacement Cycle Approaches Peak**




for servers are dropping at the same time as their computing power is going up, which is the ongoing demonstration of Moore's Law. As this occurs, retailers are getting more bang for their buck and they require less future investment activity.

For large footprint retailers – mass merchants, department stores, big box category killers and grocers – portable inventory terminals are becoming an essential tool. And as retailers move forward with these investments they are purchasing fundamentally different devices than the ones they bought as recently as three or four years ago. Today's portable inventory terminals are powerful, multi-task devices with color monitors and the ability to handle an ever increasing array of store functions. Moving forward, the term portable inventory terminal may be too simplistic a name for a tool that performs the tasks of a full-featured customer service device.

Large screen displays show a healthy future growth track, but much of this activity is still centered on pilot projects and test-market rollouts. There is tremendous retailer interest in this area and it promises to deliver measurable results across a wide variety of vertical formats, but many retailers are still in the kicking-the-tires phase.

When you walk into a kid's store these days it is almost like walking into a video game, with a lot of large-screen and digital media technology at the store level. For retailers serving older market segments, the penetration of this technology is still small, but it is only a matter of time before it becomes widespread. When it does it will become a significant factor in retailing, as it has become in the fast-food restaurant industry where adoption by national chains is nearly universal.

### STORE-LEVEL CRM

One could argue that frequent shopper and loyalty programs are among the oldest stories in retailing, but the takeaway in the data is that a fair amount of retooling is occurring in a mature technology. An equally important takeaway is that providing customer data access to associates is mirroring this activity. Taken together, these datapoints indicate a widespread retooling of store-level CRM.

As we note in several sections of the study, Best Buy is a leader in this technology and has been since it introduced its loyalty program several years ago. But what is interesting is that Best Buy's loyalty program today is far different than the one it initially introduced. Associates now have access to a lot more information than previously – purchase histories, Web orders and in-store pickup capability. This is the model that increasing numbers of retailers will be looking to emulate.

In the past, loyalty programs were often thought of as margin-reduction programs that gave sales promotions to the best customers and didn't generate measurable loyalty. But retailers as diverse as Best Buy, REI and Costco have perfected the approach and are producing very loyal shoppers. Today's technology is not your father's loyalty program. It is a combination of data warehousing, faster connections to the stores, upgraded POS, cross-channel integration and new applications made available to associates. It requires a lot of components coming together to achieve results and this is what we see happening today.

## STORE OPERATIONS

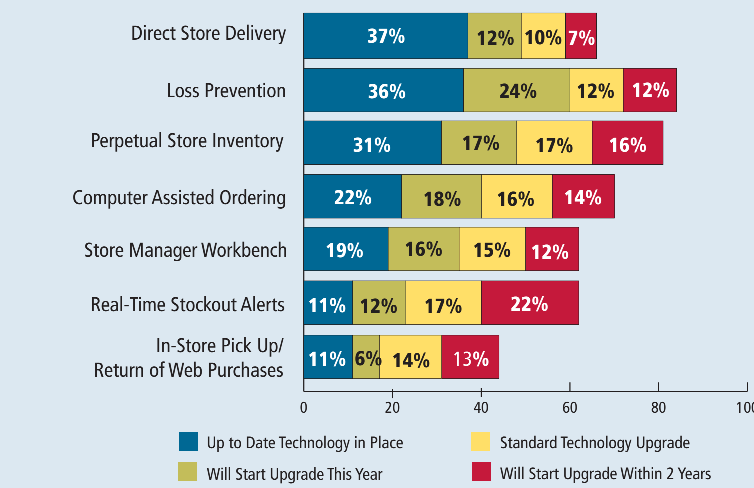
After covering many of the essential store operations in previous datapoints, we dive into some technologies that are important but not necessarily widespread across all retail verticals.

Direct store delivery is a good example of this. For grocers and convenience stores this is an essential, mature technology and it scores high for up-to-date technology in place (37%), although it is not a high-priority area for future investment.

Loss prevention, however, is a different matter. All retailers are concerned with shrink and any reduction in this area goes directly to the bottom line. As a result, every retailer has some kind of loss-prevention system in place. What this year's data shows is that new-generation software is being developed and retailers are adopting it based on the premise that it recoups its investment in a relatively short period of time.

Perpetual store inventory, computer assisted ordering and real-time stockout alerts all show solid future levels of interest, but they are difficult to achieve, and although benefits are potentially significant, they are likely to continue on a slow and steady adoption track.

**Loss Prevention a Major Focus of Store Operations**



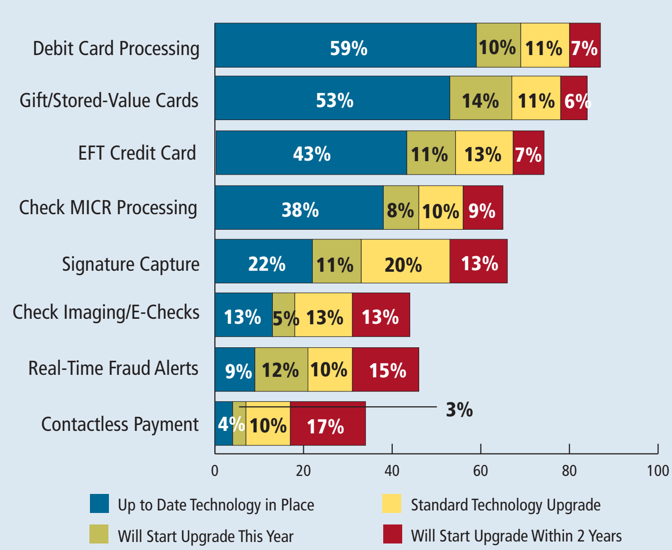

## PAYMENT PROCESSING

Ten years ago, debit cards were introduced to retailing and today they are a done deal, essentially fully rolled out to mainstream retailers. Gift and stored-value cards had an even faster adoption cycle once they reached the tipping point a couple of years ago.

Areas of strong future growth for payment processing technology include signature capture devices to reduce credit card fees taken by banks, check imaging and e-checks to convert paper into digital records and contactless payment (sometimes called proximity payment or radio frequency payment) technologies, which replace swipe cards. Although still in the early stages, this technology appears poised for strong growth,

Real-time fraud alerts show a significant up tick of interest as retailers recognize that fraud rings are inflicting heavy losses as they become more organized and sophisticated in targeting the retail industry. Retailers are showing increasing signs that they are ready to right back. ■

**Signature Capture and Contactless Payment on Growth Track**



# Centralization Leads to Optimization

## RETAILERS MOVE UP THE MATURITY LADDER IN WORKFORCE MANAGEMENT

Labor is a retailer's largest operating cost after inventory, and the variability of the store associate base compounded by double-digit churn makes it challenging for retailers to manage store labor budgets. Without access to tools that provide input and visibility into workforce budgets and forecasts, store managers cannot easily prioritize, monitor or manage their labor resources effectively.

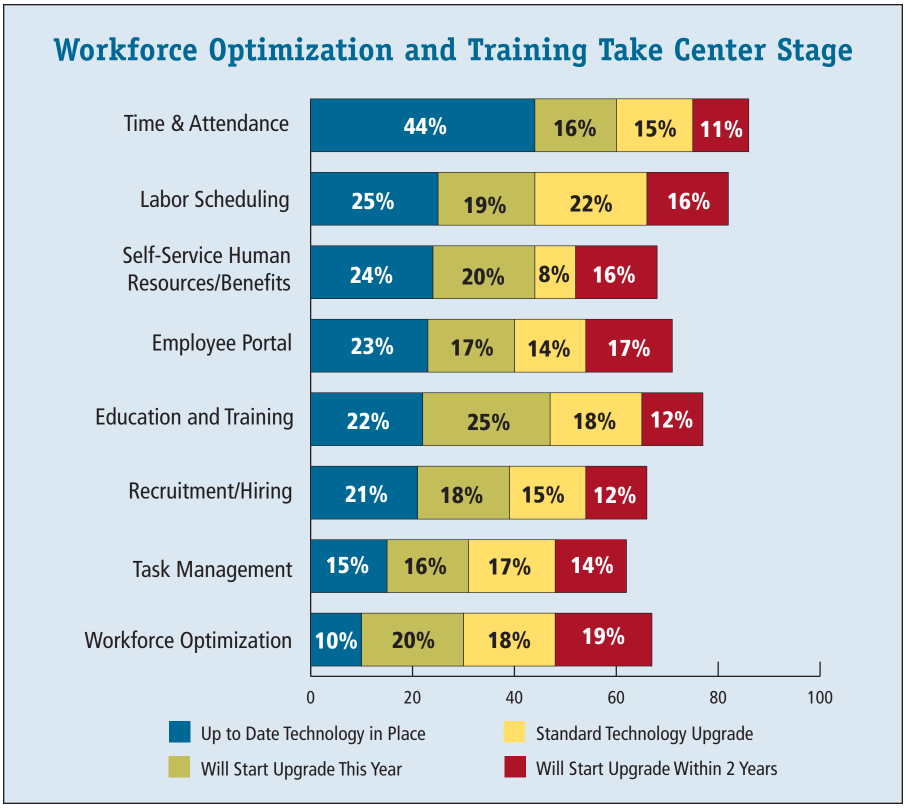
"Gartner research shows that 24% of large retailers still use paper-based schedules to staff stores, and 35% use spreadsheets to manage the process," says Gail Daikoku, research analyst with Gartner.

What's new is that retailers are beginning to allocate more of their IT budget to the store, including investments in next-generation, Web-based time and labor management solutions. Today's newer solutions centralize and standardize operational processes and enable optimization of budgets and forecasts for planning across multiple geographies and banners.

"The complexity of optimizing resources at store level to improve store execution has moved task management capability to the forefront of initiatives," says Daikoku. "Gartner knows of a few dozen large retailers who have committed resources to and are using task management applications across all stores to improve store execution of key projects."

### BREAKING OUT THE FINDINGS

Retailers are using workforce management technology to improve productivity of stores so they can focus on revenue growth by having the right staff available to support customers. While Tier 1 retailers are the furthest ahead in terms of having up-to-date technology or are in the midst of starting projects, the urgency and upside is not lost on Tier 2 retailers based on their intent to start projects.




Managing accurate time-keeping for a diverse workforce, which includes many roles, multiple departments and union constituencies, is especially critical for general merchandisers and grocers. Therefore it is no surprise that these two segments were the most penetrated in terms of having up-to date time-and-attendance technology in place (73% for general merchandisers and 57% for grocers), which in some cases includes upgrades to biometric time clocks to curb fraudulent or unauthorized punches. General merchandisers and grocers also are further along when it comes to having up to date scheduling technology in place (53% and 24% respectively), and many projects are planned or set to be started in the next two years for all segments.

"Store operations executives confirm that wages are the top factor contributing to employee churn," says Daikoku. "However, the next most important factor is store scheduling practices. This creates a counter-intuitive challenge for store managers, who are responsible for staffing their stores but also must create staffing schedules based on mandated business rules defined by corporate scheduling systems."

Retailers can clearly benefit from workforce optimization through the ability to deliver more accurate schedules, monitor store compliance to schedules and budgets and provide greater visibility across the company. However, workforce optimization is complicated and retailers in the midst of updating workforce technology are only at the beginning of their learning process. ■

# Retailing in Transition

## THE CROSS-CHANNEL ERA IS WELL UNDERWAY, BUT STILL IN ITS INFANCY

The Internet has opened up the world to everyone with a computer and a phone connection. This is good news for retailers because it gives them another channel to sell through, but it also means that product and pricing information is available to motivated shoppers with just a click of a mouse.

Despite record e-commerce sales in 2006, online retailing is still a small part of overall retail revenue, but it is growing by about 25% a year and shows no sign of slowing down. It is a true growth market to tap into with several big winners already registering multi-billion dollar sales (Staples, Office Depot, OfficeMax and Sears among them) and retailers who are not yet capturing their share risk losing a huge opportunity.

The problem for many brick-and-mortar merchants getting into effective cyber sales is they often compete with pure-play online retailers who don't carry the overhead costs associated with physical stores and staff. The differing cost structures produce a hurdle that traditional retailers have difficulty overcoming, which is that pure-play retailers typically allocate twice as much for IT as their brick-and-mortar counterparts.

This means the price of entry for late arrivers is rising each year and the fast-changing technology that engages shoppers interactively, such as product recommendations, live chat, deadly accurate searches, one-to-one personalization and social communities, is like a moving target that keeps receding over the horizon.

### FOLLOW THE MONEY

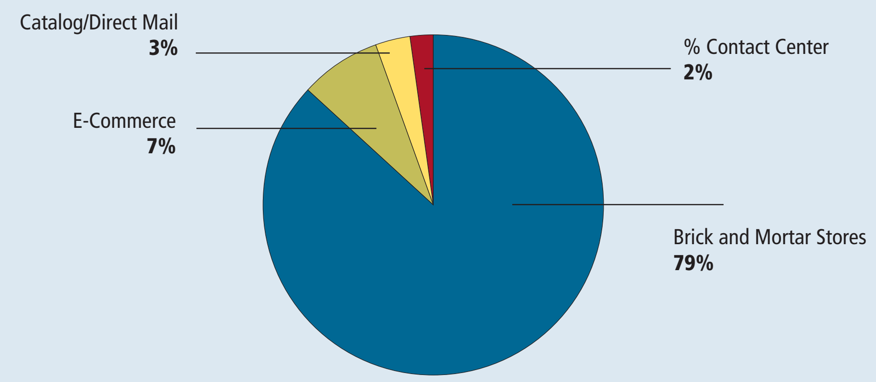
Not surprisingly for a study that has been polling retailers for 17 years, respondents in our survey say they get 79% of their revenue from brick-and-mortar stores and just 12% from all other channels. This is the first time we inserted this question into the study and it will be interesting to track this datapoint over time.

Although online revenue shows up at just 7% this still represents a significant chunk of change to our respondents, a third of which have revenue greater than $1 billion. As online revenues continue to grow budget dollars will increasingly follow.

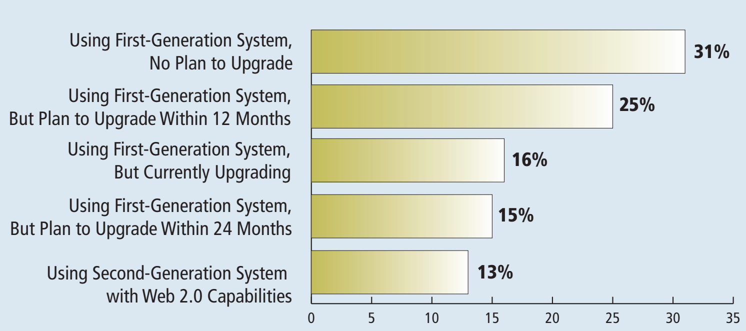
Evidence of this can already be found in the high percentage of retailers that are planning to upgrade their e-commerce platforms from first-generation systems that provide little more than facilitating basic purchasing functions for shoppers and offering simple online management and reporting tools for retailers.

A quarter of respondents are planning to upgrade their e-commerce platforms in the next 12 months and another 15% plan to do it within two years. This is a high rate of replacement planning for any technology category,

**Revenue Across Sales Channels**




**Status of E-Commerce Software Platform**



and even if the numbers are a bit optimistic they still represent a high level of investment interest.

### ADDING NEW FUNCTIONALITIES

The reason retailers want to upgrade their e-commerce platforms is to help lay the groundwork for integrating Web sites with stores and creating a consistent customer experience. Leading the list of priorities in this area are inventory management, which is critical if you are going to meet customer expectations about product delivery, and price management, which is a basic building block of online merchandising.

However, the cross-channel integration functions to watch for future growth are actually at the bottom of the chart, which is where we frequently see emerging trends. Promotions management, an increasingly sophisticated online tool for merchants, and returns management, which is the flip side of online purchasing with in-store pick up, will definitely move up the list as cross-channel integration matures.

Web 2.0 is a buzz word that describes a greater degree of customer engagement and interactivity than Web sites have previously had. It's not as much of a revolution as the name implies. More accurately it describes the natural evolution of the Web into next-generation technologies, especially in such areas as logical search and navigation, recommendations based on best sellers or previous purchases, product comparisons and reviews, live chat and social communities.

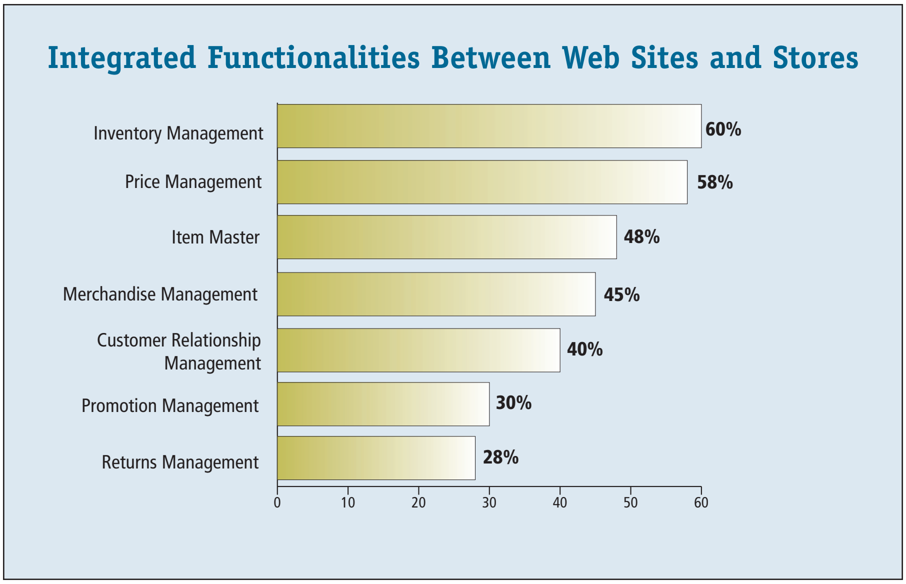
### THE INTERACTIVE CUSTOMER

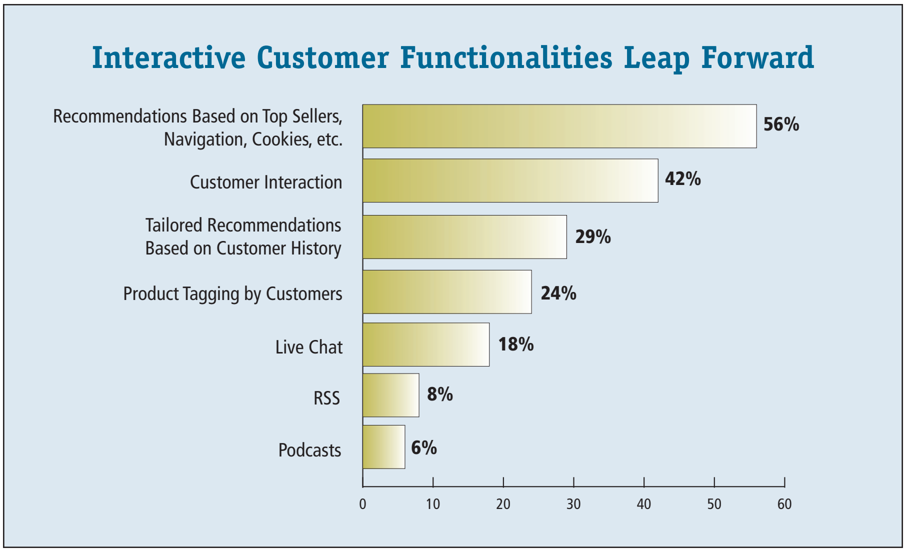
Leading the retail wish list for 2007 and beyond in the area of interactive customer functionalities are recommendations based on top sellers, navigation patterns, cookies and other immediate input. Looking forward, retailers see this area as the one that has the most promise for improving online sales, because it focuses on a specific shopper at a specific point in time.

Increasing customer interaction, a hallmark of the Web 2.0 concept, also shows strong levels of interest by respondents. Creating communities on Web sites has always been recognized as a good way to increase stickiness and build loyalty. However, the free-for-all nature of customer postings has also been viewed as a management challenge. Today, that is changing. Retailers now have come to realize that potential positives far outweigh negatives in building online communities, and as a result they are renewing efforts to engage these visitors/shoppers as never before.

Tailored recommendations based on customer history, a function perfected by Amazon and Netflix, also shows a strong level of interest by retailers. As with other technologies on this list, accomplishing this to the level established by Amazon and others requires sophisticated back-end systems that most retailers either do not have or do not have ready for cross-channel integration.

Overall, the data in this section points to a picture of an industry in transition — attempting to change the tires while going 100 mph. But the stakes are high, the profit potential large and the future at risk. The cross-channel era is well underway in retailing, but it is still in its infancy. Buckle up, because it's going to be a thrilling ride. ■



# Precision Converges with Decision

## FOCUS ON POINT SOLUTIONS CREATES COMPLACENCY AND RISKS FALLING BEHIND

In a perfect world, retailers should have a clear path to developing an advanced, seamlessly integrated suite of applications for forecasting, purchasing, merchandising, supply chain and sales to make their organizations run as precisely as well oiled clocks. This could be done through pre-packaged suites or best-of-breed aggregations. But the truth is a comprehensive solution like this, which is analogous to ERP technology in manufacturing, is not yet available in retailing.

The most mature parts of the merchandising set of applications are Inventory Management and Item Management, so we see a significant amount of respondents who either have this technology in place or are planning upgrades.

But assortment planning is a much more complex task, and the software is still undergoing development. As it develops, we see a great deal of retailer interest in 2007 and the next two years.

Two other insights jump out from this year's merchandising findings. The first is that Pricing/Revenue Optimization is definitely beginning to win over the hearts and minds of mainstream retailers.

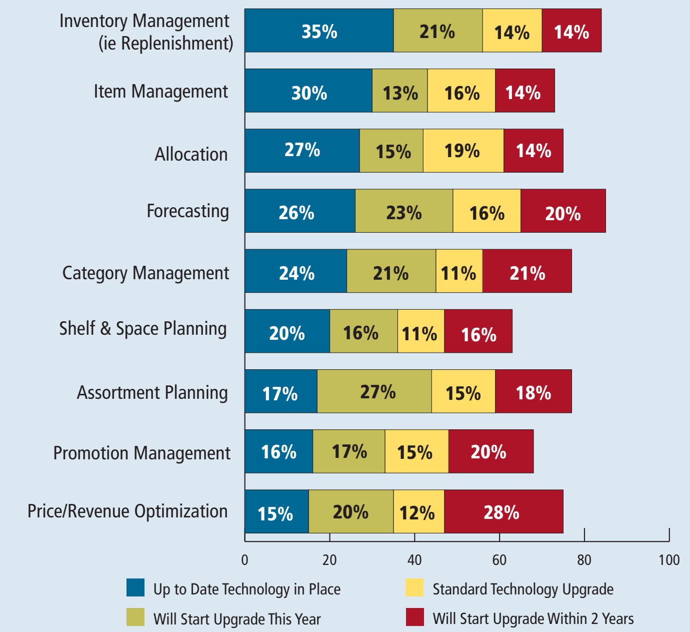
The second insight comes from the surprising number of retailers who say their Forecasting systems are up-to-date (26%). "We know this is not the case," says Andrew White, research vice president for Gartner. "This indicates that too many retailers are complacent and believe their systems are good enough."

In the supply chain area, traditionally one of the largest spend areas in the IT budget, Warehouse Management and Order Management are mature technologies and up-to-date systems show deep penetration among respondents.

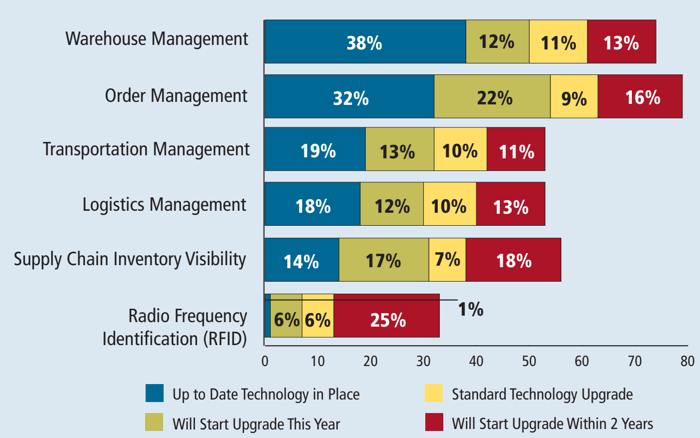
But again, White believes this approach is not focused on building an end-to-end system. "There are still gaps that need to be connected and no evidence there is a single-view strategy," says White.

Two years ago RFID was hyped as the technology that will transform retailing and this year some are calling it a failure. There is still enormous potential in using RFID and it is steadily, if slowly, moving along a normal development vector for a disruptive technology. ■

### Assortment Planning and Inventory Management Are Top Concerns




### Widespread Adoption of RFID Approaches Slowly



# High Bandwidth Is the New Norm

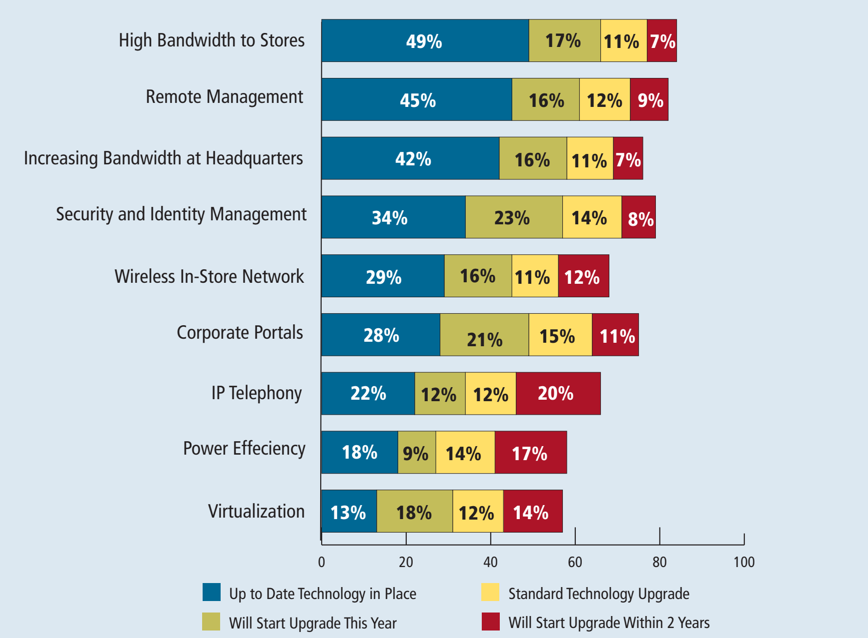
## THE NEXT PHASE IS TO CAPITALIZE ON PREVIOUS INFRASTRUCTURE INVESTMENTS

High Bandwidth to Stores was considered too costly for most CFOs to justify as recently as five years ago, but it is now a standard tool in retailing – with 49% of retailers saying they are up-to-date and another 17% in the process of upgrading.

Nearly identical numbers for Increasing Bandwidth at Headquarters (42% with up-to-date technology in place and another 16% in the process of upgrading) indicate that fat pipes are now the norm in retailing, allowing faster movement of data and richer applications. It also means that retailer infrastructure investment may be approaching a maturity plateau where CIOs can begin to capitalize on previous investments.

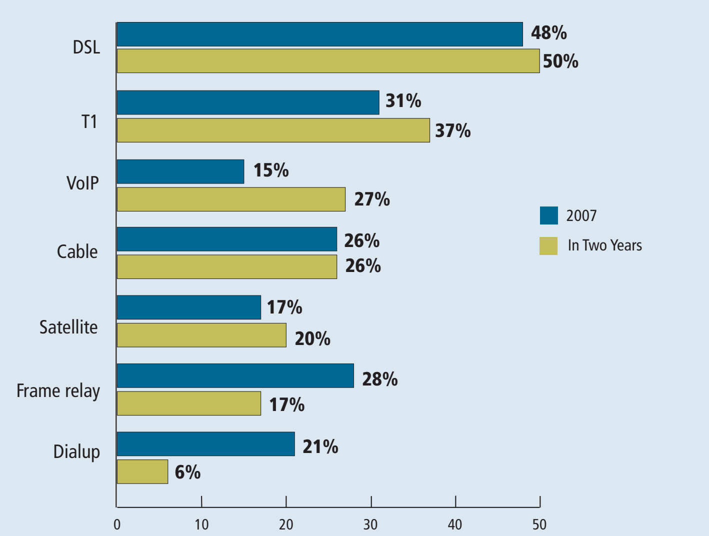
One area that can benefit from this new phase is Remote Management of IT systems. Every store is remotely managed to a degree today, but with upgraded infrastructure CIOs can layer on new functionalities to centralize IT management and help drive down maintenance costs.

### Networks Embrace Virtualization and Power Efficiency




A similar path is developing with Virtualization, a new technology we have only been tracking for two years. With retail IT budgets squeezed tightly there is little room left to spend on innovation. Virtualization, represents a huge opportunity for retailers to drive down infrastructure costs.

### VoIP the Leading Contender Among Connectivity Options




The clearest trend in the findings for connectivity options is that retailers are in a multiple choice world. Dial-up is dropping off the chart as the primary connectivity option, but it can be useful as a back-up system. There is strong interest in DSL, but also steady plans going forward for T1 lines, Cable and Satellite. Frame Relay shows a drop-off through 2009, but it is not as dramatic as Dial-up.

The big winner again this year is VoIP, which appears poised to nearly double it's penetration in the retail vertical in the next two years. The big surprise is that the percentage (27%) isn't higher. ■

# No Clear-Cut Path for Analytics & CRM

## CUSTOMER INTELLIGENCE IS STILL AN AREA OF EMERGING CAPABILITIES

Aside from the financial and government sectors, no industry is more data intensive than retailing. Investment in databases, data warehouses and infrastructure are on the rise and will continue to rise as data usage and storage continue to double every 18 months.

But there is a disconnect between collecting data and actually putting it to use. Today, in many organizations, data is scattered across the enterprise or stuck in silos. Master data is not standardized and analytical tools have a difficult time aggregating data into a report.

Although several previous survey points (covered in the Executive Summary on pages 4 and 6) show that retailers increasingly recognize lack of analytical tools as an obstacle and that upgrading data warehouse/data storage systems is a leading technology initiative for 2007, the fact is that on the business intelligence (BI) side there is no clear-cut roadmap.

Business Intelligence is still an area of emerging capabilities, so retailers are using the full menu of BI options — Spreadsheets, Legacy Database Reporting Tools, Internally Built BI Dashboards/Workbenches and Package BI Dashboards/Workbenches. The latter two are areas of future growth and since there is no clear cut winner between them it indicates that a hybrid approach may be favored by retailers, who are still very comfortable cobbling together best of breed solutions or writing their own applications.

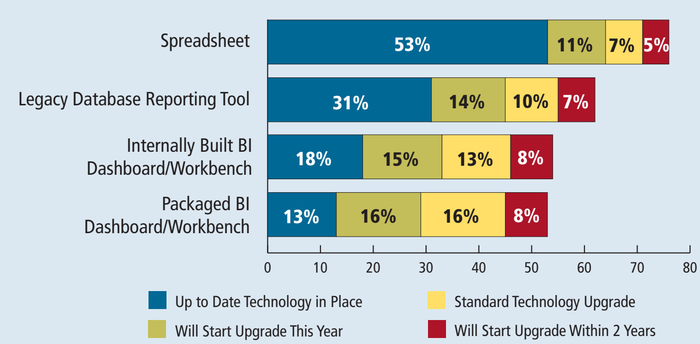
As retailers move to get closer to customers, they get closer to demand so they can make better and faster decisions. Best Buy is the poster child for this approach by first launching an incredibly successful loyalty program and then mining the data to gain customer insight that leads to highly targeted product and promotional decisions. Chico's, which generates 90% of its sales from its loyalty card customers, is another success story in this area.

But most retailers still have a long way to go to match these successful CRM programs, and many will probably not get there because they aren't good candidates for loyalty programs or they do a significant amount of cash business.

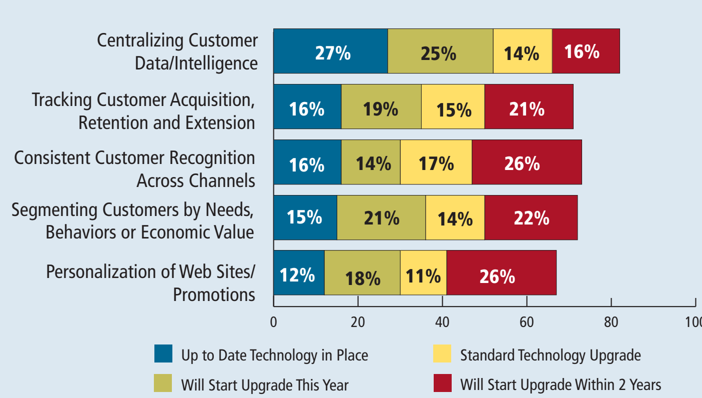
As a result, several CRM categories don't show a trend toward multi-year investment growth, such as Tracking Customer Acquisition, Retention and Extension, and Segmenting Customers by Needs Behaviors and Economic Value. In large part, these are complex, never-ending endeavors and no silver bullet is going to provide the perfect answer for retailers.

And yet identifying top customers and tailoring products and promotions to them to increase frequency, recency and market basket size is what successful retailing is all about. Know thy customer is the first rule of retailing. ■

### Growth Ahead for BI Dashboards




### Centralized Customer Data a Top Priority



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