



*Improving Retailer
Responsiveness with Real-time
Business Intelligence*

Benchmark Report: 2008-2009

Sponsored by:



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EXECUTIVE SUMMARY

The potential of real-time or near-real-time business intelligence is enormous, but retailers have a long way to go in realizing that potential. They finally understand that process is important and are moving from a “whatever it takes” mode to something more engineered: process driven by actionable information. Further, closing the loop between operational systems and BI is important because the “lag time to action” is getting shorter all the time.

BUSINESS CHALLENGES

Most retailers agree that identifying “best” customers in order to offer incentives, and giving store managers better information to run their stores top the list of Business Challenges driving interest in Real-time BI. Beyond these, significant differences emerge between laggards and others. Specifically, under-performing retailers are much more concerned than others about merchants getting information fast enough to catch trends. Laggards also express much greater concern that they are missing sales because of persistent out-of-stocks. Retail winners on the other hand are more concerned about responding more quickly to conditions in the selling environment.

OPPORTUNITIES

Retailers are new to the concept of “disciplined process”, so their understanding of what can and can’t be accomplished in near-real-time seems to be skewed overall. They believe “What-if capabilities to improve assortment and price planning” is their biggest opportunity. Unfortunately, these what-if capabilities have little to do with real-time responsiveness. Similarly, they tend to understate the value of real-time BI to the most real-time of channels – eCommerce. Retailers selling basic, year-round merchandise make the best case for driving improvements in the store. While they cannot make changes in true “real time”, they can significantly reduce their lag time to action” through the use of these technology tools.

ORGANIZATIONAL INHIBITORS

While we typically find ROI, cultural resistance to change, and tangled, difficult to change infrastructures the biggest internal issues retailers face, Real-time BI poses very different, more basic challenges. Now-ubiquitous persistent connections between headquarters and remote locations are irrelevant because back-end systems do not process data in anything close to real-time. Of course, those other, more common issues do crop up in Real-time BI as well, but RSR believes ROI won’t be achieved until change is effected in back office systems.

TECHNOLOGY ENABLERS

Not surprisingly, given our observation of batch-oriented updates, Retailers believe continuous data feeds into operational data feeds are the most important technology enablers for real-time BI. However, the question of user interfaces continues to raise its head. Technology users cleave to that which is most familiar – and in this case, e-mail, spreadsheets and Instant Messaging are the users’ tools of choice. The message is clear – the best analysis tool in the world will not be used if it’s not familiar...even if it seems less complex to a casual observer.

BOOTSTRAP RECOMMENDATIONS

The first and most important step to closing the loop between enterprise business intelligence capabilities and operational systems is to *collect transactional data as it happens*, not at the end of the day. Winners see Real-time BI as an opportunity to react more quickly to changing conditions as they occur, not after-the-fact. To realize that promise, it is important to develop a roadmap that prioritizes opportunities for infusing actionable information that drives value into processes. Gain an understanding on a *per-process basis* of the “lag time to action” (the time between knowing something and being able to do something about it), what the *right* actionable information is, when it is needed, and where it’s needed. Don’t forget the E-channel. Retailers should take advantage of the highly interactive nature of the online channel to understand what works for consumers... and *then* translate that value to the store environment. But remember that today’s cross-channel consumer expects consistency across all the channels. Avoid more “spaghetti code”. Retail winners understand that in order to “close the loop” between their BI capabilities and operational systems, they need integration middleware technologies to pass actionable information to destination processes. Experiment with human interfaces...but be careful to minimize the impact of choosing any one interface on the overall delivery architecture. Real-time BI is also important for real-time actionable information to be available to the IT Department, so that it can improve its responsiveness and ensure the level of services required by the business.

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SECTION I: OVERVIEW

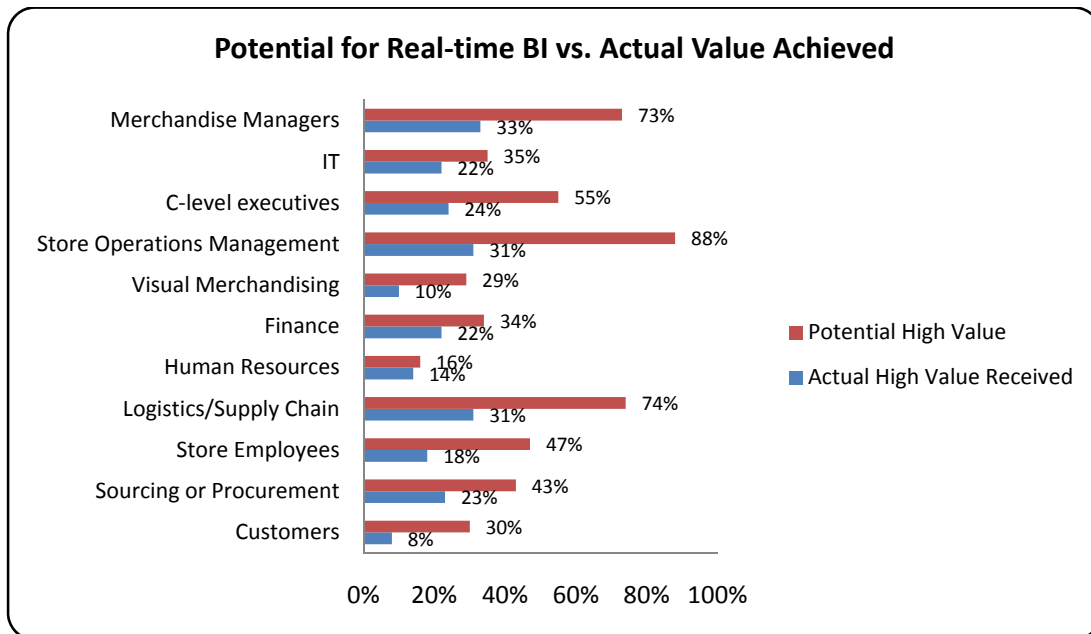
WHY THE STUDY WAS CONDUCTED

Traditionally, retailers have thought about their sales across three dimensions: product, location and time. In 2007, RSR surveyed retailers¹ to understand how they use the FOURTH dimension of sales, customer data. We found Retail Winners uncovering tremendous value using that Customer dimension to identify and understand their best customers, how to promote products to those customers, and even where to open new stores. The use of customer data has become thematic across all our research over the ensuing year.

Similarly, across time, retailers have traditionally looked at sales in seasons, months and days. Of course, the past decade has changed all that. The internet and the advent of broadband connectivity introduced the notion of “real-time” and “near-real-time”.

This year, we decided to look at the conversion of operational transaction data into actionable insights in real-time or near-real time. We believe that these insights are critical to driving success. Retailers finally understand that PROCESS is important and are moving from a “whatever it takes” mode to something more engineered: process driven by ACTIONABLE INFORMATION. Further, CLOSING THE LOOP between operational systems and BI is important because the “lag time to action” is getting shorter all the time. As it turns out, our retail respondents agree. They believe the potential of real-time or near-real-time business intelligence is enormous, but recognize they have a long way to go in realizing that potential. This is evident in Figure 1.

*Figure 1:
Real-time Business Intelligence: Promise Yet to be Fulfilled*



Source: RSR Research, September 2008

¹The Next Generation of Business Intelligence: Driving Customer Insights across the Retail Enterprise Benchmark Study: July 2007, Brian Kilcourse & Paula Rosenblum, © 2007 RSR Research LLC

This unfulfilled promise seems to result from several factors. Most specifically, retailers have been delivering real-time BI the longest to departments and people who, for the most part, have the least impact on driving sales or who are least able to effect change in real-time or even near real-time.

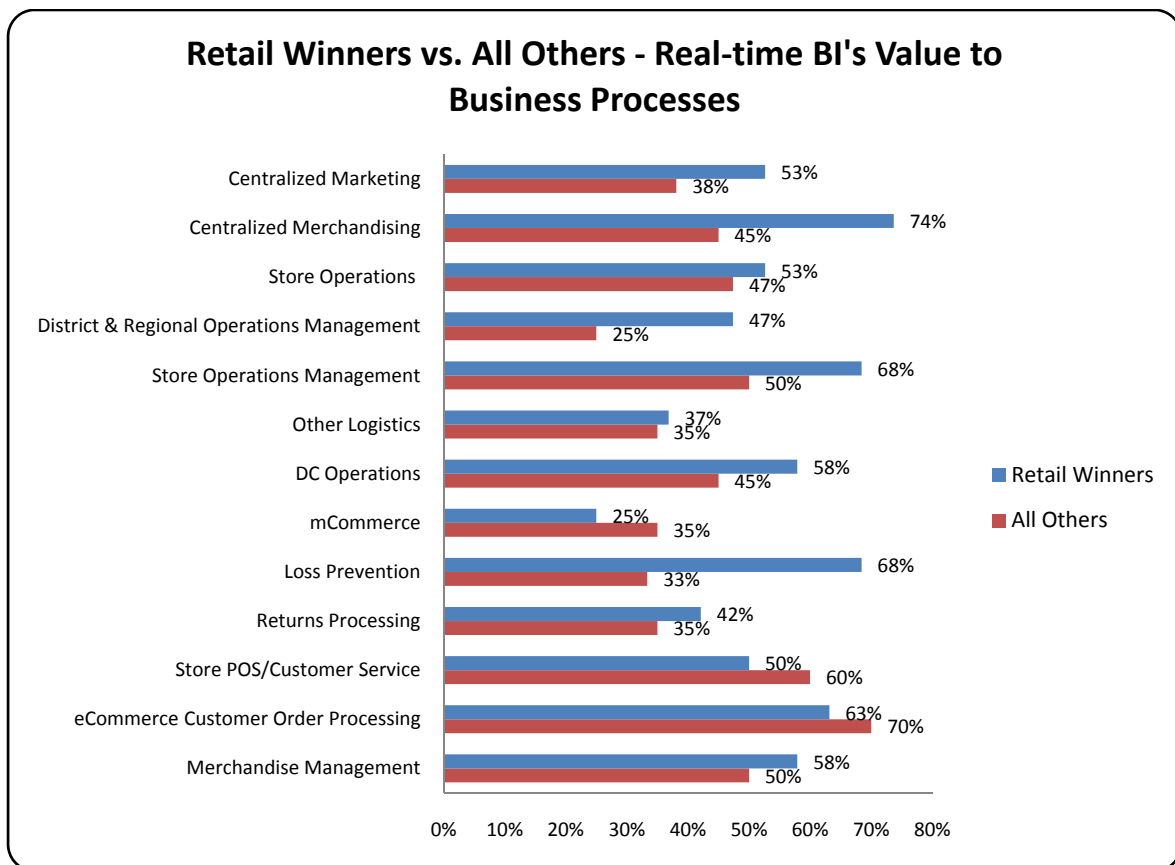
For example, while 47% of retailers have been delivering real-time BI to financial executives for longer than one year, only 12% of all respondents (and a paltry 6% of tier 1 retailer respondents) believe they have achieved high value from those initiatives.

Today’s Retailers are far more clear – they see their biggest opportunities for success lie in delivering near-real-time BI to merchants, store operations and supply chain/logistics managers.

RETAIL WINNERS SEE POTENTIAL TO IMPROVE BUSINESS PROCESSES

We asked our retail respondents to look at Real-time BI from a business process perspective. Retail Winners take a much more pragmatic approach to high-value business process improvements. Figure 2 is illustrative of this pragmatism. The best use of BI is to change processes in-flight, not after the fact.

*Figure 2:
Winners’ Secret Sauce: Infusing Business Processes with Real-time BI*



Source: RSR Research, September 2008

While it’s useful to provide overarching dashboards and metrics to C-level executives seeking to get their arms around their far-flung enterprises, Retail Winners see the most value in delivering TRULY actionable information – to the “front-lines”.

METHODOLOGY

RSR uses its own model, called the “BOOT,” to analyze Retail Industry issues. We build this model with our survey instruments. [Appendix A](#) contains a full explanation of the methodology.

In our surveys, we continue to find differences in the thought processes, actions, and decisions made by retailers who outperform their competitors and the industry at large. The BOOT model helps us better understand the behavioral and technological differences that drive sustainable sales improvements and successful execution of brand vision.

DEFINING RETAIL WINNERS AND WHY THEY WIN

We’ve already introduced the concept of Retail Winners in this report. Our definition of these Winners is straightforward. We choose to follow Wall Street. Wall Street judges retailers by year-over-year comparable store sales improvements, and we do the same. Assuming industry average comparable store sales growth of three percent, we define retailers with sales above this hurdle as “Winners,” those at this sales growth rate as “average,” and those below this sales growth rate as “laggards” or “also-rans.” It is consistent throughout much of RSR’s research findings that **Winners don’t merely do the same things better, they tend to do different things**. They think differently. They plan differently. They respond differently. In this report, we’ll be illustrating that they also respond FASTER.

SURVEY RESPONDENT CHARACTERISTICS

RSR conducted an online survey from July-August 2008 and received answers from 64 respondents. Respondent demographics are as follows:

- **Job Title:**

Senior Management (CEO, CFO, COO)	13%
Vice President	10%
Director/Manager	59%
Internal Consultant & Other Staff	18%

- **2007 Revenue (\$ Equivalent):**

\$50 Million or less	19%
\$51 - \$999 Million	36%
Over \$1 Billion	46%

- **Locations (Headquarters vs. Retail Presence):**

<u>Region</u>	<u>HQ</u>	<u>Stores</u>
United States	41%	47%
Canada	15%	32%
Europe	18%	37%
United Kingdom	18%	32%
Asia Pacific	5%	21%
Middle East	3%	16%
Latin America	0%	3%

- **Segments:**

Fast Moving Consumer Goods (FMCG)	19%
General Merchandise and Apparel (GMA)	70%
Hardware/Do-it-Yourself	8%

Food & Hospitality

3%

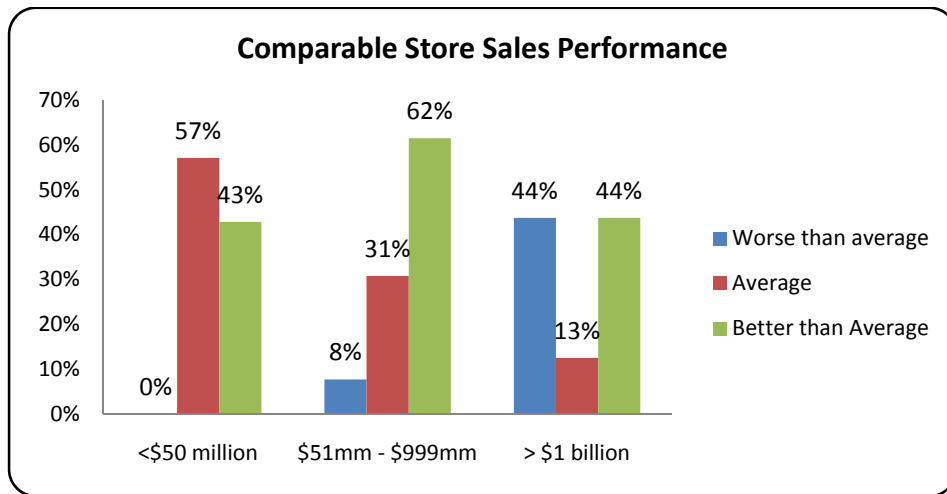
- **Year-Over-Year Comparable Store Sales Growth Rates (assume average growth of 3%):**

Worse than Average	20%
Average	32%
Better than Average (Retail Winners)	48%

PERFORMANCE: THE MID-MARKET CONTINUES TO OUTPERFORM

In an uncertain economy, with seemingly record numbers of bankruptcies, we wanted to understand where comparable store sales growth comes from. It's interesting to find the small and mid-sized retailer continuing to outperform (Figure 3)

*Figure 3:
SMB Outperforms*



Source: RSR Research, September 2008

Notwithstanding some conflicting data in some of our surveys over the past six months, **in general our respondents report the retail industry is healthy.** Those retailers who demonstrate both value and a focus on their customers continue to outperform.

While the largest retailers may not be reporting comparable store sales improvements, they do continue to report respectable earnings per share, and admirable inventory management and control. Wall Street looks quite carefully at inventory growth/square foot vs. sales growth/square foot, and overall seems satisfied. Of course, sooner or later revenue growth must return, but in the meanwhile, we continue to see far less fear and dread than that reported in the mass or even B-to-B media.

In today's economy, we expect real-time BI to provide support for expense control at the same time it provides customer-responsiveness.

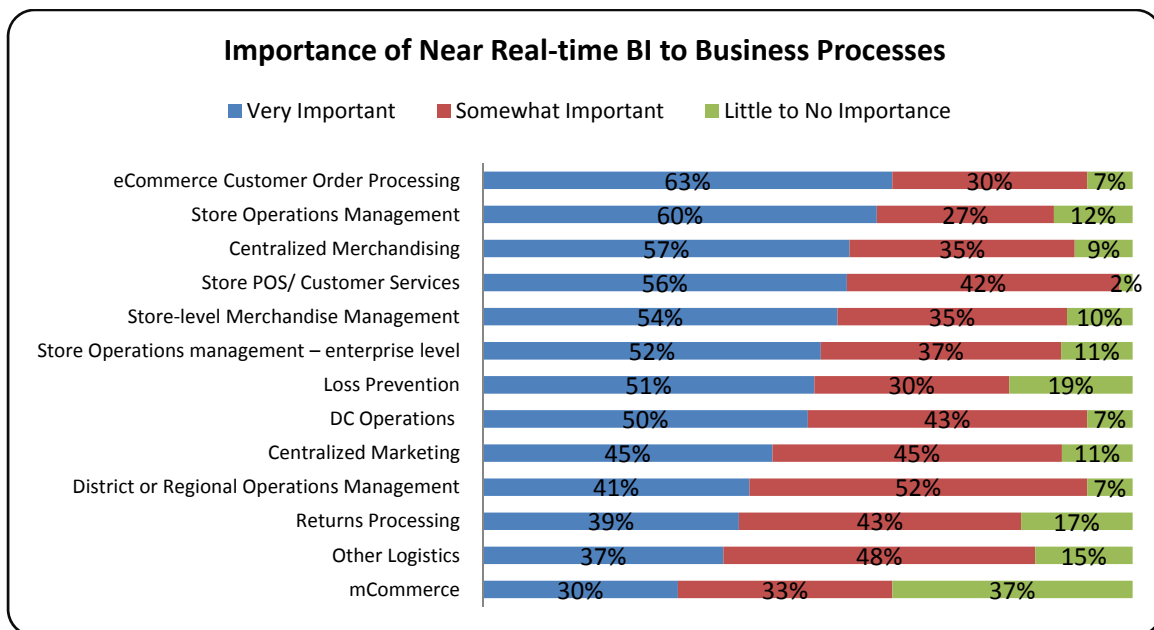
SECTION II: BUSINESS CHALLENGES

A RETAIL PARADOX: HOW TO BE MORE RESPONSIVE WITHOUT DRIVING UP COSTS

Over the past two years, RSR’s studies have consistently shown retailers everywhere striving to react far more quickly to changes in consumer demand. This affects both the “sell” (customer-facing) side of the business and the “buy” (supply chain) side. At the same time, retailers have little interest in spending more than they do now on either labor or inventory; they focus instead on finding ways to improve the productivity of both their inventory investment and their human capital. For example, in RSR’s recent study, *The Customer Centric Store – Benchmark 2008* retailers’ “number one cited business challenge is ‘improving customer service while holding the line on payroll costs’ and number two is its corollary ‘need for more consistent store execution’.”² In another recent RSR study, *The New Customer-Centric Retail Supply Chain - Benchmark Report 2008*, respondents indicated the two greatest supply chain execution challenges they face are first, “the age old conflict between planning and execution: ‘the forecast never matches demand – leaving us to scramble in execution’”, and secondly, “the need to provide more localized assortment reduces supply chain efficiency”.³

To address these challenges, retailers need *actionable information* at the operational level to ensure they make informed decisions at the appropriate time. They feel this need most keenly in the online channel, for obvious reasons. Nearly all retailers responding to our survey indicated that near real-time information is important for effective eCommerce customer order processing (Figure 4).

*Figure 4:
The Case for Actionable Information: Responsiveness to Conditions as They Change*



Source: RSR Research, September 2008

² *The Customer-Centric Store- Benchmark Report: 2008*, Paula Rosenblum, p.5, © RSR Research LLC.

³ *The New Customer-Centric Retail Supply Chain- Benchmark Report 2008*, Nikki Baird, p.4, © RSR Research LLC.

However, the need doesn't stop there - rather, it begins there. Retailers have come to understand that today's cross-channel shopper expects continuity and consistency across all facets of the total offering. Today's shoppers don't want to view the store as different than the online channel or the catalog call center; retailers either provide solutions or they lose customers. Retail winners understand this. In RSR's study ***Finding the Integrated Multi-Channel Retailer- Benchmark Study 2008***, we saw that "winners are more focused than ever on winning customer loyalty by delivering a seamless customer experience ... across all channels."⁴

Respondents to this study underline that focus. In addition to eCommerce customer order processing, important business processes to benefit from real time BI include Store Operations Management, Centralized Merchandising, and Store POS/Customer Services – all addressing the customer satisfaction challenge in the new cross-channel age of retailing.

That having been said, Retail Winners place much more emphasis on the value of real-time business intelligence to achieve operational excellence in Centralized Merchandising, Store Operations Management, and DC Operations (Figure 2). As we've seen in other research, winners maintain a relentless yet pragmatic customer-centric focus, understanding that the path to success is based on getting right product to the right customer at the right time and at the right price. Winners also understand the value of real-time BI to maximize their loss prevention efforts, with its potential to alert Operational managers to problems as they are happening, and not after-the-fact.

MISSING TRENDS, OR NOT REACTING TO THEM QUICKLY ENOUGH?

We asked retailers to identify business challenges that are driving their interest in real-time business intelligence capabilities. Most retailers agree that identifying "best" customers in order to offer incentives, and giving store managers better information to run their stores top the list. Beyond these, significant differences emerge between laggards and others. Specifically, **under-performing retailers are much more concerned than others about merchants getting information fast enough to catch trends**. Sixty-two percent of laggards indicate this as a top-three business challenge, compared to 37% of winners and 46% of average performers (Figure 5). **Laggards also express much greater concern that they are missing sales because of persistent out-of-stocks**.

Retail winners on the other hand are more concerned about responding more quickly to conditions in the selling environment, and not nearly as much about seeing trend shifts in the first place. Winners view rapid replenishment capabilities as top-three business challenges (both from the perspective of replenishing the sales floor more quickly to win sales and from the perspective of getting merchandise to the stores faster). This finding unambiguously points out that **Winners are already far ahead in leveraging BI to their advantage for merchandise planning**, but also understand that informed planning isn't enough – execution is just as important. This echoes the finding mentioned earlier from *The New Customer-Centric Retail Supply Chain - Benchmark Report 2008*. For winners, a "real time" response to sudden changes in the selling environment is the next important step towards a more agile company, and that is driving their interest in real-time BI.

⁴ ***Finding the Integrated Multi-Channel Retailer- Benchmark Study 2008***, Brian Kilcourse, p.7, © RSR Research LLC.

Figure 5:
Laggards Worry About Missing Trends



Source: RSR Research, September 2008

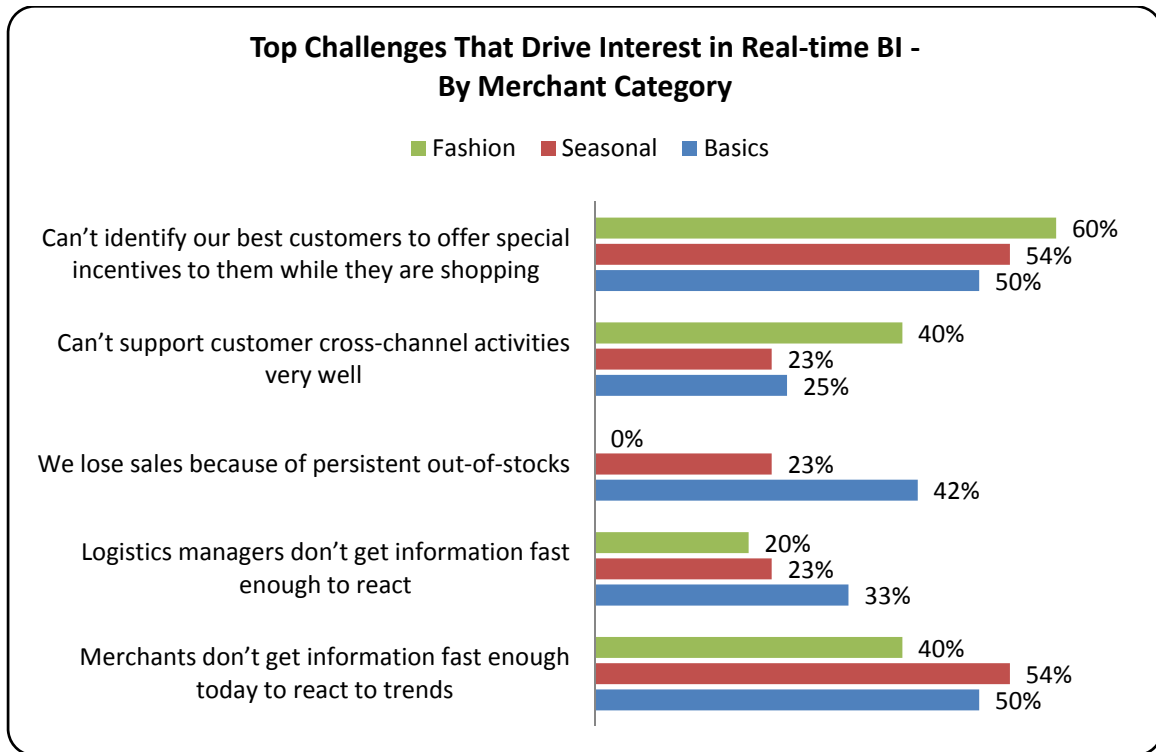
Our respondents generally feel that the brick-and-mortar channel has the most to *gain* from an infusion of real-time actionable information into operational processes (60%). Over two-thirds of winners feel strongly about this (68%), although ½ of laggards are not so sure. As we'll see later in this report, retailers generally undervalue real-time BI enablement of the on-line channel. **Although it is understandable that retailers want to focus their attention on the primary (store) channel, it cannot be emphasized enough that consumers are increasingly cross-channel shoppers, and functional dissimilarity between the channels jeopardizes their loyalty.**

“BASICS” RETAILERS SEE THE GREATEST CHALLENGE IN THE STORE

To learn how prevalent the interest in real-time BI is across the retail industry, we took a look at how different merchant categories (basics, seasonal, fashion) view business challenges that potentially could benefit from the infusion of near real-time actionable information into operational processes. We learned that retailers who sell basic every-day items, with their fast and continuous flow of merchandise through the DC's to the stores, express the greatest concern about losing sales by not reacting quickly enough to out-of-stock conditions (Figure 6). For this reason, 75% of these retailers rate the brick-and-mortar channel as the one with the most to gain from real-time actionable information. Like retail winners generally, “basics” retailers express concern about lack of responsiveness by logistics managers, but unlike winners, ½ of these retailers are also worried that their merchants can't react quickly enough

to changes in trends. Seasonal and fashion retailers also believe that their merchants don't get information fast enough to react quickly to trends, but this doesn't translate into an out-of-stock concern; indeed, just the opposite might be true (too much inventory).

*Figure 6:
Value of Real-Time Depends on How Fast Decisions are Made*



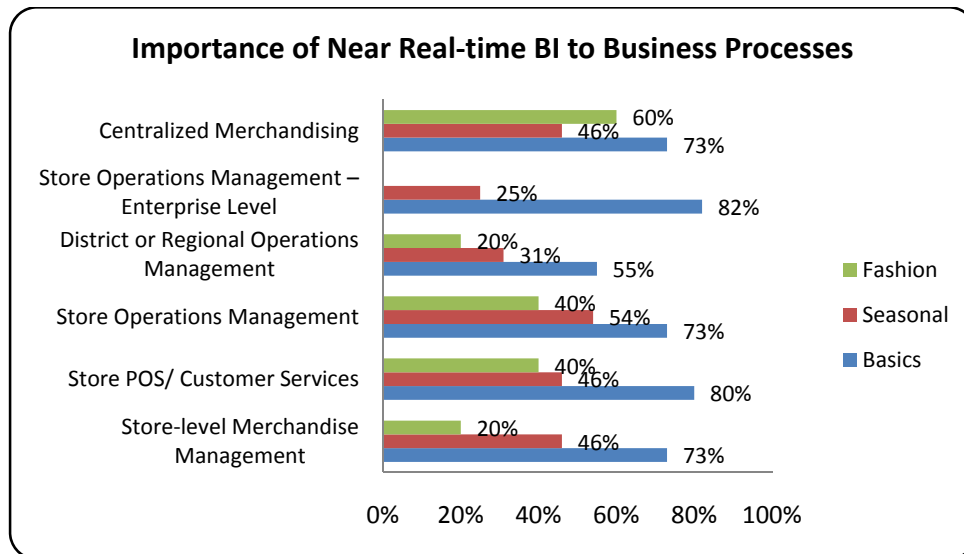
Source: RSR Research, September 2008

Fashion retailers are more concerned than others that they struggle to identify their “best” customers and can't support cross-channel activities very well. Sixty percent of these retailers are concerned about the need to identify their best customers in order to offer them incentives, compared to 42% of overall respondents. And while only 25% of all respondents express concern about being able to support cross-channel activity, 40% of fashion retailers indicate that this concern is driving interest in real-time BI.

WHAT IS “REAL-TIME”? IT DEPENDS ON “LAG TIME TO ACTION”

As we saw earlier, 75% of retailers who sell basic everyday items rate the brick-and-mortar channel as the one with the most to gain from real-time actionable information. So it is no surprise that real-time BI makes the biggest impact to business processes in the store – often by a wide margin compared to fashion and seasonal retailers. According to our survey respondents, Store Operations Management both at the enterprise and store levels have much to gain from the infusion of real-time actionable information into operational processes (Figure 7). Likewise POS/Customer Services and Store Level Merchandise Management processes rate very highly as potential beneficiaries of real-time BI for these respondents, compared to either Seasonal or Fashion retailers.

Figure 7:
For Those Selling Basics, the Store Has the Most to Gain



Source: RSR Research, September 2008

These data points bring us to one of the most interesting discussion points on the value of “real-time BI” for retailers. The notion of “real-time BI” centers on closing the loop between a company’s transactional systems and its data analysis capabilities. Traditionally, transactional data has been collected, aggregated, and “consumed” by corporate-level data analysis systems, but it has taken a human (for example, a merchandise planner) to act on the information. In comparison, Real-time BI systems consume transactional data as it is created. They compare this data to “intelligence” derived from the analysis of similar transactions to generate an *actionable* message to an operational process— for example, an alert to store personal at the POS register about a special offer to a customer based on *statistical propensity to buy* or *loyalty scoring*. For such alerts, “real-time” literally means “now” – within seconds. But what about an alert to a merchant about an unexpectedly high volume of sales of an item that could result in an out-of-stock condition – how fast is “real time” then?

The answer to this question is “it depends”, framed by *lag time to action*, i.e. the time between knowing something and being able to act on the information, depending on the process. Obviously, in the case of a personalized customer incentive based on what is in the market basket “now”, the lag time to action is very brief – either the offer is made “now” or the opportunity is missed. In the case of an unusually high number of price overrides at a checkout stand, an alert to the store manager or Loss Prevention agent may not need to be immediate, just “soon” – the lag time to action is probably one day or less. Knowing about a looming out-of-stock condition may not be immediately useful to a store manager if there is no secondary location for the hot selling item. However, Centralized Operations or Merchandising want to know in order to make the best decision about how to replenish the store.

Ultimately, the priorities for real-time BI will be based on a clear understanding of the *lag time to action* for any business process. To understand that, retailers must move towards a more engineered approach to their business processes, so that highly interactive and fast-moving processes can be infused with the *right* actionable information, when it’s needed, and where it’s needed.

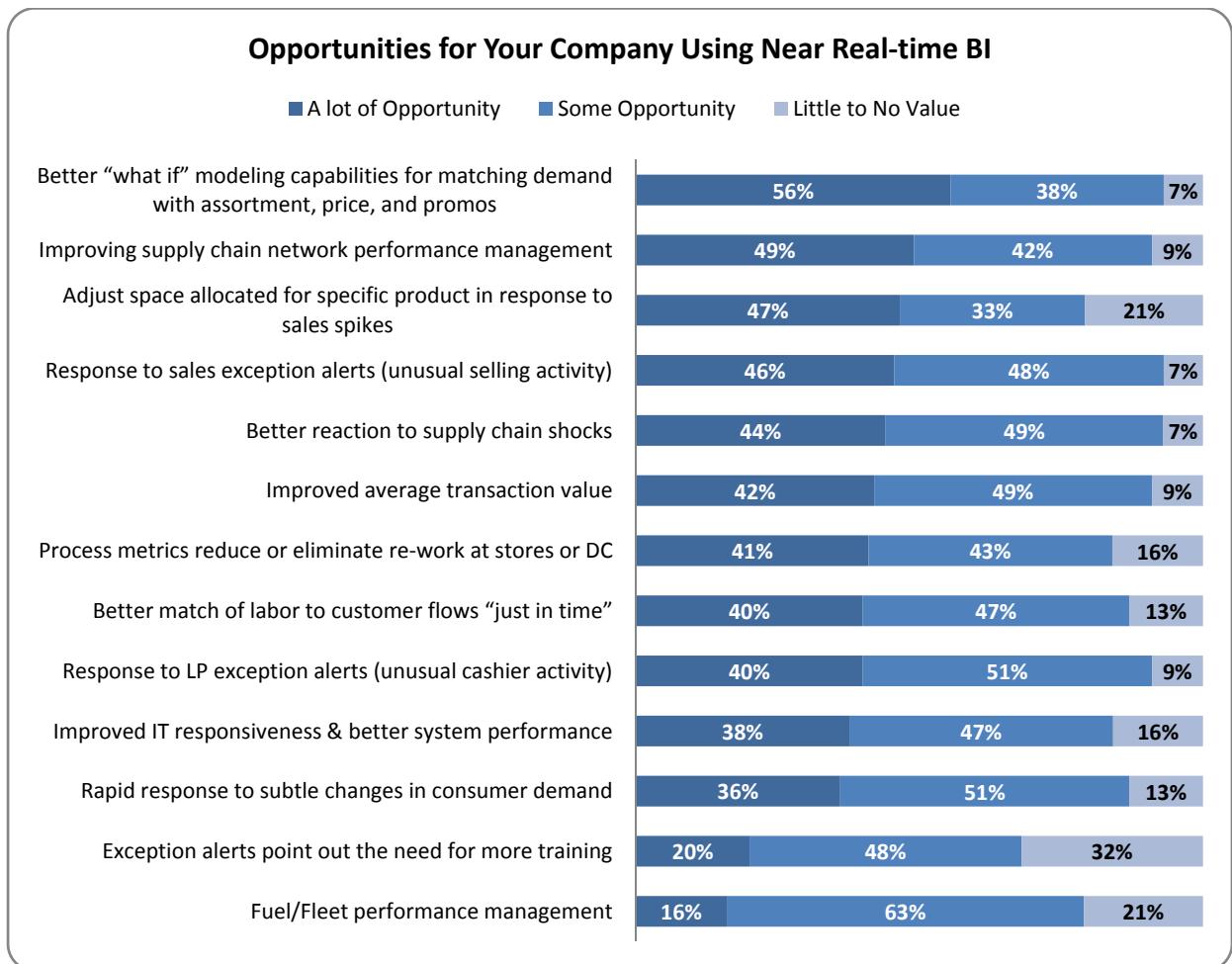
SECTION III: OPPORTUNITIES

OVERALL, A MIXED BAG OF PERCEIVED OPPORTUNITIES

In Section 1, we saw the enormous potential retailers perceive from real-time or near-real-time business intelligence and the disconnect between that potential and results achieved. In this section, we'll take a deeper dive into specific opportunities. First, we'll look at the aggregate response pool, and then we'll take a look at the differences articulated by Retail Winners.

Retailers are new to the concept of “disciplined process”, so their understanding of what can and can't be accomplished in near-real-time seems to be skewed overall. As we can see in Figure 8, they believe “What-if capabilities to improve assortment and price planning” is their biggest opportunity. Unfortunately, these what-if capabilities have little to do with real-time responsiveness.

*Figure 8:
Perceived Opportunities Not Always Realistic*



Source: RSR Research, September 2008

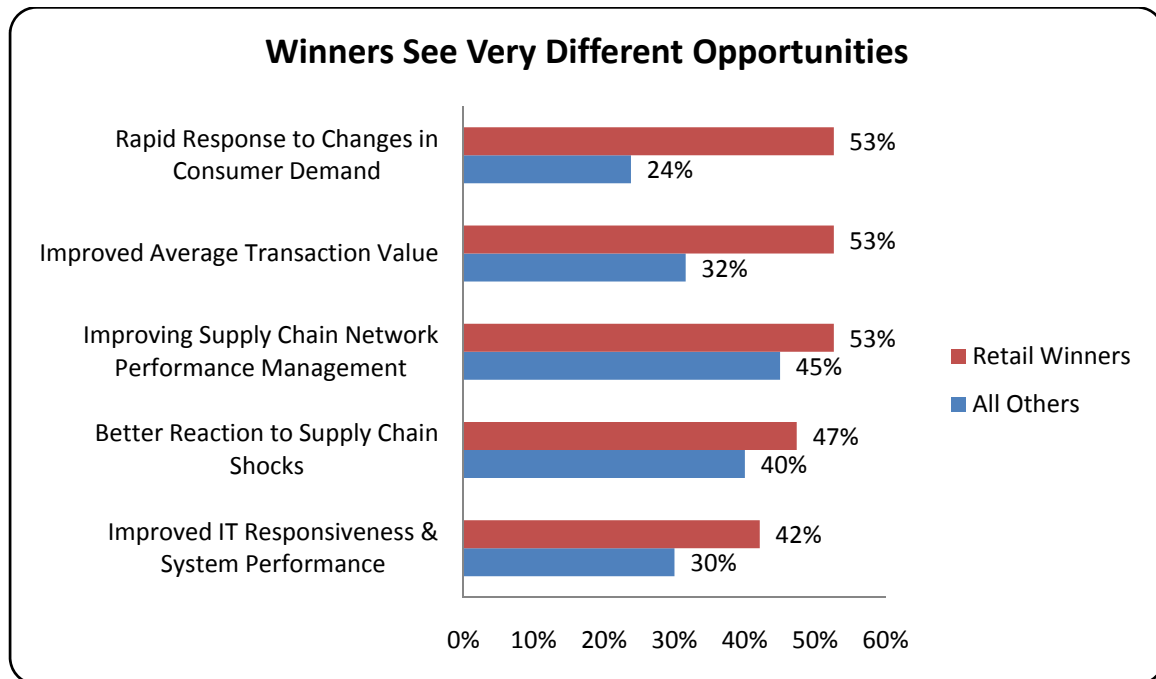
The same is true with adjusting space allocation based on sales. Reality intrudes, and humans really cannot reset planograms (not just once, but as part of an on-going process) in real-time.

If this is really what the majority of retailers believe, it's no surprise that BI hasn't provided the results they expect.

WINNERS HAVE A DIFFERENT FOCUS

It is reassuring to see that Retail Winners have a different set of expectations (Figure 9).

*Figure 9:
Winners Have a Better Understanding of What's Possible*



Source: RSR Research, September 2008

They perceive their biggest opportunities in improving their ability to respond.

- While it may not be realistic to assume a planogram can be set and re-set in near real-time, it is realistic to decide to create merchandising PROCESSES that allow for rapid response to changes in consumer demand.
- The holy grail of retail winners is increased average transaction value (ATV). After all, it involves maximizing the value of existing customers in a single trip. Real-time BI is a perfect tool to create customized offers, both on-line and in the store, to drive up that ATV. Amazon.com is considered a master at the cross-sell. Rapid access to customer data provides the same opportunities across many channels.
- The juxtaposition of shrinking demand cycles and lengthening, geographically disbursed supply cycles is a classic 21st century retail paradox. Retail winners recognize the importance in improving both overall network management and response to supply chain shocks. These retailers recognize that the very definition of a “shock” implies complete unpredictability. Rapid notification and intelligence to respond are hallmarks of Retail Winners.

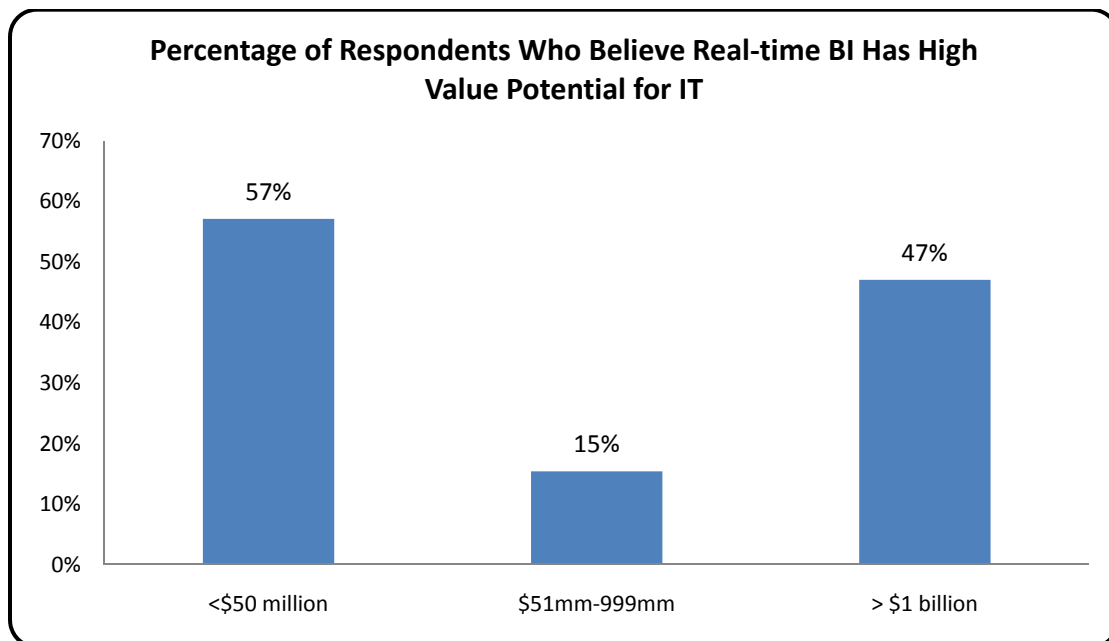
REAL-TIME BI DRIVING IT RESPONSIVENESS: A SURPRISING DIFFERENTIATOR

It's easy to ask, "IT is a provider of real-time BI. Why should the IT department also be a consumer of it?" As we saw above, Retail Winners recognize there is definite opportunity there. In a digital age, responsiveness of digital assets is a key component to success. In other words, sub-second web site response time is as important for customer satisfaction as having products in stock the consumer wants to buy. Broken links, or missing pictures are equivalent to out of stocks...if you can't see it, you can't buy it.

As we saw in Figure 9 above, Retail Winners have this awareness. Seventy-two percent of retail winners have made real-time BI available to IT, vs. only 50% of all other respondents.

The value of real-time BI to IT also becomes critical for retailers as they move out of the mid-market into the billion dollar plus category, a time when many have stumbled. Figure 10 illustrates that the mid-market has the least regard for the potential value of near real-time BI to their IT staffs.

*Figure 10:
Mid-market Missing the Importance of IT Responsiveness*



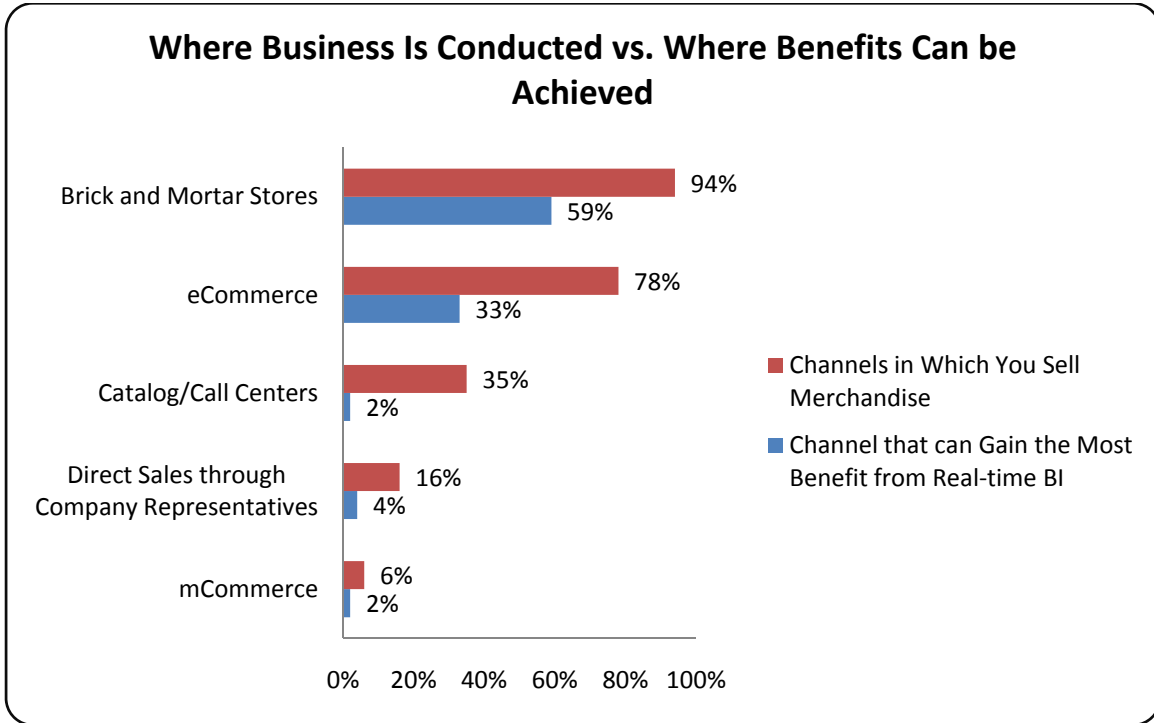
Source: RSR Research, September 2008

RSR believes that these retailers ignore IT as a consumer of BI at their own peril. The challenge of supporting a geographically disbursed multi-channel retail increases exponentially, NOT linearly as a retail enterprise passes the billion dollar hurdle.

A DISCONNECT BETWEEN REAL-TIME RETAILING AND REAL-TIME RESPONSIVENESS

On the one hand, we've pointed out that value of adding real-time BI into day-to-day business processes, and the naiveté of retailers who think real-time BI can solve problems that don't lend themselves to real-time responsiveness. On the other hand, we would be remiss if we didn't point out the opposite problem. Retailers oddly undervalue the opportunities real-time BI provides to the most real-time of channels – eCommerce. Figure 11 shows that retailers see far more opportunities afforded by real-time BI in their stores than in their on-line channel.

Figure 11:
...and Missing the Mark on the REAL Real-time Opportunity



Source: RSR Research, September 2008

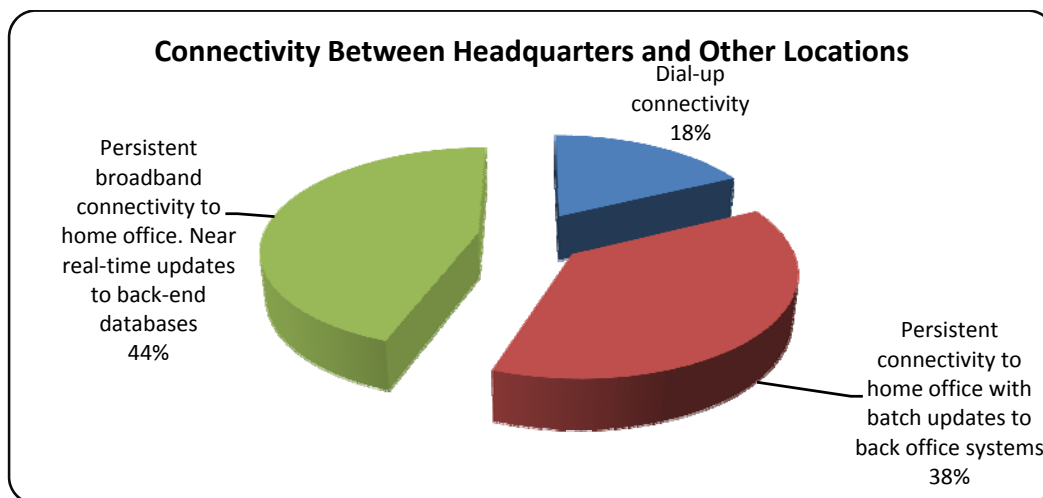
It's somewhat shocking to see only 33% of respondents seeing value in real-time BI for their eCommerce initiatives, and it's also rather stunning to see a paltry 2% seeing significant benefits to their Call Centers, those people interacting directly with customers ready and willing to buy. We can only assume that traditional retailers are still somewhat reticent over putting more investments into their other channels. The gentlest thing we can say is we certainly caution against this kind of reticence.

SECTION IV: ORGANIZATIONAL INHIBITORS

THE LARGEST RETAILERS AT A BIGGEST DISADVANTAGE

We typically lead this section of our reports with a discussion of ROI, cultural resistance to change, and tangled infrastructures that are difficult to change. The internal obstacle facing retailers seeking to use real-time BI is much more basic: persistent connectivity initiatives rendered irrelevant because back-end systems do not process data in anything close to real-time. While our respondents' indication of direct connectivity between retailer headquarters and remote locations are consistent with other studies: between 80 and 85% of total retailers (Figure 12), a deeper dive tells a very different story.

*Figure 12:
Connections are Persistent, but Updates are Not*



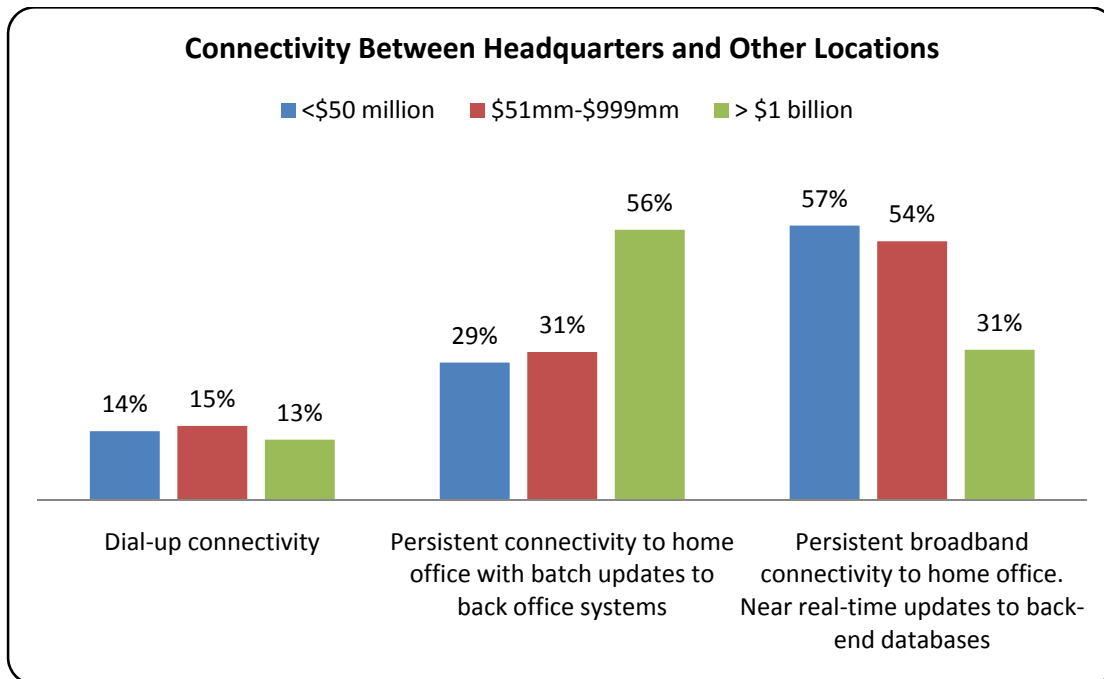
Source: RSR Research, September 2008

An additional 38% of our survey respondents may have persistent connectivity between their locations, but they still update, mash up, aggregate and analyze that data with the same batch updates they have used for longer than two decades. We contend this is only marginally more useful than dial-up connectivity in improving retailer responsiveness.

Even more interesting, the largest retailers are at the biggest disadvantage in this area (Figure 13). Fully 56% of these billion dollar plus retailers are shackled by batch updates to their back-end systems. The age and complexity of their internal systems are likely the largest roadblock to rapid responsiveness and explains their attraction to “non-intrusive optimization engines”⁵. It’s much more attractive to send the data away for cleansing and analysis in its most raw form than to wait for internal systems to do their work.

⁵ *Customer-Centric Merchandising: Driving Differentiation through Localization Benchmark Report: 2008*, Paula Rosenblum & Steve Rowen, © 2008 RSR Research LLC

Figure 13:
The Largest Retailers Face the Biggest Internal Obstacle



Source: RSR Research, September 2008

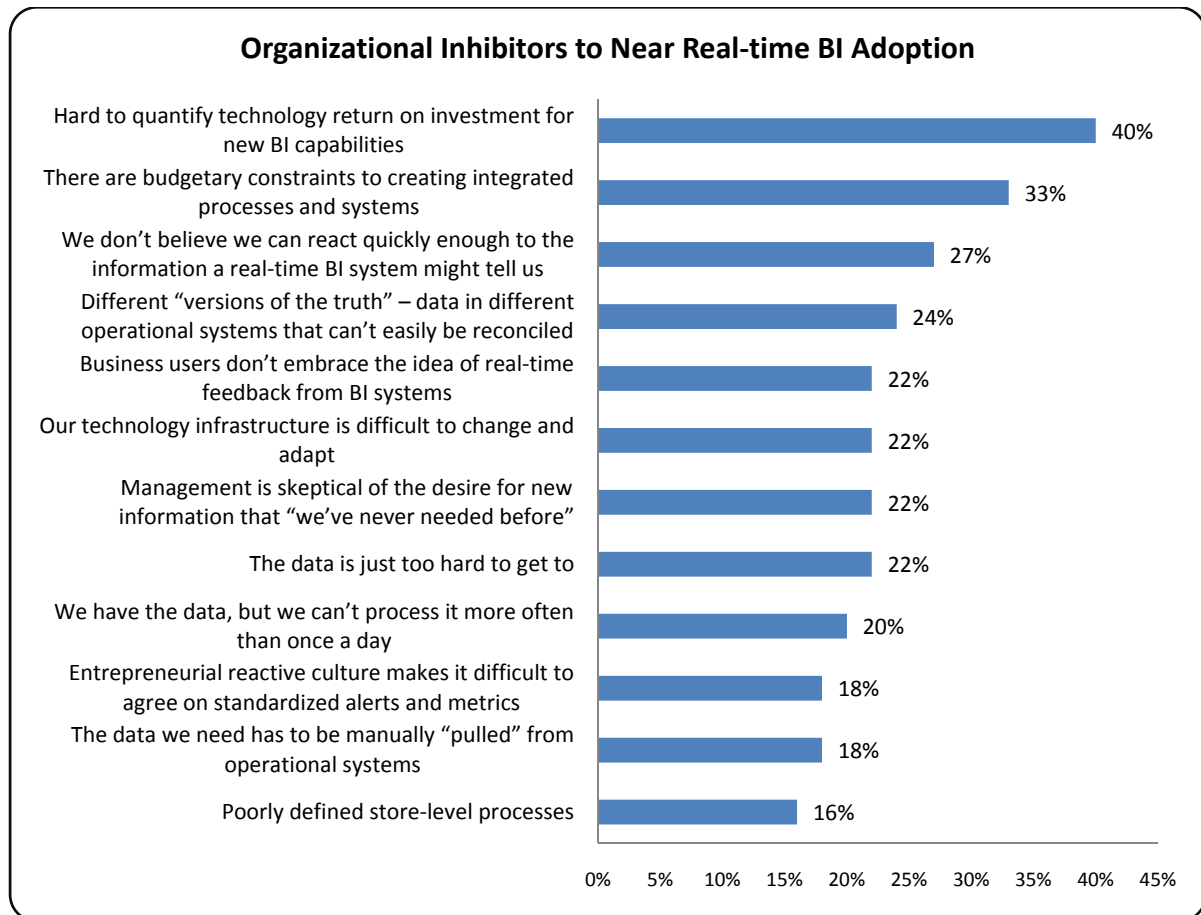
In the face of this core issue, the unfulfilled promise of real-time BI starts making more sense. The other organizational inhibitors that follow also follow clearly within this context.

TRADITIONAL ISSUES OF ROI AND CULTURAL RESISTANCE

With the backdrop of more than 50% of retailers being fundamentally unable to deliver real-time BI, the more traditional organizational inhibitors start to make more sense. Within that context, it's not surprising Line of Business executives would question the ability of new projects to drive Return on Investment (ROI). The somewhat overwhelming challenge of getting back-end systems to accept real-time updates creates budgetary and time requirements that can doom new projects. Within that framework, cultural resistance to change festers. The external challenge, "How fast can we really react?" also comes into play here, as organizations express self-doubt in their ability to respond. Process management remains a new retailer paradigm.

Figure 14 shows how our retail respondents rate the organizational inhibitors they face.

Figure 14:
Organizational Inhibitors



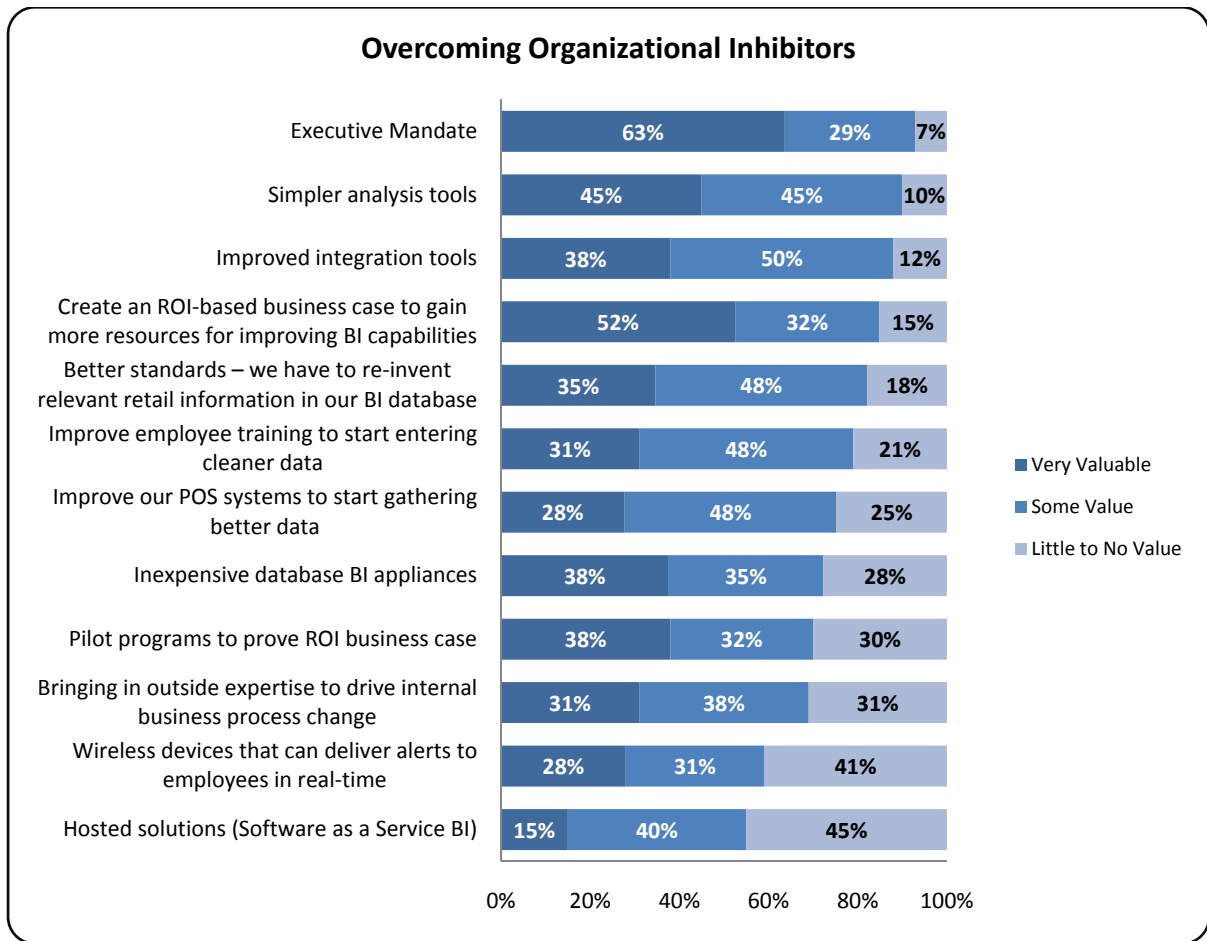
Retail Winners don't differ dramatically from the rest of the respondent pool, with a few exceptions:

- Only 11% have to pull data manually from operational systems vs. 25% of all other respondents
- Winners are more apt to embrace the feedback from real-time BI systems – with only 17% citing this as a top-three organizational inhibitor vs. 30% of all other respondents.
- Similarly, retail winners seem to be getting their infrastructural house in order, with only 17% reporting this as a top-three concern, vs. 30% of all other respondents.

EXECUTIVE DRIVERS, ROI CASES AND SIMPLER INTERFACES A KEY TO SUCCESS

It is relatively common for retailers to cite "Executive Mandate" as a key way to overcome organizational inhibitors, and real-time BI is no exception to this rule. More than 63% of respondents believe this is a very important way to move past any internal logjam. Building the ever-elusive "ROI-based business case" is cited as an important way to move past stumbling blocks as well. But perhaps most importantly, our respondents cite "simpler interfaces" as a key way to overcome internal issues (Figure 15).

Figure 15:
Executive Mandates, Simplicity and ROI Cases Drive Change



Source: RSR Research, September 2008

As we will see in the following section on technology enablers, retailers (and humans in general) tend to cleave to the familiar. While someone from Mars might look at our e-mail, instant message, and spreadsheet models as somewhat arcane and potentially inefficient, in fact, these are the tools people use most frequently in their day-to-day lives. Expecting them to adapt, easily or otherwise, to a foreign tool they use nowhere else in their lives borders on fantasy. After years of haranguing the industry on the “need to get past spreadsheets and email”, RSR has recognized that human factors are important to any project’s success. If it doesn’t look familiar, it’s not going to succeed.

SECTION V: TECHNOLOGY ENABLERS

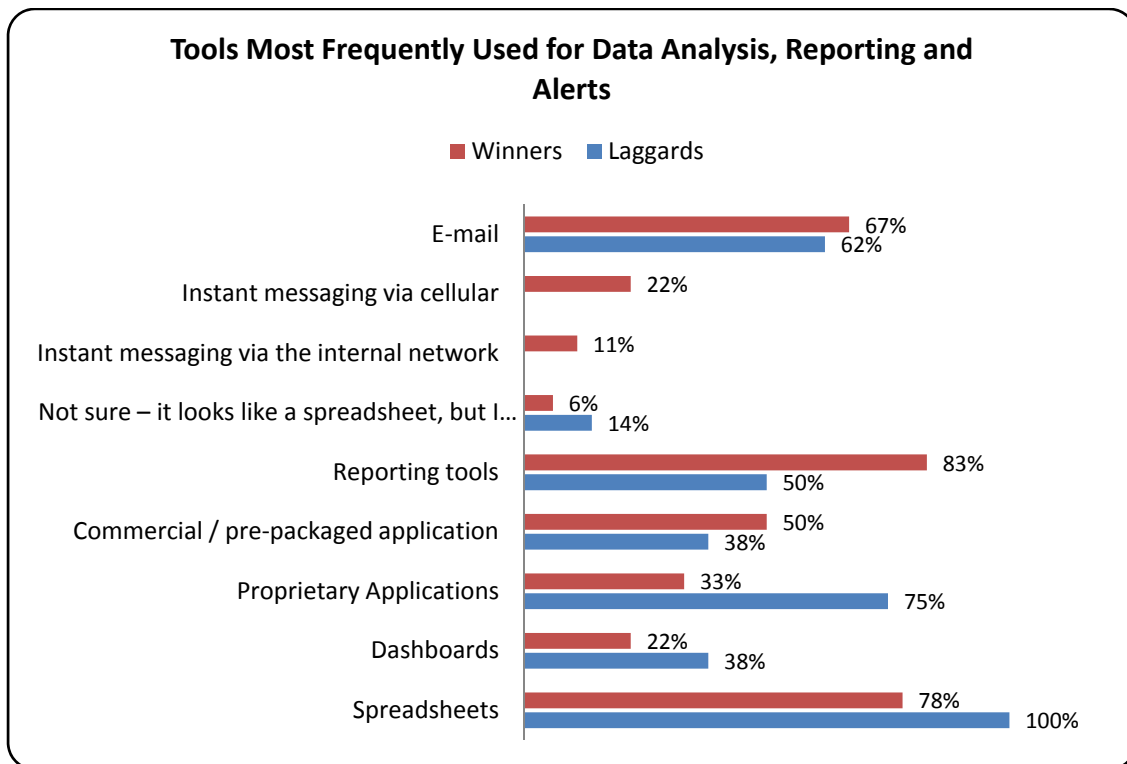
REAL-TIME BI: RETAILERS STRUGGLE WITH TECHNOLOGY IMPLICATIONS

As we saw in the last section, many of our survey respondents are not quite ready to make actionable information available in near real-time to operational processes. For many retailers, there are two technology challenges that must first be overcome.

The first and most fundamental challenge according to 56% of survey respondents is that data from transactional systems to central BI systems are delivered via “batch” rather than continuous feeds. Not surprisingly, laggards have the farthest to go to take this important first step, with 71% reporting that they continue to perform “batch” updates to upstream BI systems *even with persistent connectivity*. The finding that 45% of respondents now have continuous feeds from transactional systems to upstream BI systems represents a small improvement from our July 2007 study results, when 38% of respondents indicated the same.⁶

Secondly, beyond the basic requirement for continuous data feeds from transactional systems, none of the most frequently cited tools for data analysis, reporting, and alerts (Figure 16) lend themselves to integration into technology-assisted real-time processes.

*Figure 16:
Familiar Tools*



Source: RSR Research, September 2008

⁶ *The Next Generation of Business Intelligence: Driving Customer Insights across the Retail Enterprise Benchmark Study: July 2007*, Brian Kilcourse & Paula Rosenblum, © 2007 RSR Research LLC

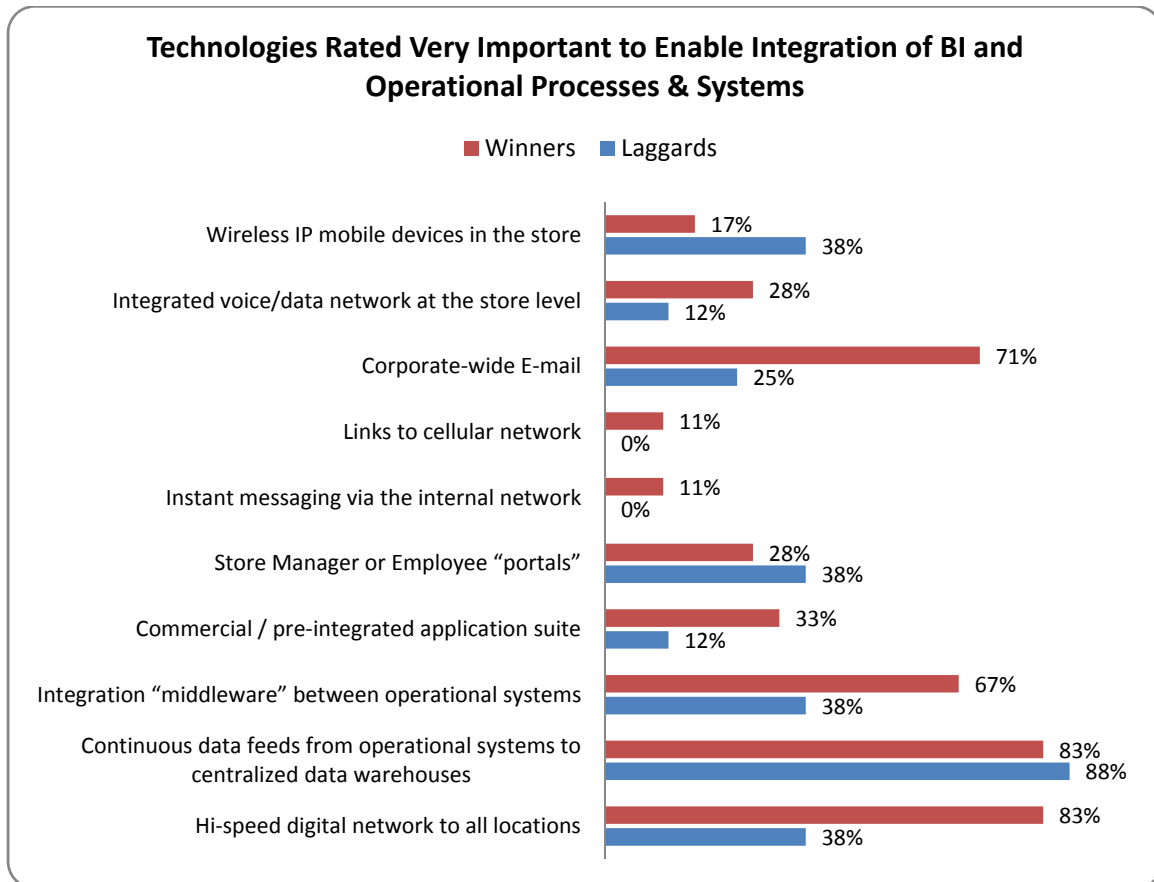
Spreadsheets, e-mail, and reporting tools have it in common that they are personal productivity tools and not easily integrated into automated process flows. For example, recipients read email when they have time, and in no particular order – people tend to read them in order received. The same holds true for reports. Spreadsheets are great for manipulating columnar data, but as with e-mails and reports, they don't lend themselves to automated process integration.

Winners once again show the way forward, with 22% indicating that they are using instant messaging via cellular technologies, and 11% are using instant messaging via the corporate network, to deliver alerts to operators.

WHAT'S NEEDED?

When we asked our respondents to identify the most critical technologies needed to enable integration of BI and operational processes, 82% of all retailers identified the need for continuous data feeds to central data warehouses (Figure 17). Oddly, although winners clearly understand the relationship between this capability and “hi-speed digital networks to all locations”, laggards only identified it as “critical” 38% of the time (with the remaining 62% indicating that it's “somewhat important”).

*Figure 17:
Critical Components: a Lot Of Confusion*



Source: RSR Research, September 2008

Winners are apparently most focused on getting the infrastructure right to enable integration of real-time BI and operational systems. These respondents place importance not only on pervasive connectivity and continuous feeds, but also on middleware integration between operational systems. This finding echoes other RSR research showing that winners are intent on breaking down technology silos to integrate commercial and proprietary applications into a more coherent portfolio of capabilities. But winners seem more ambivalent than others about how the resulting integration will actually look to users. Only “e-mail” is deemed critical by these retailers. Interestingly, laggards show much more interest in instant messaging, portals, and IP-enabled mobile devices, although these same retailers don’t show the same interest in addressing the infrastructural issues that enable these human interfaces.

Clearly, there’s a lot of confusion in the marketplace about what “integrating real-time BI with operational processes” means, and what it takes to get there. This is both an indictment on those who hype the concept of “operationalized” BI, and an opportunity for those who not only offer the capability to generate *actionable information* in real-time, but also recommendations for *process* and *infrastructure* roadmaps that will enable the enterprise to realize new business value from real-time information.

SECTION VI: BOOTSTRAP RECOMMENDATIONS

GET “REAL”

The first and most important step to closing the loop between enterprise business intelligence capabilities and operational systems is a technical one: *collect transactional data as it happens*, not at the end of the day. Forty-four percent of our survey respondents already have this capability, but another 38% have persistent connectivity and *aren't using it for this purpose yet*. Those retailers who continue to use dial-up connections to stores are missing out on this – and many other – opportunities to drive their businesses.

IT'S ALL ABOUT AN AGILE RESPONSE

An interesting difference between retail winners and others as relates to real-time BI is that winners see this as an opportunity to react more quickly to changing conditions, whereas others see this as an opportunity to improve their legacy BI capabilities (for example, recognizing trends). Real-time BI's value to the organization is in its ability to enable retailers to quickly react to conditions as they occur, not after-the-fact. For this reason, winners in particular see opportunity on both the supply chain side of their businesses and in the selling environment, to enable a rapid response to changes in consumer demand.

DEVELOP A MAP & UNDERSTAND WHAT “REAL TIME” MEANS

Retail winners understand that the best use of real time BI is to change processes in-flight, not after the fact. The question is, *which processes?* In order to deliver actionable information to operational processes, retailers need to move toward a more engineered way of looking at their business processes. Avoid trying to “boil the ocean”; it's important to develop a roadmap that prioritizes opportunities for infusing actionable information that drives value into processes. Gain an understanding on a *per-process basis* of the “lag time to action” (the time between knowing something and being able to do something about it), what the *right* actionable information is, when it's needed, and where it's needed. Retail winners are focused not only on customer facing POS/Customer service processes, but also Store Operations Management and Centralized Merchandising processes where operational improvements can be achieved. In today's economy, real-time BI can drive improved expense control as well as better customer responsiveness.

DON'T NEGLECT THE E-CHANNEL

Respondents show that they are focused on the store environment as the “green field” opportunity for real-time BI both for staff and for consumers, but it's important to remember that consumers are increasingly cross-channel shoppers and expect information that is made available to them in one channel will also be available in all the others. In particular, retailers need to take advantage of the highly interactive nature of the online channel to understand what works for consumers... and *then* translate that value to the store environment.

AVOID MORE “SPAGHETTI CODE”

Retail winners understand that in order to close the loop between their BI capabilities and operational systems, they need integration middleware technologies to pass actionable information to destination processes. As we've seen in other RSR studies, retailers are working hard to extricate themselves from

stovepiped legacy applications portfolios with brittle point-to-point integrations. An agenda to infuse operational systems with real-time BI should *not* increase that challenge.

THE HUMAN INTERFACE MATTERS

Retailers are unclear about how actionable information should be presented to those who will consume it. Traditional methods for disseminating information such as e-mail, spreadsheets, and reports are familiar to retailers, but inappropriate for the integration of real-time actionable information to operational processes – especially at the store level. Retailers need to look at other ways to deliver messages, such as portals and dashboards, cellular and IP device messages, etc. Experimentation is key, but retailers need to be careful to minimize the impact of choosing any one interface on the overall delivery architecture.

IT NEEDS REAL-TIME TOO

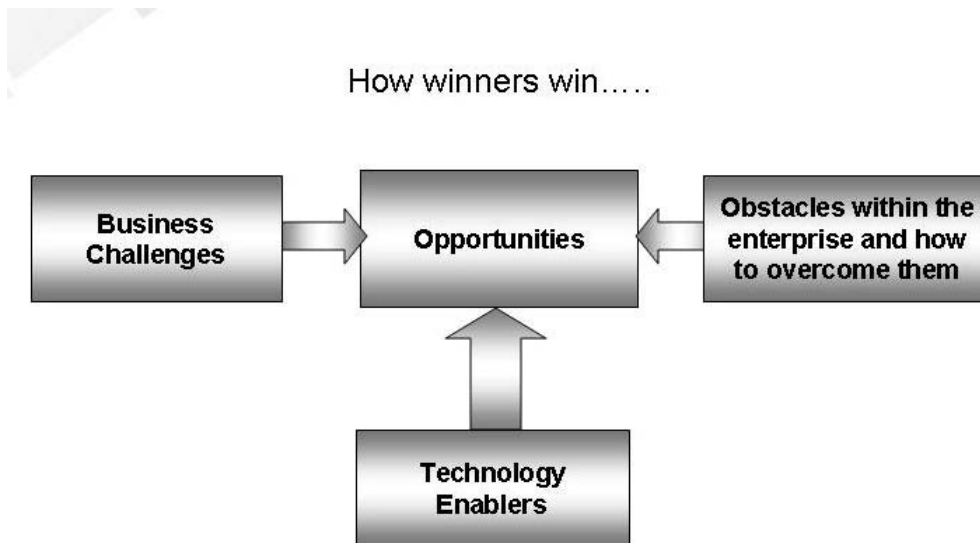
As retail processes become more dependent on the availability of IT services, it is also important for real-time actionable information to be available to the IT Department, so that it can improve its responsiveness and ensure the level of services required by the business. Winners understand this; others need to learn.

APPENDIX A: THE BOOT METHODOLOGY

The “BOOT” methodology is designed to reveal and prioritize the following:

- **Business Challenges** – Retailers of all shapes and sizes face significant **external** challenges. These issues provide a business context for the subject being discussed and drive decision-making across the enterprise.
- **Opportunities** – Every challenge brings with it a set of opportunities, or ways to change and overcome that challenge. **The ways retailers turn business challenges into opportunities often define the difference between Winners and “also-rans.”** Within the BOOT, we can also identify opportunities missed – and describe leading edge models we believe drive success.
- **Organizational Inhibitors** – Even as enterprises find opportunities to overcome their external challenges, they may find **internal** organizational inhibitors that keep them from executing on their vision. Opportunities can be found to overcome these inhibitors as well. Winning retailers understand their organizational inhibitors and find creative, effective ways to overcome them.
- **Technology Enablers** – If a company can overcome its organizational inhibitors it can use technology as an enabler to take advantage of the opportunities it identifies. Retail Winners are most adept at judiciously and effectively using these enablers, often far earlier than their peers.

A graphical depiction of the BOOT follows:



APPENDIX B: ABOUT OUR SPONSORS



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Learn more at <http://www.sap.com/retail/>.

APPENDIX C: ABOUT RSR



Retail Systems Research (“RSR”) is the only research company run by retailers for the retail industry. RSR provides insight into business and technology challenges facing the extended retail industry, providing thought leadership and advice on navigating these challenges for specific companies and the industry at large. We do this by:

- **Identifying information** that helps retailers and their trading partners to build more efficient and profitable businesses;
- **Identifying industry issues** that solutions providers must address to be relevant in the extended retail industry;
- **Providing insight and analysis** about a broad spectrum of issues and trends in the Extended Retail Industry.

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