The Future of Application Delivery In Retail

Benchmark Study 2008

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EXECUTIVE SUMMARY

The pace of change within the retail industry continues to speed up, and with it there are increasing demands on the internal IT department to deliver more value to the business. RSR research has consistently pointed out that retailers are worried that the inflexibility of their technical infrastructure and portfolio of applications will stand in the way of executing business strategies. Business application development is arguably the most strategic process within the IT function, but IT is increasingly challenged to deliver projects on time, within budget, and with promised functionality, in part because the IT organization must support heavy maintenance loads that prevent sufficient resources from being directed to new development efforts. As a result, companies are generally less than satisfied with their IT department's ability to support the business. Retail Winners do a better job of satisfying business needs than their competitors because they have invested in IT technical infrastructures that can be leveraged to deliver technology-driven process innovations more quickly and effectively to the business. Other retailers are concerned about their companies' willingness to invest in technical infrastructures that enable the same flexibility that winners enjoy.

For all sizes of company, the backlog of requests for new IT enabled functionality continues to grow. Because of this, retailers are looking hard at new application delivery models, moving irrevocably away from proprietary development and towards commercial packages, either "best-of-breed" packages or ERP/"suites". There is also newfound interest in on-demand delivery models such as Software-as-a-Service (SaaS), and modern architectural concepts such as Services Oriented Architectures (SOA). The goal of most retailers considering these options is not only speed of delivery, but also a reduction in the ongoing cost to own a solution once it is in production.

BUSINESS CHALLENGE

Retail IT's ability to meet the needs of the business is impacted by two basic challenges: the application portfolio itself, and IT/Business alignment. As for the application portfolio, retailers typically support a multi-generational portfolio of applications that include proprietary or commercial applications, or a combination, with custom integrations. The application portfolio often operates in a proprietary and highly distributed technology environment. IT organizations spend a large percentage of their developers' time and energy in "keeping the lights on" rather than in developing new value adding capabilities. When it comes to IT/Business alignment, Retail Winners worry that the increasing demands for IT services will overwhelm their organizations' ability to respond, while others worry about a lack of business direction for their efforts as well as the cost of re-engineering business processes.

Retailers are looking for new ways to break the logjam in the IT function to address problems delivering IT enabled improvements on time, within budget, and as promised.

OPPORTUNITIES

A retailer's size (revenue) is the biggest driver behind whether the challenges to efficiently delivering quality business applications are associated with portfolio management and development processes, or with the tools and technologies used to develop and deliver new IT enabled capabilities. Retailers across all revenue tiers agree that "aligning IT activities to corporate strategy via an executive steering committee" is the best opportunity to improve the reliability and predictability of the IT development process. But large retailers focus much more on the need for executive steering to *prioritize* the IT backlog, and call for more *accountability* from line-of-business decision leaders. Mid-tiered retailers have higher hopes for changing *how* they deliver applications. Small retailers demonstrate that they want the same technology-enabled capabilities as their bigger competitors – often delivered as services.

ORGANIZATIONAL INHIBITORS

Although Retail Winners view the IT function in a more positive light than their competitors, they are concerned

about the business's willingness to change their internal processes to take advantage of what new business applications have to offer. Other retailers are more concerned than winners about lack of high-level business leader support and lack of funding for infrastructure projects.

TECHNOLOGY ENABLERS

Retailers Winners want to leverage their infrastructure to deliver flexible business applications. These retailers see an opportunity to implement more flexible, adaptive applications into their portfolios, and to that end are focused on technologies that will enable them to "loosely couple" business rules, data, and user interfaces via services oriented architectures (SOA) and web enablement. Non-winners are much more focused on standardization of their infrastructure.

BOOTSTRAP RECOMMENDATIONS

Retailers across all revenue tiers agree that the best way to overcome inhibitors and address challenges and opportunities is by empowering ***an executive committee to align IT priorities to corporate strategies***. CEO and/or Board level support and the willingness of Line of Business leaders to take ownership of development efforts are the most influential factors in making this happen.

"Process" is important. ***One of the most important steps in a systems development effort is to define the difference between the current business process and the desired one***. Doing so will help retailers conform their business practices to the implied "best practices" inherent in most commercial applications. This will speed value delivery and lower future maintenance costs that would otherwise have resulted from modification of the vendor's code.

A well defined and well implemented technical infrastructure enables flexibility. Winners are poised to leverage investments in IT infrastructure to "run up the score"; others are in a catch-up game.

Most retailers today are strategically disadvantaged by the absence of IT-enabled processes that address business challenges and opportunities, and only tactically advantaged by their presence. Companies need to distinguish between what is truly important and what is merely interesting, and ***choose application delivery options that promise the quickest time to value realization***.

Retailers have new options to explore when it comes to business application delivery. Most retailers favor a "Best of Breed" model, but that puts the onus of integration on the retailer. Another option is large ERP/"suites" delivered one component at a time. This approach promises lower integration costs since the vendor has "pre-integrated" components of their suite. On-Demand application delivery (such as "Software as a Service") is a relatively new option, and very attractive to retailers today. "Network centric" technical architectures that deliver internal applications to stores in much the same manner as consumer portals make service available, are an option that retailer should explore to lower the high cost of maintaining complex in-store environments. Finally, outsourcing remains a viable option.

Regardless of the business application delivery model that retailers choose, one thing is clear: ***application development & delivery is a business process*** that needs to be routinized, measured, and optimized. The process needs to be transparent to the business so that business leaders can take ownership of the outcomes.

SECTION I: OVERVIEW

WHY THE STUDY WAS CONDUCTED

Retailers' key decision makers see the Information Technology (IT) function as the source of both hope and frustration. On the one hand, automation has enabled today's retailers to achieve economies of scale and geographic reaches unimagined by their predecessors. On the other hand, demands from both within and outside their organizations challenge the IT organization to keep up. It is no surprise then that Information Technology and Line of Business executives in the industry continue to have a love-hate relationship.

In a survey conducted in May 2007 (***Software-as-a-Service and the Need for Speed - Benchmark Study: July 2007***), 44 percent of all survey respondents expressed dissatisfaction with their company's abilities to keep up with demands, and 70 percent of under-performing companies expressed dissatisfaction. And that dissatisfaction isn't confined to under-performers; retail "winners" (those companies that outperform their peers) express concern that their legacy technologies will inhibit further growth. For example, in RSR's report, ***Finding the Integrated Multi-Channel Retailer: Benchmark Study 2008***, retail "winners" expressed concern that their legacy applications portfolios are so inflexible, they won't be able to enable cross-channel data visibility or meet increasing consumer demands for a consistent experience across all the channels.

Retailers that strategically use information technology have the opportunity to turn technical advantage into long term market dominance (for example, Wal-Mart's use of technology in the extended supply chain). But even if companies don't want to lead with IT-enabled innovation, they can certainly find themselves strategically *disadvantaged* by the failure of the IT function to deliver efficiencies that enable them to focus on other, more strategic initiatives. At the same time, companies are continually challenged to "do more with less, and do it faster", and this applies to IT, too – often at the expense of infrastructure investments. Retailers have looked at many different approaches to reducing the backlog of pending application projects, from in-house proprietary development, to best-of-breed integration, ERP implementation, outsourcing, and software-as-a-service delivery options.

The Future of Application Delivery in Retail - Benchmark Study 2008 measures how retailers are addressing the need to accelerate delivery of technology-enabled business value. We set out to identify the challenges and opportunities associated with different business application delivery models in retail. We wanted to know if retail winners see the value of their IT architectures differently than their competitors do. We also sought to identify how retailers deal with organizational inhibitors that constrain application development value delivery, as well as the opportunities they see to overcome those inhibitors. And finally we wanted to understand what technology enablers help retailers manage their IT efforts to deliver IT-enabled business value on time, within budget, and with the desired functionality.

METHODOLOGY

RSR uses its own model, called the "BOOT," to analyze Retail Industry issues. This model is built with our survey instruments. An explanation of the methodology can be found in Appendix A.

Winning is not an accident in the world of Retail. Customers vote with their wallets. Sustainable sales improvement and successful execution of brand vision are direct results of an enterprise's recognition of external and internal business issues, its ability to take advantage of opportunities for improvement, and

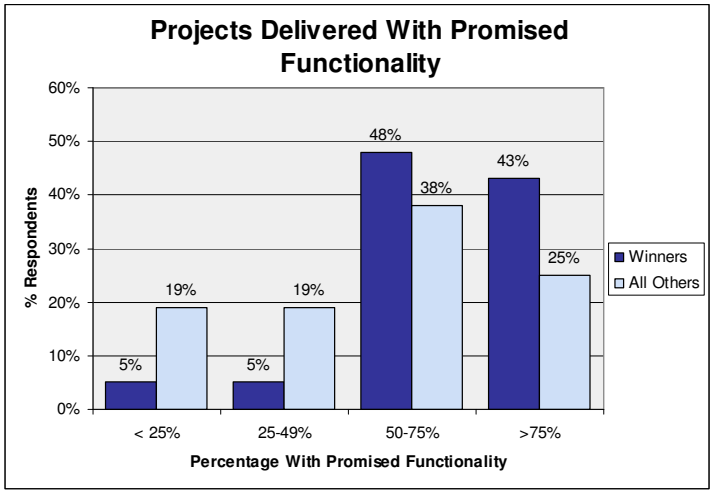
its use of technology enablers to simplify and rationalize business processes. Data that emerges from the BOOT model helps us understand the behavioral and technological differences between winners and their peers.

Defining Retail Winners and Why They Win

Our definition of Retail 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 RSR's research findings that **Winners don't merely do the same things better, they tend to do things differently**.

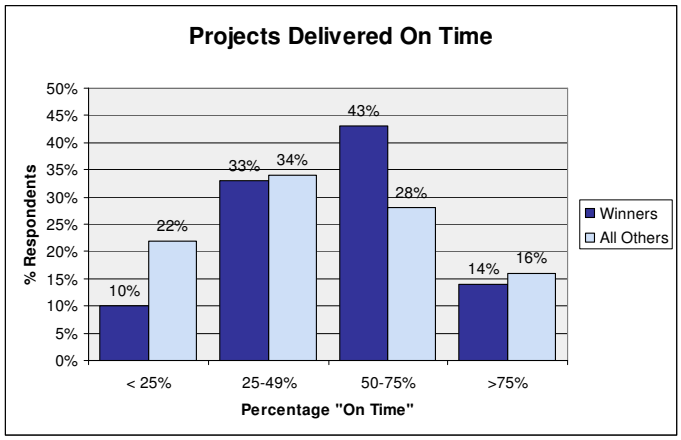
For example, in *Figures 1*, 2, and, 3 we see that even though all our respondents are seriously challenged to deliver projects on time, within budget, and with promised functionality, Retail Winners have a better track record. This speaks both to the difficulty in delivering technology-enabled business solutions, and to the fact that Winners focus on improving.

Figure 1:
Winners Get More…



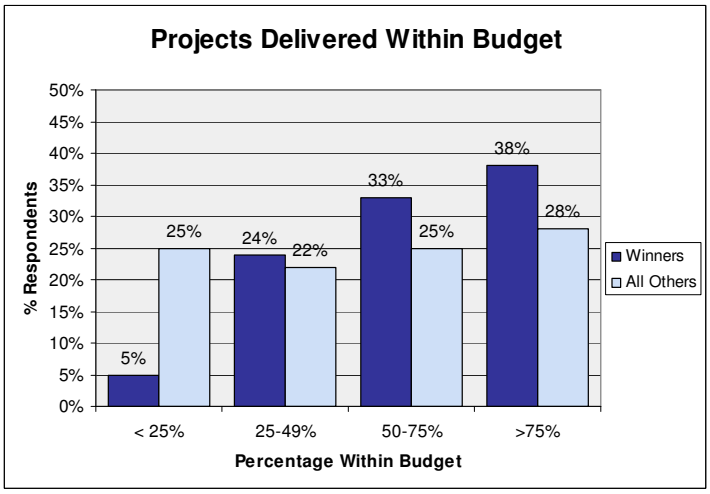
Source: RSR Research, April 2008

Figure 2:
…Faster…



Source: RSR Research, April 2008

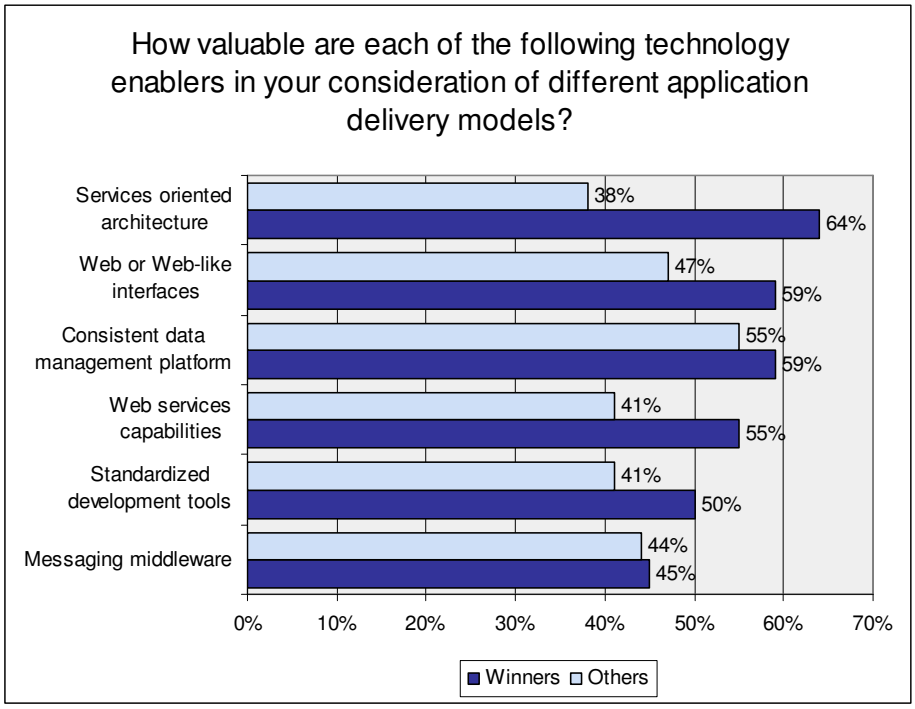
Figure 3:
…At Lower Cost



Source: RSR Research, April 2008

This begs the question: ***Does technology architecture itself create differences in performance, or are there other germane business issues driving business success***? The answer is yes, winners do a better job of ensuring that the technology architecture itself enables IT responsiveness to business needs. For example, retail winners are more focused than others on enabling business applications that utilize the network to deliver "loosely coupled" business rules and data via web-like interfaces (*Figure 4*). What's the goal? In a word: *Flexibility*. Architecting applications as a set of services rather than tightly vertically-integrated stacks of code and data would enable retailers to re-deploy those services quickly and cost-effectively as the business changes, improving the speed of implementation and the simplicity of integration. Winners are transforming their application portfolios to achieve more flexible solutions.

Figure 4:
Winners' Focus: Flexible Solutions



Source: RSR Research, April 2008

SURVEY RESPONDENT CHARACTERISTICS

RSR conducted an online survey in April 2008 and received answers from 73 respondents, including 62 who identified themselves as part of the extended retail ecosystem. Respondents were predominantly from the IT organization itself.

Respondent demographics are as follows:

- **Job Title**:

Senior management (CEO, CFO, COO)	8%
CIO/IT Leader	25%
(Senior) Vice President	3%
Director	22%
Manager	20%
Staff	7%
Internal Consultant	10%
Other	3%

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

Less than $50 million	17%
$51 million - $249 million	7%
$250 million - $499 million	7%
$500 million - $999 million	19%

$1Billion to $5 Billion	19%
Over $5 Billion	31%

- **Headquarters Location**:

North America	74%
Latin America	3%
Europe	14%
Middle East, Africa	2%
Asia Pacific	7%

- **Year-Over-Year Comparable Store Sales Growth Rates**:

Worse than average (“Laggards”)	18%
Average	43%
Better than Average (“Winners”)	39%

SECTION II: BUSINESS CHALLENGES

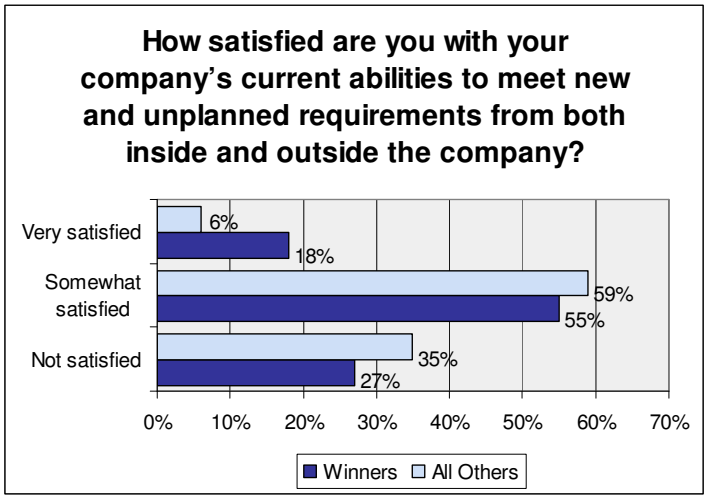
A RETAIL PARADOX: HOW TO MEET TODAY'S DEMANDS WHILE TRANSFORMING IT TO PREPARE FOR TOMORROW'S CHALLENGES?

There is no doubt that the cycle of business change in Retail is accelerating, and with it, demands on the internal IT function to support the rate of change are ever-increasing. At the same time, the IT organization is under the same pressures as the rest of Operations – to hold the line on costs. Regardless of the pressure to control costs, RSR's research has shown that retailers are still looking for significant contributions from their IT functions in delivering important new capabilities to support changes in the business, including:

- *Enabling a new generation of business intelligence capabilities to respond more quickly to changes in the marketplace*
- *Integrating multi-channel operations to enable the business to present a consistent brand to consumers across all channels*
- *Helping to make the shopping experience more relevant to consumers with one view of the customer, one view of product and inventory, one customer order fulfillment process*
- *Addressing global supply chain issues associated with speed-to-market, quality, and cost*
- *Addressing the "green" agenda*

In other RSR research, retail winners express an overarching concern about the inflexibility of the technical architecture and their ability to alter it to face new market realities. In this survey, we asked respondents whether they are satisfied with their IT organization's ability to meet unanticipated challenges from the business (*Figure 6*).

Figure 6:
IT's Ability to Respond Quickly – Winners are More Confident



Source: RSR Research, April 2008

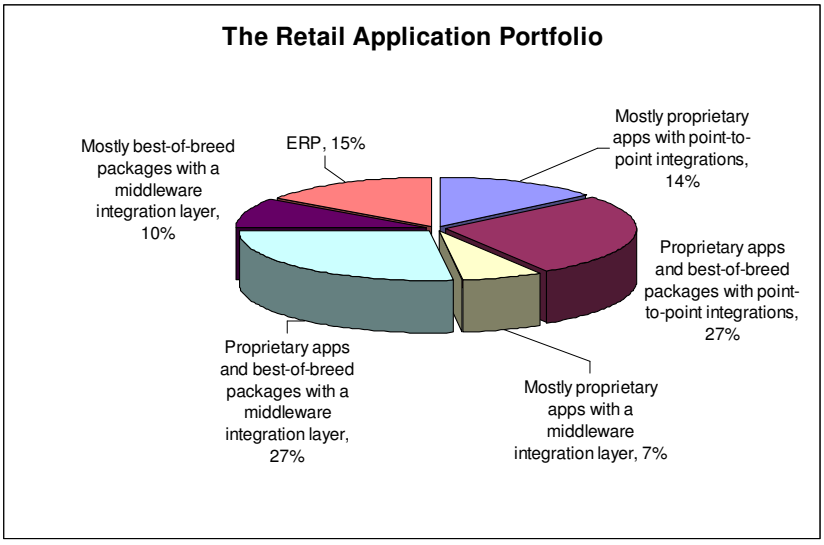
Responses indicate a mixed reaction: although some winners express great confidence, most retailers are ambivalent about the IT department's ability to deliver new value, and a large number of the total response group (32%) are "not satisfied". Although winners have a tempered response to this question, not so with laggards; fully 70% of those retailers indicate that they are "not satisfied" and none of these respondents report that they are satisfied.

The question is, why? Broadly speaking, the challenges that retail organizations face can be categorized along two lines: the portfolio itself, and IT/business alignment.

CHALLENGE #1: THE PORTFOLIO ITSELF

Retailers typically support a multi-generational portfolio of applications, including fully depreciated software assets that are still operational but in need of replacement, assets that are still "on the books" and provide the backbone of support for retail operations, and new applications that either are being rolled out or are in development. These portfolios are often comprised of either proprietary applications or commercial applications, or a combination of both, that have been integrated with middleware or via point-to-point interfaces (*Figure 7*).

Figure 7:
The Application Portfolio: Heterogeneous & Brittle



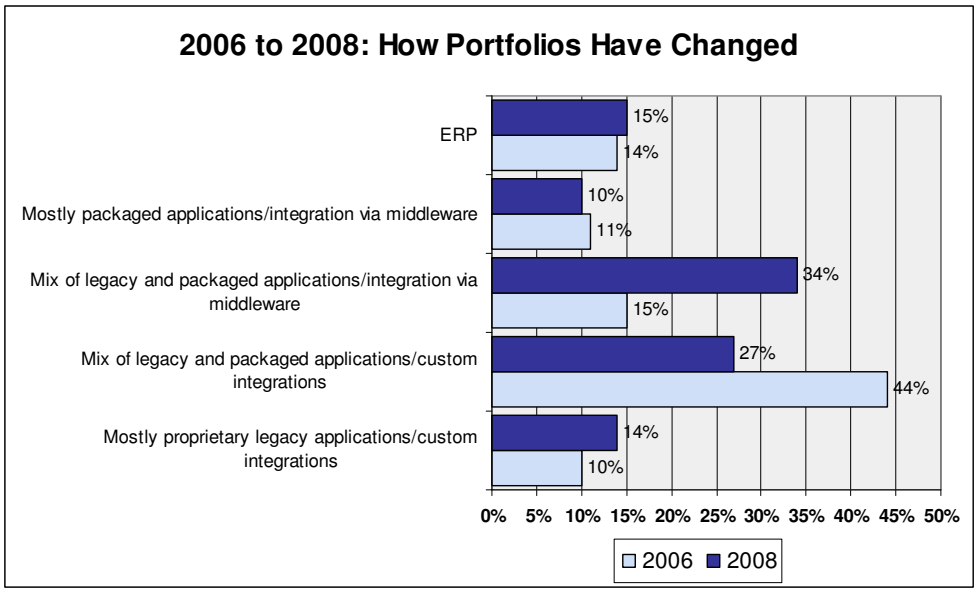
Source: RSR Research, April 2008

In the time since we conducted a study in 2006, the nature of the portfolio has changed, according to our respondents.[1] Whereas in the earlier study, over one-half of the respondents indicated that applications were integrated in point-to-point fashion, this year's survey respondents indicate a shift towards loosely coupled application integration via middleware (Figure 8). This is an important change, because in a point-to-point integration model the IT organization must re-engineer those integration points every time

[1] *Services Oriented Architecture - The Extended Retail Industry Feels the Need for Speed…And Education: Benchmark Study 2006-2007*, Brian Kilcourse, ©Retail Systems Alert Group, 2006

a new application is added to the portfolio, increasing both the initial cost of implementation and the ongoing cost-of-ownership, since the integrations must be maintained.

Figure 8:
The Application Portfolio: Untangling Legacy Integrations



Source: RSR Research, April 2008

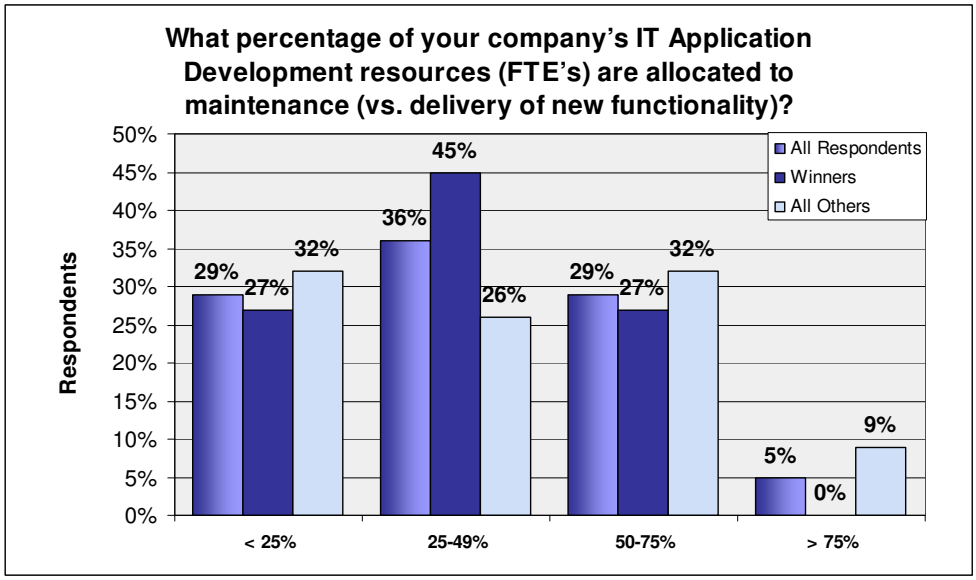
Interestingly, 36% of retail winners support a mix of legacy and "best of breed" applications with custom integrations compared to 24% for all other respondents. This is perhaps indicative that retail winners implemented applications earlier than their competition, when middleware software was not so readily available. However, retail winners also indicate a stronger presence for ERP's or "suites" in their portfolios, with 18%, compared to 12% for all others.

Looking at the portfolio from the perspective of company size (in terms of annual revenue), a surprisingly high percentage of mid-tiered retailers (annual revenue between $250M-$1B) support portfolios of "proprietary apps and best-of-breed packages with *point-to-point* integrations", with 47%, compared to large retailers (17%) and small retailers (29%). On the other hand, large retailers have embraced middleware to integrate applications, with 54% saying that they have pursued that direction (vs. 36% of all others).

The Cost of Keeping the Lights On

In addition to supporting the integrations between applications, CIO's must devote a portion of the IT spend on supporting the application code itself. Because the age of the portfolio can span as much as twenty years or more (as one CIO recently put it, "My POS system is old enough to drink!"), old packaged applications that have long-ago lost support from vendors are typically supported by in-house staff, who also support proprietary applications that were developed in-house and "best of breed" packages that have been modified to suit the company's particular requirements. As a result, IT organizations focus a large percentage of their developers' time and energy to "keeping the lights on" rather than developing new value-adding capabilities (*Figure 9*).

Figure 9:
Development Resources: Keeping the Lights On

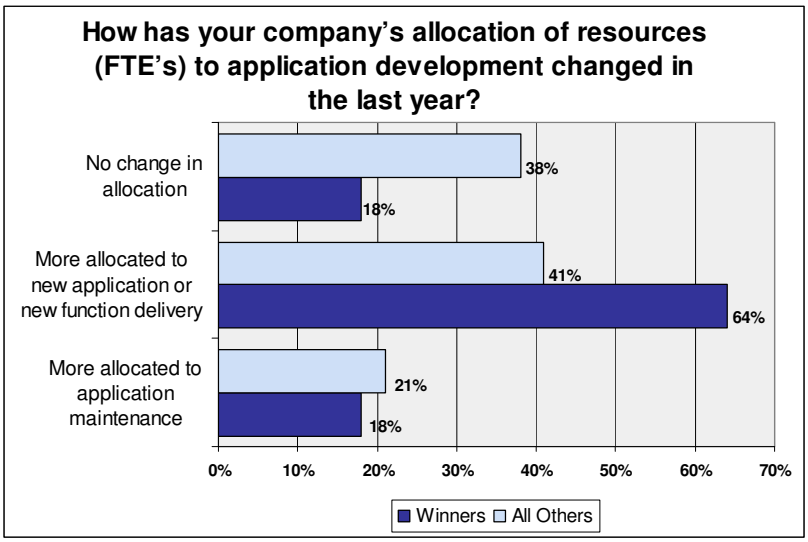


Source: RSR Research, April 2008

A full 34% of all survey respondents indicated that 50% or more of their "Application Development" resources are devoted to maintenance of existing applications. Winners fare better, with only 27% reporting that they devote 50% or more of those resources on maintenance. Mid-tiered retailers are hit the hardest with the maintenance "bill", with 46% indicating that 50% or more of their developers are focused on maintenance rather than on new function development, at least partly the result of the burden associated with supporting point-to-point integrations.

In spite of these pressures, retailers are redirecting more resources towards the development of new functionality in the past year. Forty-nine percent of the total response group indicated that they have allocated more developer resources to new functionality. Winners once again lead the way, with 64% indicating that more resources are being focused on new function delivery (*Figure 10*). The difference between winners and laggards shows up in how they have addressed this issue: whereas only 18% of winners report "no change", 40% of laggards indicate that their allocation of development FTE's hasn't changed, and only 30% of laggards indicate that they have redirected more developer headcount toward developing new functionality.

Figure 10:
Re-Focusing on Delivering New Value



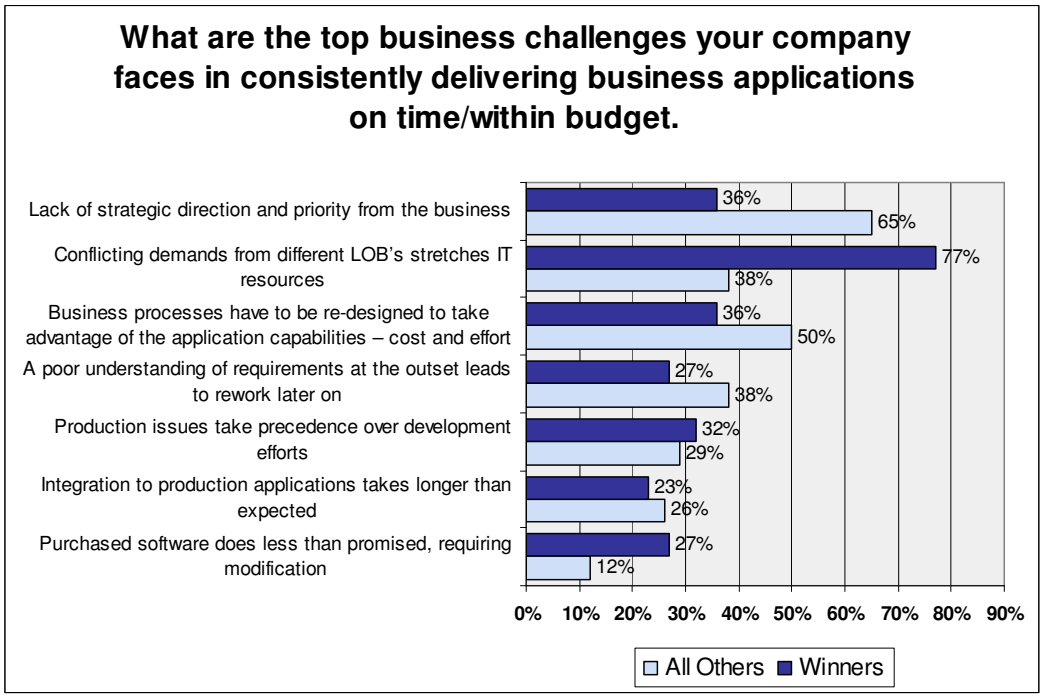
Source: RSR Research, April 2008

Mid-sized retailers demonstrate a strong desire to get more new value from IT, with 80% indicating that they have devoted more of their resources to developing new functions. Considering that mid-sized retailers also tended to report the greatest maintenance load (in terms of developer FTE's), this data point speaks to the urgency that these retailers feel to turn the IT organization around to deliver more new value to the company, and how far they have to go in order to refocus their application development resources on new functionality needed by the business.

CHALLENGE #2: IT/BUSINESS ALIGNMENT

We asked respondents to identify the top business challenges that they face in consistently delivering business applications on time, within budget, and with promised functionality. Winners validate what we have learned in our other research, indicating that they fret that increasing demands for IT services will overwhelm their organizations' ability to respond (Figure 11). Others worry about lack of direction and the cost of re-engineering business processes to take advantage of business applications' capabilities. In both cases, alignment and prioritization challenges supersede issues that might come up in the development process itself (such as rework because of poor requirements definition or integration issues). However, laggards are also concerned about poor requirements definition and unanticipated integration problems, suggesting not only a lack of strategic oversight of projects but also problems with project management processes.

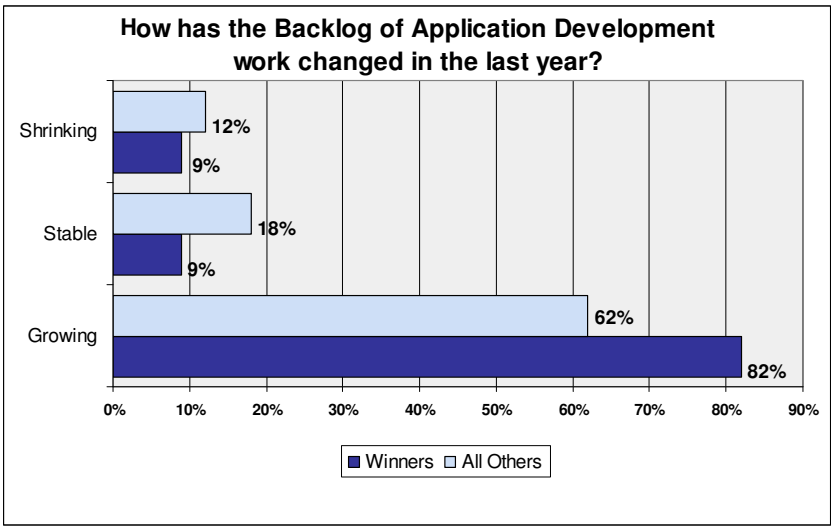
Figure 11:
Winners Get Pulled In Many Directions – Others Wonder That the Direction Is



Source: RSR Research, April 2008

Regardless of whether they are winners or not, most of our respondents say that their backlog of pending development requests has gotten bigger in the past year (*Figure 12*). Perhaps not surprisingly (given their satisfaction level with IT's ability to respond to new/unanticipated demands), laggards lag behind the total response group, with 30% reporting that their backlogs are "stable" and 50% reporting that it is growing.

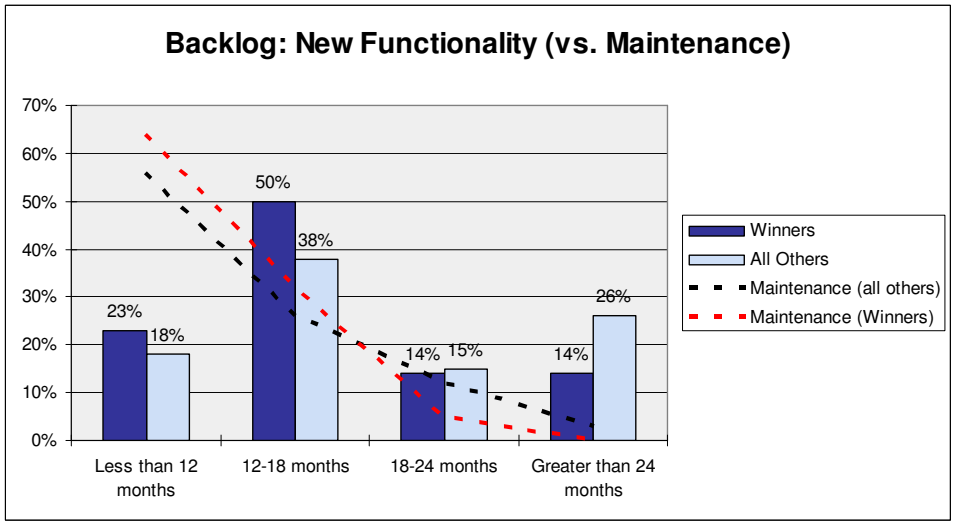
Figure 12:
Requests for IT Services Are Climbing



Source: RSR Research, April 2008

When it comes to the size of the backlog, respondents indicate that most requests have been on the books up to 18 months (*Figure 13*). Seventy three percent of retail winners report that the backlog of new functionality requests is eighteen months or less compared to 56% for all others. As we've seen from earlier data, **laggards have serious problems governing the IT priority queue; 50% of these retailers report a backlog of up to eighteen months, but a startling 40% report that their backlogs are greater than 24 months.** Many retail CIO's would argue that any request two years old is probably out-of-date and should be either dropped or re-justified.

Figure 13:
Backlog: New Capabilities Wait while Maintenance Takes Precedence



Source: RSR Research, April 2008

For most respondents, the maintenance backlogs remain less than 12 months, reinforcing the rationale for devoting so much development headcount to maintenance rather than new function development: maintenance of production systems must come first.

Interestingly, mid-tiered retailers do the best job at keeping their maintenance backlog to one year or less (80%). For these retailers, 50% or more of their developers work on maintenance rather than new function development, and maintaining production service levels overrides all other considerations. The "plus" is that maintenance service requests are kept under control. The downside is that these retailers are particularly challenged to keep the backlog of 'new functionality' requests within a reasonable timeframe: 40% of respondents indicate a new development backlog of more than 18 months.

Although such an approach may keep the business satisfied with the IT department's responsiveness (80% of mid-tiered retailers express that they are "somewhat satisfied" with IT's ability to address new and/or unanticipated requirements), it also risks sacrificing long-term objectives for near term considerations.

SECTION III: OPPORTUNITIES

BUSINESS APPLICATION DELIVERY: BOTH A TECHNOLOGY *AND* A PROCESS OPPORTUNITY

Business Application development is arguably the single most strategic process within the IT function. Whereas production management can be characterized as "keeping the lights on", business application development is all about "shedding new light". The conception, development and delivery of new applications, services and systems can create powerful competitive advantage in the marketplace, and that advantage can be turned into strategic market dominance. Yet, as strategic as new IT-enabled capabilities are to retail today, the process by which they are created, delivered and managed is still fraught with unpredictability.

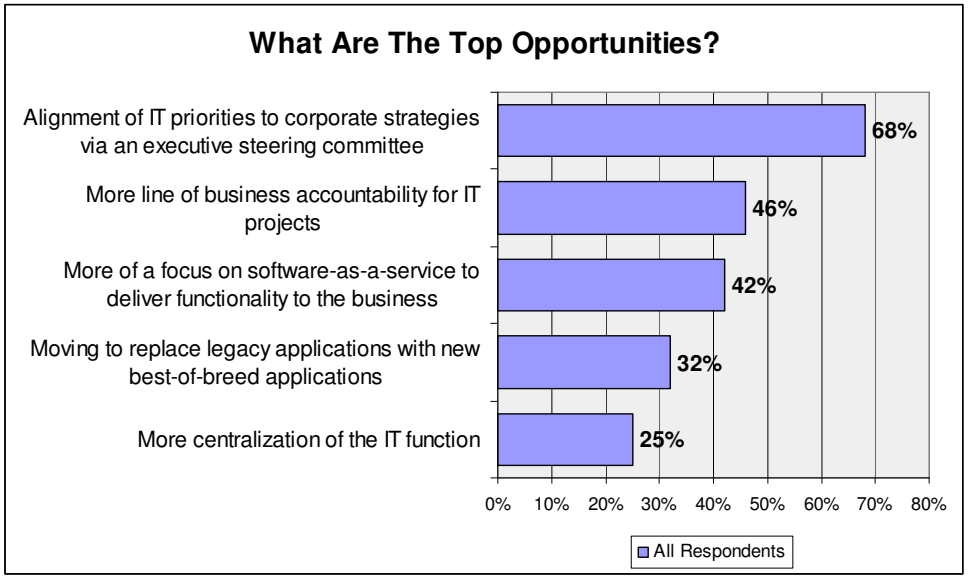
Software development and delivery has become unmanageably complex. The scope of business applications has widened and enterprise application portfolios have expanded to include the widely distributed mix of components and technologies it takes to power today's businesses. Factor in constantly changing business requirements, competing priorities and limited communication with end-users, and the challenges development organizations face are truly daunting.

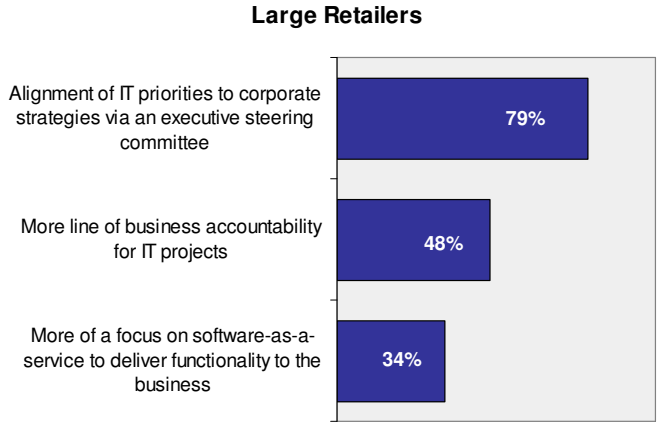
A retailer's size (revenue) is the biggest driver behind whether the challenges to efficiently delivering quality business applications are associated with portfolio management and development processes, or with the tools and technologies used to develop and deliver new IT enabled capabilities. Although retailers across all revenue tiers agree that "aligning IT activities to corporate strategy via an executive steering committee" is singly the best opportunity to improve the reliability and predictability of the IT development process (*Figure 14*), differences by size almost immediately emerge. Large retailers focus much more on the need for executive steering to *prioritize* the IT backlog, and call for more *accountability* from line-of-business decision leaders. Mid-tiered retailers have higher hopes for changing *how* they deliver applications. Small retailers demonstrate that they want the same technology-enabled capabilities as their bigger competitors – often delivered as services.

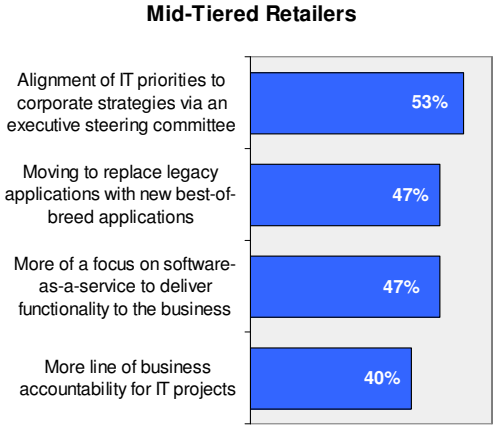
What about proprietary development? Almost no respondents (2%) view this as a viable opportunity to replace old packages. However, since retailers will continue to develop proprietary code development to some extent (see next section), "improving application development tools and methodologies" is viewed as an opportunity, according to 22% of the overall response group. In a remarkable shift, many retailers view on-demand services as an opportunity to deliver needed functionality, even more than either "suites" or "best-of-breed" solutions. In a 2007 study on SaaS 70% of respondents expressed either "low" or "no" expectations for SaaS as an option – now times have changed.[2] One message is becoming clear: ***retailers no longer see proprietary systems as positive differentiators from their competitors.*** Retailers have come to see systems as *enablers* for differentiating strategies, but not as differentiators in and of themselves.

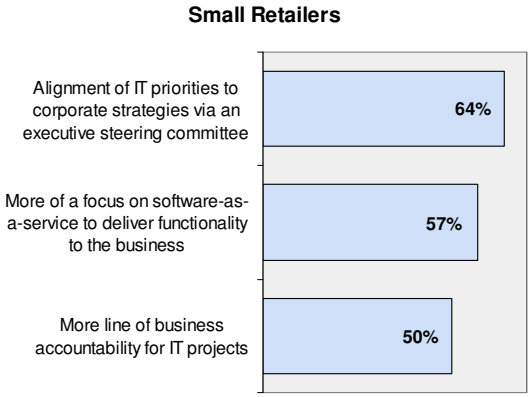
[2] *Software-as-a-Service and the Need for Speed- Benchmark Study: July 2007*, ©2007 RSR LLC

Figure 14:
Opportunities Differ Depending on Size







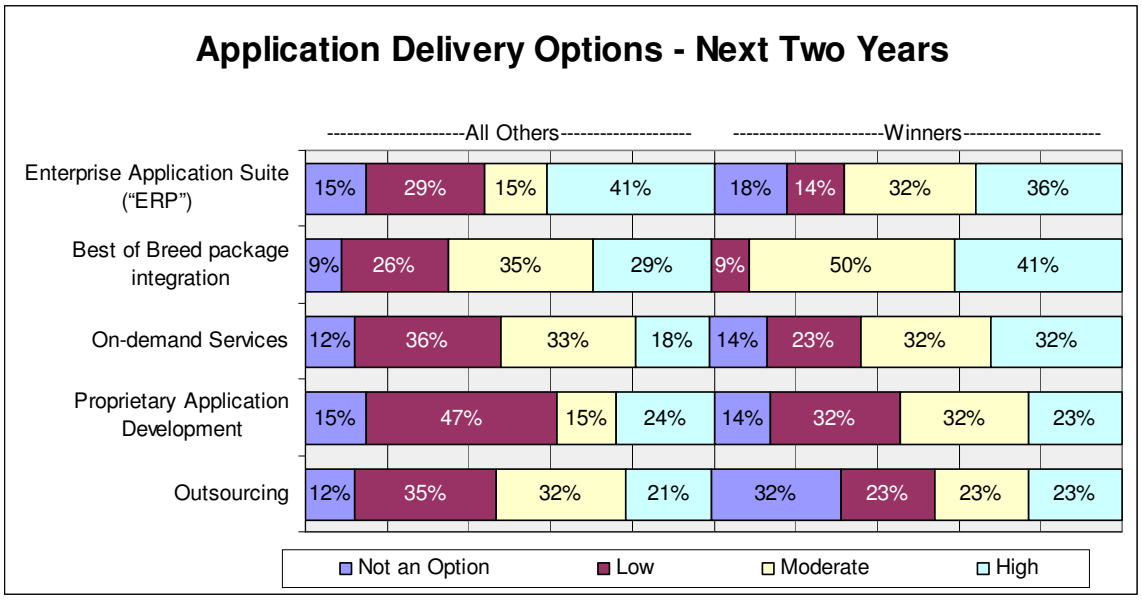


Source: RSR Research, April 2008

Opportunities Vs. Expectations: Evolution, not Revolution

Regardless of retailers' dissatisfaction with the status quo and their view of the opportunities to change how business applications get delivered, over the next two years retailers expect incremental improvement rather than sweeping change. As we have seen, 68% of all of our survey respondents hope that executive prioritization and line-of-business accountability will help them to focus IT activities on those things that matter most to the business. As to how applications will be delivered to the business, different expectations emerge between retail winners and all other respondents (*Figure 15*).

Figure 15:
Retailers Expect to Make Greater Use of Packages & Services



Source: RSR Research, April 2008

Winners have a much higher expectation that commercial solutions, either ERP/"suites" or best-of-breed packages, will be implemented at their companies than all other respondents ("moderate" and "high" rankings). Winners most strongly favor the best-of-breed approach ("high" ranking), whereas other respondents tend to favor ERP/"suites". Winners also have higher expectations for on-demand services, and to some extent, see proprietary code development ongoing – likely as a result of their desire to follow the "best-of-breed" approach, which puts the burden of integration onto the IT organization. This finding reflects what we have seen regarding current portfolios, with winners indicating the largest percentage of a "mix or legacy and best-of-breed applications with custom integrations".

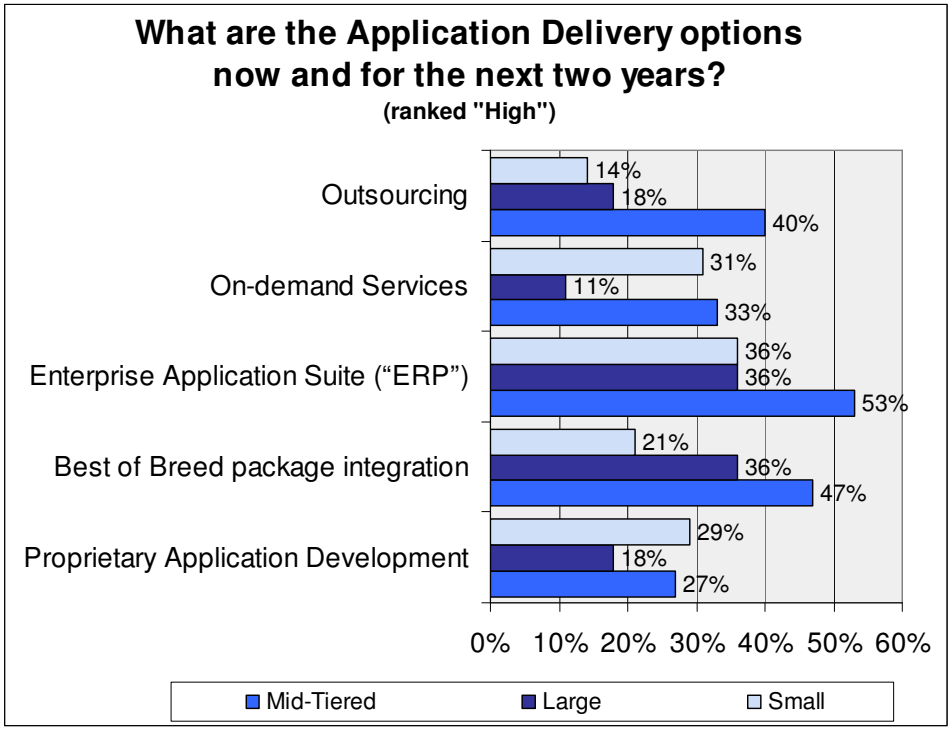
The Mid-Tier Opportunity

When looking at responses by company size, we have seen that mid-tiered retailers (between $250 Million and $1 Billion in annual revenue) spend a greater portion of their IT development resources on maintenance. As the price/performance of technology improved, and with it the cost of acquiring development tools and application licenses, these retailers followed the path of their larger counterparts, developing portfolios of proprietary and best-of-breed packages. But although the capital costs associated with the acquisition of technology and software improved, the cost of an IT professional is the same for a

mid-tiered retailer as it is for a big retailer. Survey responses also show that mid-tiered retailers have had a tendency to build point-to-point integrations rather than employ integration middleware, and this further drives up the maintenance requirement. Because of these factors, and because they have a smaller business to absorb the IT budget, mid-tiered retailers have been forced to spend a greater percentage of their budgets on maintenance of the production portfolio rather than new value delivery.

Looking forward, these retailers have the strongest desire to refocus those resources on new function delivery- but they also want to change the dynamic of their IT value delivery capabilities. On the two-year horizon, mid-tiered retailers indicate higher hopes for both ERP and "best of breed" solutions than either larger or smaller retailers (*Figure 16*). This favorable response is far more pronounced than for the overall response group or winners. Even more pronounced are mid-tiered retailers' expectations for outsourcing; 40% indicate this as a strong probability compared to 21% of the overall response group and 23% of winners. *Clearly,* ***mid-tiered retailers represent the greatest opportunity in the next two years for solutions providers and outsourcers.***

Figure 16:
Mid-Tier Retailers Are Ready To Change



Source: RSR Research, April 2008

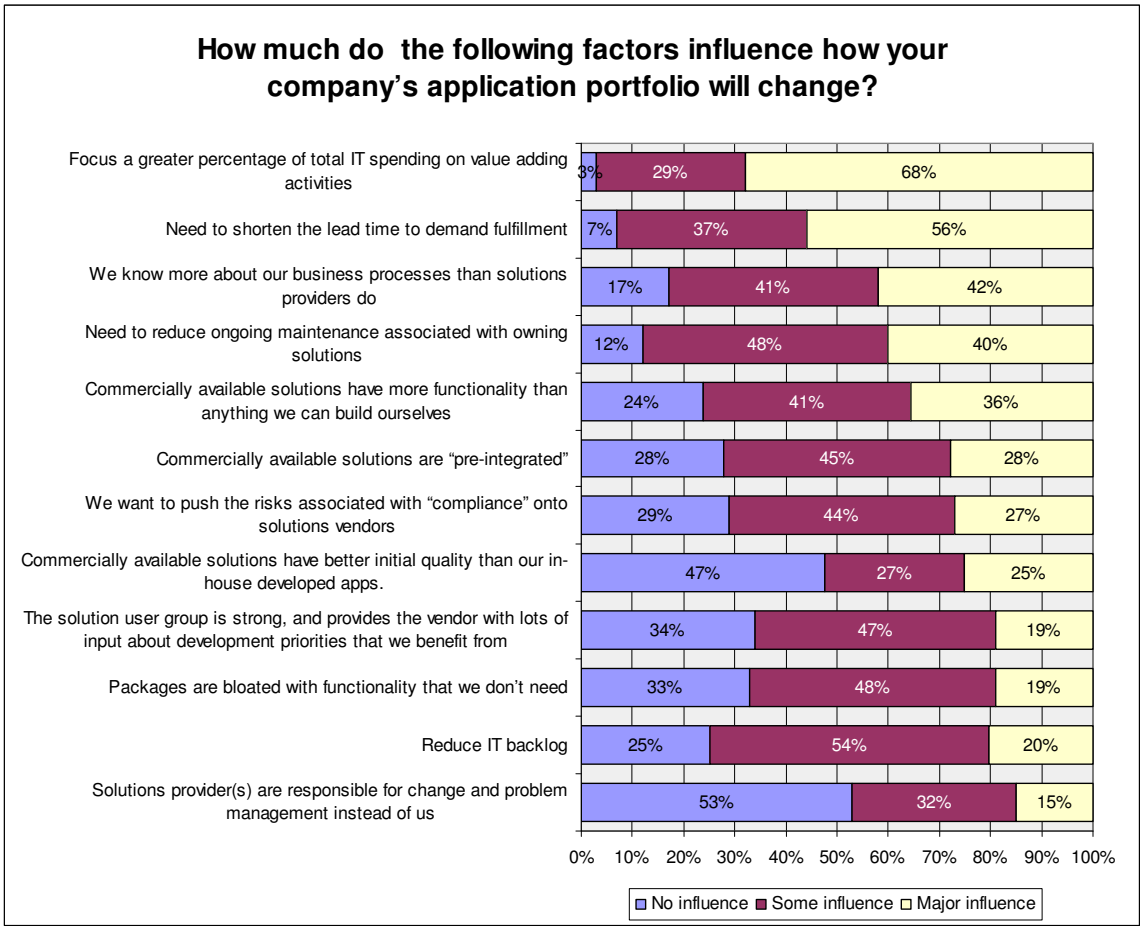
Beyond two years, retailers' expectations become murky. Although many large retailers expect to see more focus on service-oriented architectures and mid-tiered retailers expect to see greater use of on-demand services in that time frame, no one delivery option stands out as a clear choice for the overall group. *Generally,* ***retailers aren't thinking much beyond the two year horizon when it comes to improving IT's ability to meet business demands.***

THE "NEED FOR SPEED" OVERRIDES OTHER CONSIDERATIONS

The need to devote more of the IT "spend" on value adding activities and to deliver that value faster overrides all other considerations, according to our survey respondents (*Figure 17*). Although survey respondents have indicated a general movement in the direction of commercial solutions (rather than continued proprietary development), that doesn't necessarily mean they feel that commercial solutions are "better" than in-house developed solutions.

In fact, 42% of all of our respondents say that knowing "more about their business processes than solutions providers do" is a major influencer on their decision-making. And retailers are clearly ambivalent about the richness of commercial solutions' functionality, with only 36% indicating that they feel strongly that "commercially available solutions have more functionality than anything we can build ourselves". Even less (25%) indicate that "commercially available solutions have better initial quality than our in-house developed apps". Indeed, although only 19% of the overall response group strongly believe that "packages are bloated with functionality that we don't need", fully 33% of winners feel that way (compared to 12% of all others).

Figure 17:
The Need For Speed



Source: RSR Research, April 2008

Nonetheless, the trend toward commercial solutions is accelerating, and this underlines the urgency that retailers feel when it comes to IT value delivery. As responses to our survey show, retailers are willing to put aside their ambivalence about packages in order to "get there faster". However, *solutions providers should use caution when talking to retailers about either their process expertise or the richness of their solutions' functionality*, *because retailers are clearly skeptical of such claims.*

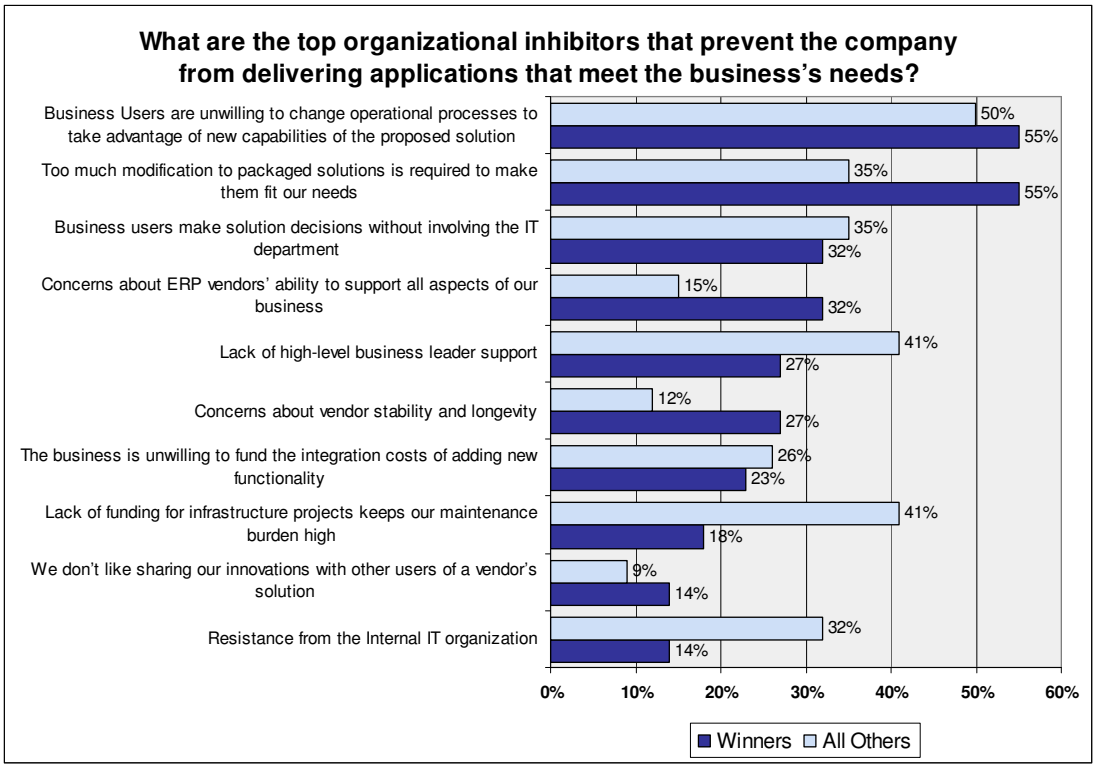
SECTION IV: ORGANIZATIONAL INHIBITORS

UNWILLINGNESS TO CHANGE (THE ENEMY WITHIN)

RSR has seen in its research that retail winners win not by doing what other retailers do "better", but by doing things differently. When it comes to business application delivery, ***winners view the IT function in a positive light more than other retailers.*** Although winners have a more complex architecture – a mix of packaged and proprietary applications integrated with either a middleware integration "bus" or with "point-to-point" integrations (63% aggregate response) – they also do the best job at keeping the IT backlog under 18 months. At the same time, winners, more than any other group, also report that their application backlog is growing.

Even though winners express more satisfaction with the IT function, the reverse is not necessarily true. When we queried respondents about internal inhibitors to the IT department's ability to deliver value, ***winners demonstrated more frustration with the business's willingness to change their internal processes than other respondents*** (*Figure 18*). Perhaps because they *are* winners, the IT department's counterparts in business operations appear more resistant to changing current business processes to take advantage of proposed new functionality (55% compared to 50% of all other respondents), and therefore make demands on the IT organization to change package functionality to fit their way of doing business (55% compared to 35% of all other respondents). For winners, these issues represent the most critical inhibitors to overcome.

Figure 18:
Winners Worry About Missing Opportunities To Improve Processes



Source: RSR Research, April 2008

Although all other respondents agree with winners that "unwillingness to change business processes to take advantage of the new capabilities of the proposed solution" is the #1 inhibitor (50%), these retailers also point to "lack of high-level business leader support" and "lack of funding for infrastructure projects keeps our maintenance burden high" as top barriers to success. Laggards in particular are unsupportive of the IT function: they indicate that these two inhibitors are particularly crippling, with 60% saying that "lack of funding for infrastructure projects keeps our maintenance burden high" (compared to only 18% of winners) and 40% say that "lack of high level business leader support" is a top problem (compared to 27% of winners). Taken as a whole, responses suggest that ***laggard companies' lack of support for the IT function leads them to short change infrastructure investments, and under-estimate its ability to deliver value.***

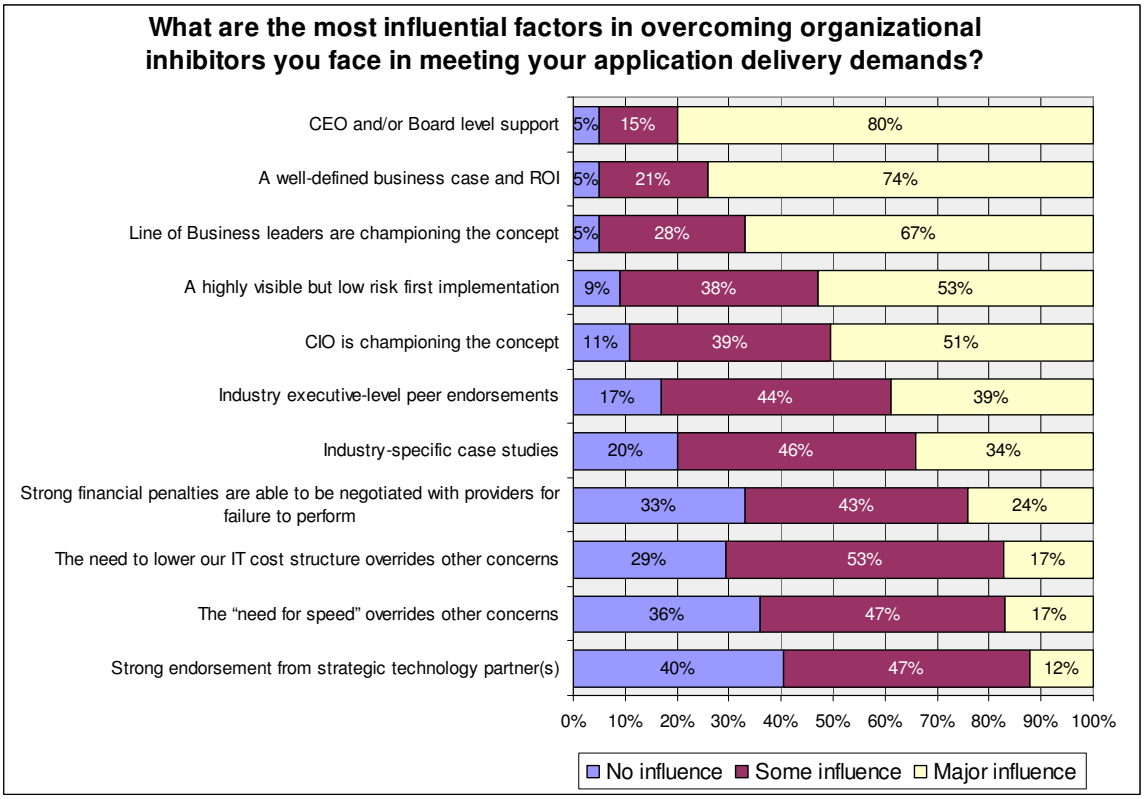
The Fox In the Hen-House?

A surprising number of all respondents - including winners (35% and 32% respectively) - expressed concerns that business users will make solutions decisions without involving IT in the process. Although great inroads have been made to standardize computing technologies in the last two decades, professional IT'ers know that even the most standards-compliant application is still a fragile collection of code, data, and services that must be integrated, managed, and maintained for the life of the asset, and that the *cost to own* a solution is often many times greater than the *cost to buy* one. Large retailers express the greatest concern (41%) about the business making technology decisions without involvement from the IT department, perhaps demonstrating why they feel the most strongly that "alignment of IT priorities to corporate strategies via an executive steering committee" is the top opportunity to improve in the next two years.

Survey respondents further emphasized the notion of using an executive steering committee to establish IT priorities when we asked them to identify the best ways to overcome internal inhibitors. Overwhelmingly, respondents view *business leadership* as the right way to proceed: 80% state that "CEO and/or Board support" is essential to create the right focus on technology-enabled change in the company (Figure 19). It is perhaps inevitable that "a well defined business case and ROI" would rank as an important way to overcome internal resistance, but strong line-of-business support is also very important to 67% of all survey respondents.

These high scores are being driven by mid-tiered retailers, who express the greatest need for the business to step up and champion the transition: 93% of respondents in that group indicate both that "CEO and/or Board support" and "Line of Business leaders" support are critical. As we've seen, these retailers have the biggest maintenance burden caused in great part by their portfolios of applications integrated in point-to-point fashion, and have the highest hopes for getting past legacy problems with packaged solutions, either ERP or "best of breed".

Figure 19:
Responding to Inhibitors: It's Takes Leadership



Source: RSR Research, April 2008

What about the CIO? While the CIO's role is important in overcoming organizational inhibitors, business "ownership" of the solution is critical. Clearly, survey respondents want more "business" sponsorship for IT initiatives, although the CIO's role is still important (only 11% of all survey respondents think the CIO's role has "no influence"). ***Leadership from the CEO & Board of Directors, Line-of-business (LOB) executives, and the CIO is a critical success factor in retailers' ability to take advantage of the opportunities in business application delivery.*** This message is just as important for solutions providers as it is for retailers themselves; neither selling directly to LOB leaders nor selling to the CIO is enough. Instead, decisions regarding business application delivery have the best chance for success when they include both the business leadership *and* IT.

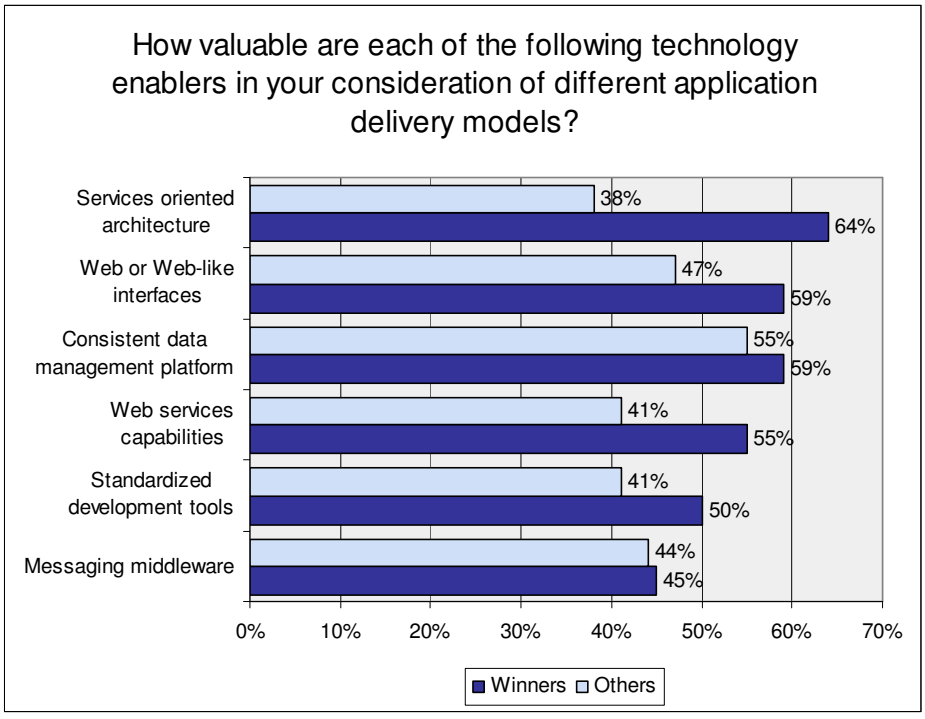
SECTION V: TECHNOLOGY ENABLERS

INCREASED FOCUS ON AGILE TECHNOLOGY ENABLERS

In his 1999 book, *Adaptive Enterprise: Creating and Leading Sense-And-Respond Organizations*, Stephen Haeckel contended that designing the business around adaptive systems is imperative because the rate of discontinuity of change can overwhelm an organization's ability to fix incorrect assumptions in their plans.[3] In the context of business applications delivery, this implies application architectures that enable the business to quickly redeploy digital assets (business rules and data) as business processes change. The good news is that 21st century network-centric technology architectures enable applications to be constructed in such a way that this kind of flexibility is possible. The bad news is that most "legacy" systems that retailers have in their portfolios *aren't* constructed that way, and that can limit the retailer's flexibility to quickly respond to changing business conditions.

Retail winners certainly see the opportunity to implement more flexible, adaptive applications into their portfolios (*Figure 20*). Responses from these retailers reveal that unlike others, winners are focused on technologies that will enable them to "loosely couple" business rules, data, and user interfaces via services oriented architectures (SOA) and web enablement.

Figure 20:
Top Technology Enablers: Winners Want Application Agility…



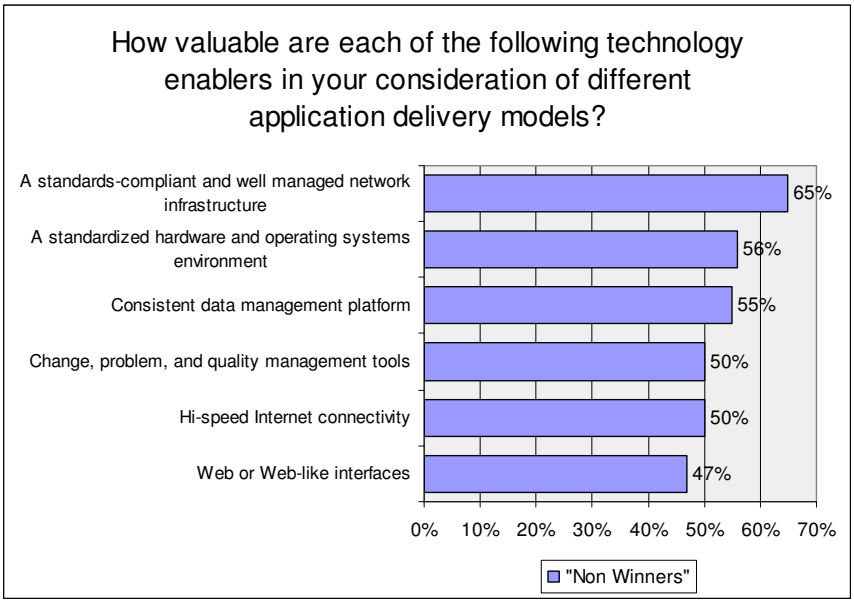
Source: RSR Research, April 2008

[3] *Adaptive Enterprise, Creating and Leading Sense-and-Respond Organizations*, Stephen H. Haeckel, Harvard Business School Press, ©1999 President and Fellows of Harvard College

The promise of SOA in particular is that its adoption as an architectural concept has the potential to transform the information technology assets of a business, making it possible to do more with less, and do it faster. However, highly standardized hardware platforms, operating systems, and standardized and well-managed network topographies are a necessary prerequisite for SOA, as are a consistent data management platform and integration middleware.

Thus it isn't surprising that non-winners are much more focused on standardization of their infrastructure, most particularly "a standards compliant and well managed network infrastructure" and "a standardized hardware and operating systems environment", whereas these rank much lower with winners (who ranked them "very valuable" 45% and 35%, respectively), who take these things for granted (Figure 21). **Winners want to *leverage* their infrastructure to deliver flexible business applications, whereas others are focused on implementing standardized baseline technologies.** This echoes what we learned earlier about inhibitors, when non-winners indicated that "lack of funding for infrastructure projects" is a major stumbling block.

Figure 21:
…Others Need Platform Standardization

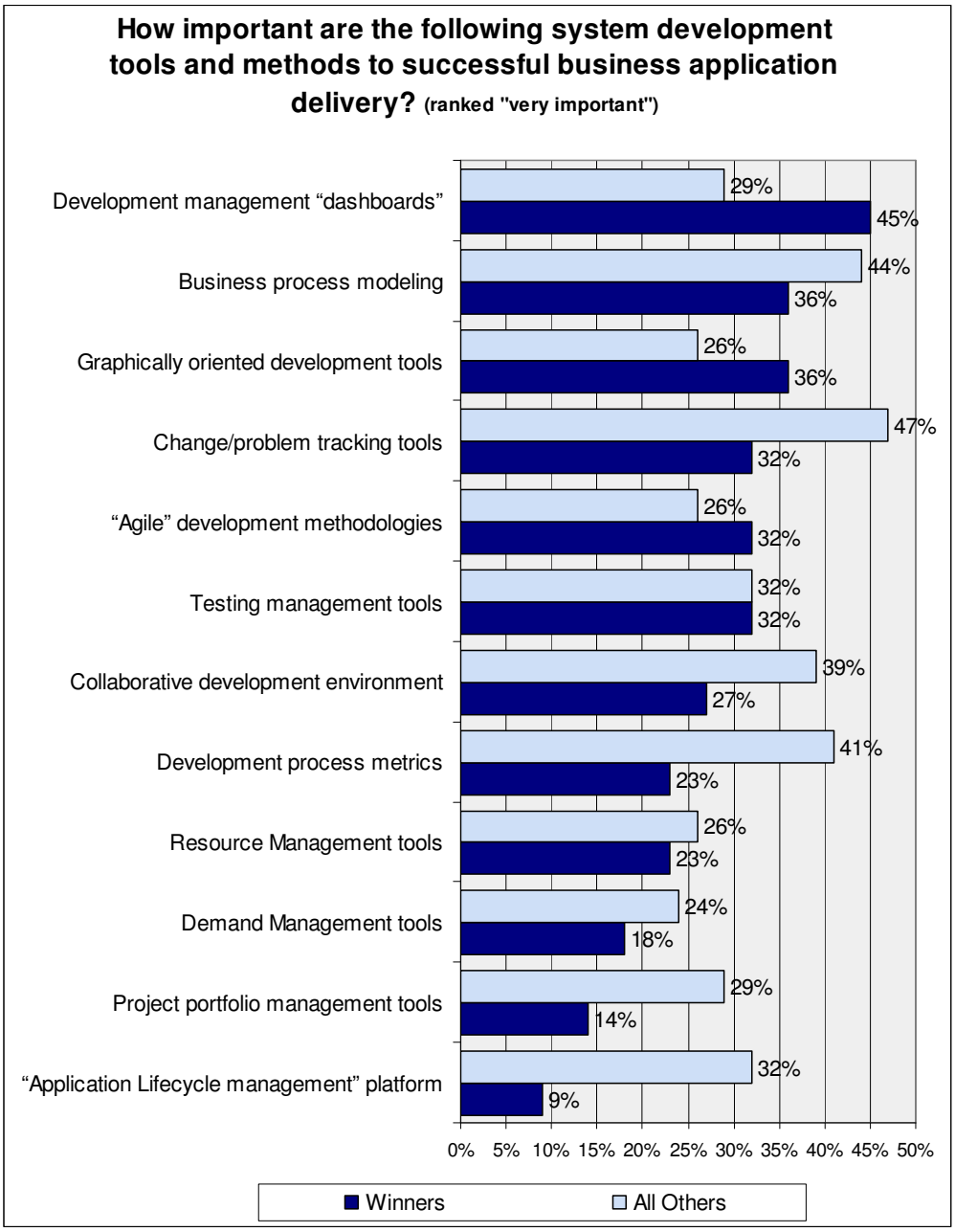


Source: RSR Research, April 2008

APPLICATION PORTFOLIO MANAGEMENT TOOLS FOCUS ON VISIBILITY

When it comes to managing the business application delivery lifecycle from development through production, only winners express a strong opinion in favor of "development management dashboards" as a management tool, while others are much more concerned about the details of the process itself, such as "business process modeling", "problem/change management", and "development process metrics" (Figure 22). Certainly, the process itself is important, but non-winners are more focused on it, perhaps because it is more problematic for them.

Figure 22:
The Application Lifecycle- Retailers Want Visibility



Source: RSR Research, April 2008

As we have seen, winners have more confidence in their ability to deliver business applications on time, within budget, and with promised functionality. Their issue is Executive Steering committee involvement and line-of-business accountability, and so "dashboards" makes sense to them as a useful "next step". Non-winners on the other hand are seeking to improve IT processes that deliver business applications.

SECTION VI: BOOTSTRAP RECOMMENDATIONS

THE VALUE OF LEADERSHIP

Retailers across all revenue tiers agree that ***aligning IT activities to corporate strategy via an executive steering committee*** is singly the best opportunity to improve the reliability and predictability of the IT development process. But it doesn't stop there. While a well defined business case and ROI is important, line-of-business endorsement of IT-enabled change also has a big influence on the company's ability to successfully deliver business applications. Support from the CIO is also critical to success for retailers to be able to improve business application delivery. Lack of strategic prioritization and lack of buy-in either from IT or line-of-business leaders, lessens a project's chances for delivering promised value on time and within budget.

Ultimately, business change, whether IT-enabled or not, requires the endorsement and active support of the CEO. Pennsylvania convenience retailer Wawa's CEO Howard Stoeckel recently stated that any business transformation project requires the chief executive to:

- Break down functional silos
- Force the business to "confront the brutal facts"
- Align strategies and programs
- Mobilize the organization
- "Mainstream" a new way of thinking

IT'S ALL ABOUT "PROCESS"

Even if retailers choose to acquire proven and available commercial solutions, they still may not realize the benefits promised by best-of-breed packages or the pre-integrated advantages of suites if they are not willing to change business operational processes to wring the greatest value from those investments. Retail winners rate this as their biggest internal inhibitor to delivering the value of business applications more effectively. If retailers don't conform their business practices to the implied "best practices" inherent in many commercial applications, then the alternative is to modify the vendor's code to suit existing business practices. This is winners' next greatest inhibitor, since it drives down the potential for business value realization and drives up the IT cost of ownership of the resulting application. ***One of the most important steps in a systems development effort is to define the difference in the current business process and the desired one.*** However, this is often a step that is given short shrift, and the result can be rework or even project failure.

Although non-winners also rate the business's unwillingness to change internal business processes as the top inhibitor, next up on their list of concerns is lack of high-level business support and lack of funding for infrastructure projects. Winners express far less concern about these issues, because their companies understand and appreciate the value of IT enablement.

THE VALUE OF INFRASTRUCTURE

Focusing more of the IT spend on new value-adding development and *shortening the lead time to demand fulfillment* are the top business drivers causing retailers to examine how they deliver business applications. Retail winners seek to leverage infrastructure investments they've made in order achieve

those goals. These retailers know that a well defined and well implemented technical infrastructure enables *flexibility*, and so have turned their focus to systems architectural concepts such as services oriented architectures (SOA) and web-like interfaces as key enablers in their quest to be able to more quickly and effectively redeploy IT assets. SOA's promise is that digital assets (business rules and data) can be architected as "services", and those services can be organized into processes that the business can change without altering the services that are used, thus increasing flexibility and speed and at the same time lowering costs.

Other retailers are focused on a standards-compliant and well managed network infrastructure as a key technology enabler, which is a necessary prerequisite of either SOA or web-like interfaces. These retailers are focused on implementing the baseline technologies needed set the stage for future improvements in business application delivery.

Winners are poised to run up the score– others are in a catch-up game. Laggards in particular undercut themselves with a lack of support for the IT function and that leads to a self-fulfilling prophesy: since they under-estimate its ability to deliver value, they under-invest in the IT infrastructure, and that in turn causes more poor performance.

Distinguish Between "Important" and "Interesting"

Retailers have a reputation for failing to distinguish between those business processes that require proprietary one-of-a-kind IT solutions, and those that don't. ***More retailers today are strategically disadvantaged by the absence of IT-enabled processes that work and only tactically advantaged by their presence.*** Even retailers that have taken the lead in adopting leading edge IT-enabled capabilities have learned that these investments don't have lasting strategic value unless short term gains are converted into long term market dominance, since virtually any differentiating IT-enabled capability will soon be copied by competitors. Commercial applications today have functionally rich capabilities that can enable businesses to drive business value in two ways: first by delivering operating efficiencies that free up capital that can be invested in differentiating services to consumers, and secondly by freeing up more IT resources to focus on value adding development without increasing overall IT costs. Retailers are looking to best-of-breed solutions and "suites" to deliver IT-enabled efficiencies more quickly, and to lower their support costs in the future.

Remember The 80/20 Rule

Not all IT enabled process changes have to be large scale efforts in order to deliver big value. For example, Home Depot found that 80% of their store business involved 15 transactions, so they focused their attention on simplifying the user interfaces for those transactions to gain some early benefit and acceptance for a much larger effort.

Explore New Options

Mid-tiered retailers in particular are ready to break the gridlock in IT caused by the requirement to support several generations of legacy code and old unsupported commercial applications. But even small retailers are looking to get the same kinds of functional benefits from information technology as the largest of their competitors- without the cost. ***For retailers large and small, neither of the two extremes of business application delivery – proprietary in-house development or monolithic ERP implementation – are the only choices.*** Small and mid-tiered retailers can avail themselves of hosted on-demand options

that virtually eliminate initial capital outlays and offer pay-for-what-you-use services that minimize P&L impact.

"Best-of-breed" application implementation is the most favored application delivery model for retailers according to our survey results, and many of today's solutions are both broad and deep in terms of their capabilities. But this choice still puts the burden of integration on the retailer. ***Mid-tiered and large retailers have the opportunity today to implement components of "suites" that offer "natural integration" to other components of the same suite***, when and if the retailer wants the additional functionality. Retail winners express the greatest interest in this application delivery model.

Another important alternative for retailers to consider is to implement ***"network centric" applications*** for the store in much the same way as Internet providers offer their services to the public. For over 25 years (since the advent of POS scanning), retailers have favored a "heavy" store architecture for the simple reason that the network technologies of the day were extremely slow and unreliable. For that reason, retailers replicated code and data throughout their enterprises, essentially establishing "mini data centers" in the stores in order to guarantee high service levels to customers at the checkout lanes. But this architecture also created a tremendous overhead for the company to support remote operations, and replicated operational data and distributed applications. The distributed architecture makes it difficult for retailers to respond to changing business conditions. For example, a recent study by RSR revealed that retailers rated "inventory and order management systems that are not integrated across all channels" as a top inhibitor to more efficient multi-channel operations.[4] A real part of that problem is that the distributed nature of the computing architecture makes real time visibility across the enterprise very difficult to achieve. With today's high-speed digital network technology, commercial applications that are constructed as "service oriented architectures", and the universal acceptance of "web-like" user interfaces, retailers should seriously consider reducing as much store-level code and data as possible by implementing applications on centralized servers. In addition to the store-level capital and ongoing maintenance savings possible, retailers' IT shops could then spend more time and money on "new value creation" and less on "old value maintenance", and business decision makers would have much greater visibility into the enterprise's information assets when they need it.

Although "***outsourcing***" development and/or production applications is not heavily favored by those retailers who responded to our survey, it still must be considered an option, particularly for those functions that are purely "backoffice" in nature. Although outsourcing is usually considered for routinized processes that can be turned over to lower cost labor, there is another value proposition, and this is to use outsource capabilities to apply technology to underserved business processes, and to take advantage of the process engineering expertise of outside resources to improve even important areas of the business that need it.

THE DEVELOPMENT PROCESS ITSELF

Just as retailers have found in almost every aspect of the business, ***application development & delivery is a business process*** that needs to be routinized, measured and possibly optimized. Retail winners want visibility into the process itself in the form of management dashboards. Since retail winners place so much importance on engaging line-of-business leaders, it follows that they would also want business

[4] *Finding the Integrated Multi-Channel Retailer Benchmark Study 2008*, © 2008 RSR LLC, p. 18

leaders to have visibility into the development process without having to become project management experts themselves.

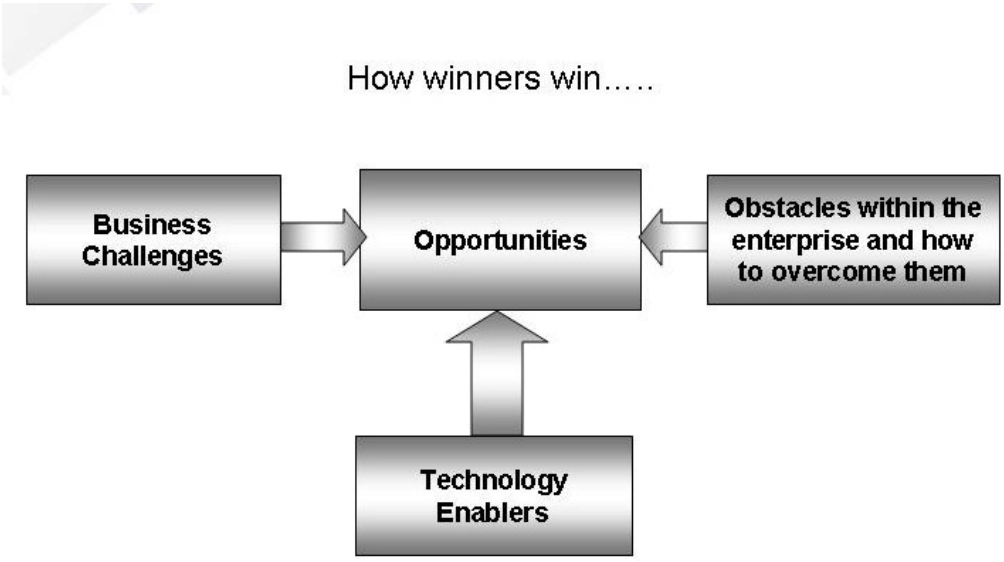
Although winners focus on visibility into the application delivery process, others focus on improving it, giving importance to business process modeling tools, collaborative development tools, developing process metrics, and implementing change and problem management procedures. Laggards are in greatest need of improving the business application delivery process itself, and the least willing to do so. For example, ½ of laggards place "little or no value" on business process modeling, whereas 82% of winners place "some" or "a lot of" value on the capability. Laggards need to fix their attitudes about IT value delivery in general and the development process in particular. ***The correlation between poor business performance and poor support of the IT function is too obvious to ignore.***

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 SPONSOR

Accenture is a global management consulting, technology services and outsourcing company. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. With more than 175,000 people in 49 countries, the company generated net revenues of US$19.70 billion for the fiscal year ended Aug. 31, 2007. Its home page is www.accenture.com.

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.