WHITE PAPER

Netezza Retail Analytic Appliance™

Guided Best Practices for Operational Improvements

Introduction

The macro-economic challenges of the late 2000's have, in many ways, increased the sense of urgency in retailing. It was hard before the recession to avoid markdowns, migrate toward localized assortments, fight out-of-stocks, and work on pricing and promotion strategies. Today, the stakes and challenges have increased. A number of experts believe the new shopping habits of this time will continue long after the economy has stabilized and even improved. As a result, it's likely the need to be super aggressive in retail merchandising, marketing, supply chain, stores and management will continue.

So what are the retailers driving toward? What are they fervid about? What needs to be answered in real-time? What does the staff need to be focusing their questions, answers, and most importantly, actions around? The answers to these questions can be delivered daily with the right kind of analytic appliance, in a guided method that leads to seamless action.

Fundamental Changes a Retailer May Need to Implement for Positive, Significant Changes in Business Benefits

- More structured management approach to how a merchant, or category manager uses their time allocated for analytics and intelligence, including specific business processes embedded into software that result in data-driven actions
- A culture of immediate, close-to-real-time response latency when a business person asks a question—which is the only way to foster a 'stream-of-question' process that makes decisions truly more intelligent
- An approach to use software that guides users to operational actions--to transform the users to be more active and data-driven business performers
- Integration of the online channel data—be it inventory, demand plans, customer data, promotions, and more—with the store and potential catalog or other channels
- Close collaboration between Merchandising and Supply Chain boiling down shared business benefits to component metrics and new operational processes

Business Benefits

One of the key questions today related to investing in improvement of business metrics is 'will this investment have an impact on my balance sheet in the next year or sooner?' If the value arrives beyond that horizon then the investment is not meaningful. The balance sheet requirement points to another shift in the thinking of the retailer 'investor': no longer does a prospective '3-5% increase in sales' seem a likely outcome from an analytic process in the current consumer climate.

Shoppers today are resistant to moving to higher price points, to selecting anything but 'required' items in the basket, and to moving outside core categories. This creates a behavioral 'ceiling' now in place dampening the effect of pure growth strategies. There is, however, a firm belief that a main lever on the balance sheet—inventory—is a needle that can be moved in a positive direction. When inventory has a direct impact on the top line—for example, in cases of out-of-stock reduction—the retailer has a double bonus. Achieving effects like improved inventory turns or intelligently decreasing cost-to-serve are places where small movement means big impact.

However, simply assuming insights and visibility from analytics leads to business benefit does not always play out. There are two keys. The first key is to reduce risks and hurdles that block business people from access to the insights. The second key is to provide the insights in a context of a business action. It is business actions, not insight, that remove lost sales and move inventory faster.

So what business benefits should a retailer target when implementing an analytic application? The benefits can center on making the inventory more productive. Can we achieve the same sales with less inventory? Can we achieve greater sales with the same inventory? If so, how? Here are twelve places to start:

1. Reacting to and resolving out of stocks in real-time
2. Reducing out of stocks proactively by identifying patterns
3. Reducing overstocks through visibility and management
4. Ending a season with lower markdowns and out-of-stocks
5. Drawing the shopper out to shop more of the store
6. Migrating shoppers to private label where appropriate
7. Reducing cost to serve through more supply chain visibility
8. Increasing turns via localized assortments tailored to demand
9. Decreasing the number of markdowns and integration with price optimization
10. Flushing stale inventory from a slow-moving environment
11. Delivering more relevant promotions due to customer-centric retailing
12. Streamlining inventory across retailing channels

It is typical that capitalizing on even one of these areas leads to a very fast investment payback.

One Clue To Know When Your Business Benefits Arrive

One of the symptoms of a retailer running with tight but correct inventory is an accentuation of the power distribution across products. The power distribution maxim typically shows up in 20% of your items accounting for 80% of your business. The 'long tail' of sales per SKU will become more pronounced. Why? First, prior sales of the top products have been dampened by out-of-stock problems. The order triggers may have been set too low, or the store hasn't been equipped to handle product movement, or product is in the wrong DC—an analytic appliance can help solve identification of root cause. Second, when the imminent out-of-stocks are avoided, the shopper won't switch down the SKU tail to substitutes (lowering sales in the tail), so the sales increases won't occur down the tail. Third, category analysts or merchandising assistants will be better able to identify the new-item 'stars' and future top sellers, migrating them from the tail to the head. Finally, less SKU rationalization happens when sales are focused among a core of blockbuster items and when inventory management is tight (sales are not supported by more inventory). With less need of inventory management, the items at the end of the tail—right or wrong—end up staying. As a result, your 'long tail' will be more pronounced and make for a healthier business.

Transforming Managers and Analysts to be Data-Driven

In today's work environment, managers and end users are spending more and more of their time in meetings or otherwise away from their desk. Industry analysts have called out one of the secrets of analytics deployments: that in many cases, fewer than 20% of the end users are using the analytic application. In retail, the category analysts, the brand analysts, the merchants, all of them have only a handful of hours a week to sit and query data toward answering business questions and act. Next, add in the temptation for an average user to avoid using their analytic tool and resorting to being a 'view-only' user of Excel. In the end, the time invested in analytics must be focused, goal-driven, high-performing and effective.

One question that arises is: what if we could double the number of end users who actively validate their actions with data? Would it be beneficial? Yes—most everyone faced with this questions wants the tools to be used to their maximum potential. So how can usage be increased? It's often the case that doing more training on the same unused tool has no impact on increasing usage of the tool. An analytics application is either usable or it isn't after the first training. It isn't training, and it isn't even the front-end user interface. There are three key factors to adoption that aren't often considered:

- **Direction** - Does the analytic tool provide a step-by-step process for a user to intuit what they are to do next, and how it relates to their overall business process? Does it cue and direct them along the way? Or does each answer give rise to more additional questions?
- **Action-oriented** - Does each analytic process in the tool end in a decision or action? Or is the analysis free-flowing and stream-of-thought?
- **Data & Metric Perspective** - At any given time, does the user know exactly what data they are (and are not) looking at: what items, promotions, stores, dates, and more? Do they know how the metrics are defined? Can they sum up what they are looking at, and can the members of their or other teams recognize and interpret that data in the same way?

Unfortunately, most analytic tools are designed for power users. These users are often the most data-hungry, have the most time for doing analysis, and are most frustrated with the previous analytic tool. The consequence is that when the average end user is trained on a tool designed around the power user, they don't have the time, capability, or interest to use it. The retailer ends up with a population of under-served users that are handling the bulk of the sales volume without access to data they'll use. What is really needed is a structured approach for the bulk of the users, yet leaving the advanced users being able to go outside the directed, action-oriented analytic tool.

Netezza's Retail Analytic Appliance™ introduces Playbooks—directed analytic business processes to make specific actions 'data-driven'. Playbooks are a tool that can be used by all users alike. However, they are designed for the needs of the average user. They are designed toward a specific action, such as reducing overstocks or taking advantage of a sales trend. They cue users through each step in the process. The user never has to wonder how to use the tool; they just need to absorb the answers to the business questions in that Playbook. What is the result? A leader can orchestrate or users can opt to run 'plays' and the bulk of the team—not just the specialists—are suddenly scripted and guided toward the same elite analytical process previously only natural to the elite user.

Ideal for the average user of analytics

- Exception-driven insight directs the user to high-value areas
- A directed process guides users toward right action
- No metric-heavy dashboards to 'interpret'
- Clarity on the data in view at all times

Ideal for the power user of analytics

- User identifies high-value areas in metric-rich dashboards
- 'Stream-of-question' analytic capability
- Fast performance enabling high output of queries
- Ability to drill with depth and breadth in real-time

Using Playbooks to Improve Operations and Margins

Playbooks—these data-driven work flows that result in smart action—will improve business metrics. Here is an example of merchandising with and without Playbooks:

Before

Suzanne is asked to review the total inventory for her department. Why? Management found data that showed them there's an overstock issue and that Suzanne's department was one of the culprits. Suzanne digs into specific reports that require her to go back and review her training materials, ask some questions to one of her peers known to be a power user of her analytic tool, and run a report to drill down into where the overstocks are and for what items, segments, classes, etc. Unfortunately, Suzanne's process is based on her custom reports, and in the process she leaves out some segments and business rules that more experienced users remember. As a result, Suzanne only identifies some of the offending items and actually includes some items in her results that are selling through faster than she expects and are not an overstock risk. Since her metrics are typical and based on history, she isn't looking at imminent overstocks and being proactive to solve future problems, but rather looking at what is overstock today. Susan writes down on a scratchpad the segments and items she needs to pare down, and gets into her merchandise management application. She manually enters the information and sees which purchase orders are tied to these items. She picks some and cancels them. She writes an email to her boss listing the purchase order total she cancelled.

Obviously, there are sub-optimal steps in Suzanne's process. And Suzanne is considered one of the better merchants out there. Let's take a look at how the process works if Suzanne is using a Playbook from the Netezza Retail Analytic Appliance.

After

Suzanne identifies that her department is becoming one of the leaders in overstock and wants to resolve this before it becomes an issue. She proactively notifies her boss and runs an 'Imminent Overstock' play. Suzanne knows that this play will fix her issue, and once that's done she can go back and look at other analytics that will tell her how her department ended up here so she can avoid it in the future. When Suzanne runs the play, fortunately she doesn't have to review materials or ask for help. The play, as it unfolds, tells her each next step—and as she's running it for a specific action to occur, each sub-step is logical and requires no interpretation. Also fortunate is that the best-practices of creating the analytics along the way were gleaned from the power users in Suzanne's company, so she doesn't have to remember odd factors about the data. Suzanne clearly sees where she is having issues today, and where she will tomorrow. Suzanne then sorts on her metrics to decide—based on data—which purchase orders to cancel. She realizes she might want to run another play for deciding how and when to move inventory across DC's. She doesn't have to write anything down—she moves her list into the operational system and cuts. Along the way she saved some reports into .pdf files she can mail to her boss as she explains her actions at a summary level.

Which merchant/category manager/supply chain analyst do you want working for you? If you are an IT support personnel, which business person do you want using your system? Which one is going to deliver better business performance and help the balance sheet?

To best improve retail performance, you want your Playbooks to cover all the major areas of actionability. These include:

- Overstocks
- Out-of-stocks
- Trends & Returns
- Managing Seasons
- Product Switching
- Assortment
- Pricing & Promotions
- Order Management
- Cross-Channel Optimization

Lower Risk with Appliance Approach

Of all the disciplines within IT applications, none has remained as architecturally modular as analytics. It is an industry standard for an IT shop to select a mix of best of breed or corporate standard components and integrate them to deliver analytics. When it comes to operational applications, few would imagine standing up a custom mix of modular best-of-breed components when a cheaper, lower risk off-the-shelf solution is available. This realization is suddenly dawning on CIOs in retail as, for the first time ever, they see the importance of speed to insight, the critical nature but historically low usage of analytics, and the sheer time it takes to install, configure and integrate the various components needed to deliver an analytic architecture.

There is another way. Netezza is a pioneer in the delivery of an 'appliance' approach. By pre-integrating, pre-testing, and implementing the best-in-class technologies, an appliance can deliver lower risk and better performance. For the first time, Netezza has expanded its appliance footprint to include application content and further reduce risk for customers. Additional benefits of an appliance approach to analytics include some of the make or break factors in project success—never before attainable together:

- Packaged retail best practices and proven business value
- Fastest time to production, user value and business impact
- Much lower total cost and risk of implementation delay or failure

Conclusion

A retail analytic appliance with the right strengths can move your business forward in new ways. From organizational alignment to improving metrics to understanding customers, these 'new ways' encompass many facets in a retailer. All the changes drive increased usage of data in business processes, more productive inventory on the balance sheet, and less risk for the retailer investing in technology.

Too many retailer investments in technology become focused on just that: technology. Netezza proposes an investment in business improvement. Business improvement is how a project will be measured. Simply providing an 'enterprise data warehouse' or a 'library of business metrics' will not operate themselves into profitability. The decision makers in your business drive profitable decisions and actions, or miss them. It's not about providing them insights. It's about providing them insights at their request, in actionable formats, as part of their job, their business processes. This is how a retailer can use analytics to increase margin, decrease inventory, take advantage of trends, rid stores of stale inventory, and take localized action.

Many of the reasons a project doesn't live up to the improvement goals have been resolved a priori in our analytic appliance. Seasoned IT organizations that have delivered multiple analytic technologies will focus on system performance, support, speed of implementation, ability to deliver business value—all items that are traditionally hard to come by. It is possible to deliver all these requirements. But doing so using the old approach is incredibly hard—and, based on historical figures—prone to failure.

Netezza is transforming the way analytics are delivered to retailers. Until today, there has never been a completely integrated technology stack, from hardware and storage all the way to end user interface, that's pre-tested, shrink-wrapped and delivered to your door. Huge benefits accrue in terms of reducing time to delivery of business value, dealing with a single vendor, reducing downtime and headaches, and having a very simple support profile. We believe this is the model that others will attempt to copy in that is the only sensible method to deliver analytics. Expensive, bespoke application integration to corporate standard tools and technologies—when a safer, faster, more durable alternative exists with best-in-class components—will gradually die away. And the business numbers will look the better for it.

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