
Bringing Effective Science to the Art of Merchandising

The current economic uncertainty has intensified the urgency to make more precise pricing and inventory decisions. Traditionally, retailers have relied heavily on the skills and expertise of the merchants – the art of retail. However, future success will depend equally as much on the ability of advanced software to harness ever-expanding data to enable faster, smarter decision-making – the science of retail.

Revenue Management and Advanced Planning is the term frequently used to describe this analytical software.

Science Drives the State of the Art.

Retail has changed dramatically, along with many of the old paradigms that we use to associate with the business. Companies like Wal*Mart continue to blast past traditional boundaries of scale while continuing to be effective merchants and operators. It is no longer enough to have a good concept—achieving your plans requires aligning the capabilities of your people and technology with your business strategy. It is also no longer enough to be focused solely on sales and store expansion—effectively managing the costs of the business will gain increased importance in a slowing retail environment.

Revenue Management and Advanced Planning analytics provide the technological horsepower to drive effective recommendations from the proliferation of store and SKU data. These

systems analyze historical data to identify merchandise lifecycles, seasonal indices, price-elasticity factors, and inventory effects. Once merchandise behavior is understood, they employ optimization techniques and present recommendations based on current demand and a retailer's business rules and operational constraints. The key is that these systems are continually updating recommendations with the latest data. Best of

breed systems support decision making at any level in the location and merchandise hierarchies, down to the Store/SKU level. In other words, retailers can make decisions centrally and implement them locally. The ability to take discrete store level actions increases the effectiveness of the merchandising organization and improves financial performance.

New Capabilities. Revenue Management and Advanced Planning technology leverages sophisticated data-handling, forecasting and optimization techniques to recommend action plans. Output in the form of detailed recommendations informs buying, allocating and pricing decisions to drive increased sales and gross margin.

Better Buying Decisions result from assortment planning down to the Store/SKU level with a combination of top-down and bottom-up analysis. Top-down financial goals can be compared to bottom-up forecasts derived from sophisticated post mortem analysis of true demand — what would have sold if the inventory had been available.

Demand-Driven Allocation Recommendations are based on Store/SKU forecasts and take into account operational constraints and business rules. This enables retailers to manage initial allocation and in-season replenishment for both short lifecycle and basic products.

Profitable Pricing Recommendations come from first of their kind systems that automate analysis to identify critical pricing decisions in three areas: initial prices, promotional plans (i.e.,

Using Revenue Management to Improve Markdown Management.

- **System Functionality:** *Identifies the optimal timing and depth of markdowns to clear merchandise within a specified time frame and maximize gross margin.*

- **Applicability:** *For short cycle merchandise in all retail segments (e.g., seasonal and cosmetic aisles of drug and grocery stores or fashion apparel and accessories in specialty and department stores).*

- **Results:** *As reported by ProfitLogic, enterprise rollouts of their Pricing4Profit application drove a 7X ROI in first season of use at a specialty retailer and a 9X ROI in first year of use at a major department store.*

items, vehicles, pricing and promotional buys), and markdowns (timing, depth and locations). This optimizes sales and gross margins and enables retailers to achieve their marketing objectives.

The recent attention these applications have been getting includes promises to maximize return on your inventory investment and reduce time-consuming spreadsheet analysis

Results are Real. From what we have observed, markdown optimization is probably the lowest-hanging fruit. Early adopters like JCPenney, ShopKo and Casual Male, are reporting gross margin dollar gains of **5 – 15%** through the use of markdown optimization software. Sell-throughs and inventory turns should increase, while markdowns should decrease along with carrying costs. The payback on investment appears to be relatively quick. Additional applications for assortment planning, allocation, in-season replenishment, initial pricing and promotional planning have also demonstrated the ability to drive sales and margins. All of these should increase the speed and accuracy of decision-making.

The value may be most significant when these software applications are fully integrated throughout the product lifecycle and are generating recommendations based on a common forecast. For example, if replenishment can be informed by markdown optimization to recommend the Store/SKU combinations with both the highest demand and the greatest residual profit potential, both sales and margins can benefit.

Retail Revenue Management & Advanced Planning brings better science to the art of retailing. Great merchants with extensive knowledge of market conditions, an eye for spotting trends and an intimate understanding of their customers are still a critical success factor for profitable retailing. This technology is clearly not a substitute for, but a complement to the experience-based judgment of savvy merchants. Forward thinking retailers will combine the two to drive overall business performance.

Getting Going. A critical success factor is to get buy-in from senior management and the merchants to lead the change. This leadership is necessary to eliminate any fear that the new technology might diminish the role of the merchants. These systems produce recommendations that require informed review, and merchants need to believe that the software can help them make smarter, faster decisions and ultimately be more successful.

While Revenue Management and Advanced Planning systems are typically implemented with minimal disruption, they do require integration, system configuration, change management, and process realignment. Another critical success factor is assembling a cross-functional team to spearhead the effort. Their first step is to evaluate merchandising processes and prioritize opportunities. The next step is to select the right vendor. The best vendors will have a suite of products to address your needs and a methodology to help you understand the impact on your business.

Next month we will look into criteria for evaluating solution providers and applications. In the meantime, we hope you will consider how these applications may improve the effectiveness of your organization, your overall results and ultimately, your competitive strength.

This article is the first of a two-part series from Anne Brouwer, a McMillan|Doolittle partner who leads the firms' fashion apparel, accessories and home practice. Anne is a leading authority on merchandise optimization systems.

Bringing Effective Science to the Art of Merchandising: Part II

Last month we talked about the development of Revenue Management and Advanced Planning software and how these applications enable retailers to make better decisions in buying, distributing and pricing their assortments. **Gross margin improvements in the range of 5% to 15%** are the initial results reported by both vendors and retailers who are implementing these systems. However, for the company to realize these improvements, it must choose solutions that fit the needs and objectives of the business. This month, we will explore some of the critical technology issues to consider when investigating solutions and suppliers. Think of these as a starting point to define key technology success factors, and add issues unique to the situation. Next month we will conclude our series with a look at how to prepare the organization.

What Should We Look For In The Vendor?

The company will have a long-term relationship with any software provider it selects, so be confident that the relationship will be one of partnership, trust and accomplishment. Many of the vendors in this area may be new to the organization, so give some thought to what you want — from a relationship and the product(s).

- *Does the company need only a specific solution, such as a markdown optimization system or a suite of solutions to help improve performance across a number of business processes (e.g.,*

assortment planning, allocation and promotional planning)? Vendors with a broad set of solutions may be the best choice; even if the company is focused on just one process, those needs may expand in the near future. As we said last month, the greatest benefit may come from fully integrated solutions that manage a product through the entire lifecycle and generate recommendations based on a common forecast.

- *Does the vendor demonstrate an understanding of the business needs and constraints? Can they express how they will address these effectively? Have they built business rules into the system, which can be modified for how the company plans to run the business? Or will significant additional development and customization work be required?*
- *Can the vendor point to experience in retail merchandising processes and a track record of success, or are they just starting out? Were the solutions developed with input from retailers who have inventory productivity expertise?*

We believe it is important that both the merchants and the IT group should participate in reviewing the marketplace to ensure critical technical and business concerns are addressed. This will help the organization build a better understanding, define goals and surface issues early in the process.

What Should We Look For In The Technology?

Revenue Management and Advanced Planning software applications are complex. But the process of selecting analytical applications that fit the business can be

de-mystified by focusing on critical technology success factors. Consider the company's readiness in terms of data and technical infrastructure, and how well the vendor's solution fits your environment.

How Ready Is Our Data?

The first step is an honest assessment of the quality of existing sales and inventory data. Understand the data currently available in the company and how it aligns with long-range business strategy. At what level does the company capture data? How accurate is the data? How much history does the company have? Will the condition and quality of the data enable the company to meet its goal for a new system? Understand what gaps exist in the data required by application and vendor to determine what adjustments to make and what investment is required. While some business performance improvement can be realized even under less than ideal conditions, the old adage of "garbage in, garbage out" may apply if the data does not meet minimum requirements.

How Ready Are Our Current System Capabilities?

Other factors to consider at this stage are data storage capacity, processing power and system management. Additional data storage, hardware or resources may be required. If you want to minimize the initial investment and system risk, explore various options, including whether it is smarter to start with a hosted application run on the vendor's technical infrastructure. Essentially the company would outsource the work and the vendor acts as an ASP (Application Service Provider). That gives the company time to evaluate results and

make the appropriate investments to run and manage the applications internally.

What Are Our Requirements for System Functionality?

The most important consideration is how the applications really work. This is also where the team needs to think about what it will take to improve the decision-making capability centrally and the execution of those decisions at the store level. They need to understand how the system will work, whether it is scalable, flexible, easy to install and easy to use. Key questions about system functionality are shown in the box below. Use these to compare the various products in the marketplace.

Why Should We Act Now?

It is true that Revenue Management and Advanced Planning technology is new. Unlike many of the current systems, which may have only periodic upgrades or enhancements, many of these applications are still in early release stages. Some of the more advanced capabilities may be coming in later releases, which should be taken into account as part of the plan. However, we don't suggest the company wait for further development to get going. As we said earlier, there is real and immediate payback. *And waiting may just give your competition a chance to beat you.*

Because these solutions are in the early stages of development, the company may have an opportunity to participate in joint development with one of these vendors. Before deciding, assess what that means in terms of time and effort from the organization. In addition, we point back to the first issue, which is whether your chosen vendor will be a strong and reliable partner. If the company is not confident of this, either they have the wrong vendor, or joint development may not be a good option for the company.

Next Steps

In order to assess the best fit solution for the business, the organization needs to understand what changes will occur in business rules, marketing approaches, timing of reports to support key decision-making activities and any other impacts on the overall operational strategy. That requires dialog throughout this process, from senior managers, user groups and the IT team. We've seen too many major investments go awry after implementation because of misunderstanding and miscommunication. Start early and keep talking.

Next month, we will look at the critical success factors in preparing the organization for implementation and the impact on key user groups.

This article is the second of a three-part series from Anne Brouwer, a McMillan/Doolittle partner who leads the firm's fashion apparel, accessories and home practice. If you would like more information regarding this topic, please call Anne at 312-822-9149 x219.

Critical System Capabilities

Scalability

- Can the systems handle the volume of SKUs and Stores?
- Will it be able to support the company growth?

Flexibility / Usability

- Does it support existing business constraints, processes and workflows?
- Can it work with the merchandise? (e.g., short lifecycle, seasonal, and staple products that may have spikes in demand)
- Is the system intuitive to use and can users customize views to their preferences?

Integration / Implementation

- How will it interface with existing systems?
- If there are currently multiple systems to support (due to consolidation, acquisitions, etc.), can this software support all of these?
- Is data conversion required to install this solution?
- How long will it take to implement?

Analytical Approach

- How does it model demand, elasticity and seasonal effects?
- How automated is it (i.e., does it require manual inputs to complete analysis)?
- Does it reduce the potential for human error?
- How is it different from the current process?

Bringing Effective Science to the Art of Merchandising: Part III

This is the last article in our series on Revenue Management and Advanced Planning software. Previously, we covered how these applications work and key considerations in the selection process. Initial results are **gross margin improvements in the range of 5% to 15%**. Our last topic is how to prepare your organization for this kind of success.

The biggest challenge with buying any technology is not in the selection or integration process – it's getting the organization to understand and use the applications appropriately to achieve business objectives. Sadly, we have seen firsthand how quickly users can find shortcuts and workarounds that shortchange benefits. Whether this happens by intent or by accident, the root cause is usually the same – lack of understanding. Don't let it happen to your company. We believe that organizational readiness is the “make it or break it” proposition.

Organizational Readiness – a “Make It or Break It” Proposition

Revenue Management and Advanced Planning software can affect almost all key functional areas. You need a cross-functional team of your best and brightest to lead the change. The group should define the business requirements, identify necessary operational changes and champion use and benefits capture.

The most difficult effort is preparing the merchandising organization. Initial training in navigating the system is the easy part. The challenge is educating users to change their decision-making processes to benefit from the system. Users must understand how the system works, how it impacts their jobs, and how it empowers them to make better decisions.

Key success factors for the merchandising organization include:

- **Capture Business Rules:** *Business rules – must be codified and incorporated into the system. This effort may take some time, as they depend on being able to articulate things like merchandising strategy as well as overall systems, organizational, and data processes. Involving the cross-functional team is important so that they understand how the factors they consider in making decisions will be used by the system. Robust testing is key to preventing unintended consequences.*
- **Modify Business Processes:** *Business rule changes, new merchandising objectives and many other factors can impact how you manage the business. Anticipate likely changes and be prepared before implementation to provide structure and guidance to the users.*
- **Monitor the Process:** *Quickly catch those who are backsliding into old habits. Regularly review how people are working with the new system. Managers need to help users develop critical thinking and decision-making*

skills. Super-users or experts need to be ready to provide remedial training for those who struggle with the application.

- **Measure and Communicate Results:** *Spread success stories about where it is working and take quick action where it isn't.*
- **Set Competency Requirements:** *Define competency requirements and establish a process to evaluate users over time. Performance measures may need to be modified. For example, it may not be relevant to measure how many units were allocated, but it may be critical to measure effective in-stock or sell-through rates. Incentives may need to be realigned with changes in performance measurements.*
- **Develop Ongoing Training and Education:** *Turnover is inevitable and new employees will require similar education and coaching as that provided during implementation.*
- **Encourage Critical Thinking:** *Even with the latest technical and analytical capabilities, these new systems cannot replace experience, knowledge and critical judgment. Marketplace and economic conditions, competitors' activities and other factors cannot be built into an algorithm – your merchants must account for these when they review the system's recommendations. If the users don't make this effort, and if management doesn't monitor and challenge the judgment and rationale, results may fall short of expectations. This isn't the fault of the software – it can't replicate this kind of intelligence.*

In addition to the merchants, the stores organization, marketing, and supply chain and warehouse operations are likely to be impacted. Operational changes must be implemented. Some key considerations in preparing these groups include:

- **Stores Readiness:** *Full integration with store systems is one aspect. Business practices, such as how merchandise is presented, priced and signed, may require modification. Workloads may be impacted. Timely and effective communication and the right processes will help the stores to execute effectively.*
- **Operational Readiness:** *Identify impacts to critical functions such as marketing, allocation and replenishment. Opportunities can arise, such as making pricing decisions closer to receipt or advertising dates. Challenges can also arise, such as the need for more frequent replenishment. Integration of Revenue Management and Advanced planning software with other key systems, such as price management, must go smoothly. A cross-functional team can think through and monitor key business processes, and increase the degree of success.*

Leadership and Sponsorship—Your Insurance Policy

Leadership is demonstrated when your entire management team communicates key issues throughout this change and is responsive to feedback. Communication must be frequent and ongoing – keep monitoring progress, answering questions and sharing success stories.

Sponsorship means that business leaders are visibly driving this initiative. Sponsorship also means supporting users, being accountable to the results and taking proactive steps to drive continuous improvement.

Your entire management team should consistently communicate key messages:

- **Business purpose:** *Explain in clear terms the business purpose and why the company wants this new software.*
- **Benefits:** *Communicate expected benefits and results measurement plans. Specify business benefits (e.g., improved assortments, better alignment between demand and allocation) and financial metrics (e.g., improved sell-thru, sales and margins). In addition, point out the many benefits to the users, such as less time spent gathering and analyzing data and more time spent making sounder, faster decisions.*
- **Ownership:** *Demonstrate executive commitment. A fast way to quell skepticism is to show business leaders are fully committed to this change.*
- **Accountability:** *Make it clear that everyone is accountable to business improvement and that progress will be monitored and measured.*

One last key point about leadership – you will likely need to modify the way you manage the business to get the greatest benefit from Revenue Management and Advanced Planning software. In our first article, we talked about new capabilities of these systems and how they leverage sophisticated data-handling, forecasting and optimization techniques to recommend action plans.

Optimization is based on current performance and sophisticated forecasts, not on plans set prior to a season. Figure out how you will manage using these forecasts as opposed to just the plan (which can be months out of date) before you implement the system. Your organization will run right into this issue with the first set of recommendations, because they are likely to be of a magnitude far beyond expectations—or plan. Your key leaders in merchandising, finance, inventory management and IT need to figure out beforehand how to work together to make changes, stay flexible and drive the best results. Having a game plan in place to deal with this will build confidence and acceptance from the beginning. Continue communicating with the organization and monitor how well they are adapting to the new framework.

Final Thoughts

We recognize it can be hard to spend the time and effort on these organizational changes – they don't have the immediacy of many other business issues and they are difficult to measure. However, our experience has shown the greatest returns happen when the people and process parts of the equation get as much attention as the strategy and technology. Those retailers who can align all of these will undoubtedly reap the biggest benefits.

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