Achieving Effective Retail Reporting

▸ An Aptos White Paper

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Introduction

So much data, so little time, and so much to do. Since the onset of computers in retailing almost 50 years ago, retail executives, managers and professionals have been challenged to find the most effective way to report information.

The problem is complex because many factors must be considered. This white paper is intended to foster discussion among retail professionals and information specialists about reporting. To begin, this paper sets out a benchmark for effective reporting based on the Aptos Analytics framework. Next, obstacles that an organization must overcome in order to experience an effective reporting system in retail are outlined. Finally, the paper explores the key issues in each of the functional areas of a retailer's business: merchandising, store operations, planning, supply chain management, finance, and marketing.

Retail reporting is long overdue for fresh thinking. If you would like to exchange information or ideas on this subject, please contact the Aptos Analytics team at info@aptos.com.

Benchmark For Effective Reporting

The central problem is that reporting has evolved slowly while many other disciplines in retail have undergone rapid change. At Aptos, we feel it is time to take a fresh look at the information that users receive, what information users have access to, what tools they use, and what real value is produced from the reports and tools that are utilized.

The purpose of reporting is more than presenting information. It's to enable insight. This white paper models best practices in the Industry. It provides a valuable context to achieve a "proactive merchant" as well as a proactive store executive, retail marketer, and supply chain analyst.

The four things that retailers manage

After many years of working with retailers in every aspect of the enterprise, we have come to realize that every retailer has four things to manage:

- ▸ Products
- ▸ Suppliers
- ▸ Channels
- ▸ Customers

A retail organization must ask itself what role each of its functional business areas has in managing these entities? How does merchandising, planning, store operations, finance, supply chain management, and marketing measure success and failure? How does each identify recurring problems and uncover opportunities? What action does each area take upon learning of outstanding or disappointing performance, or when problems or opportunities are uncovered?

Life Cycle Management

Each one of the four things has a life cycle which is vital to understand. The metrics you use to measure success and failure depend on where you are in the life cycle. Each subject has four stages and the appropriate and necessary strategies and actions differ greatly from stage to stage.

Life Cycle Stages: Products, Channels, Customers & Suppliers
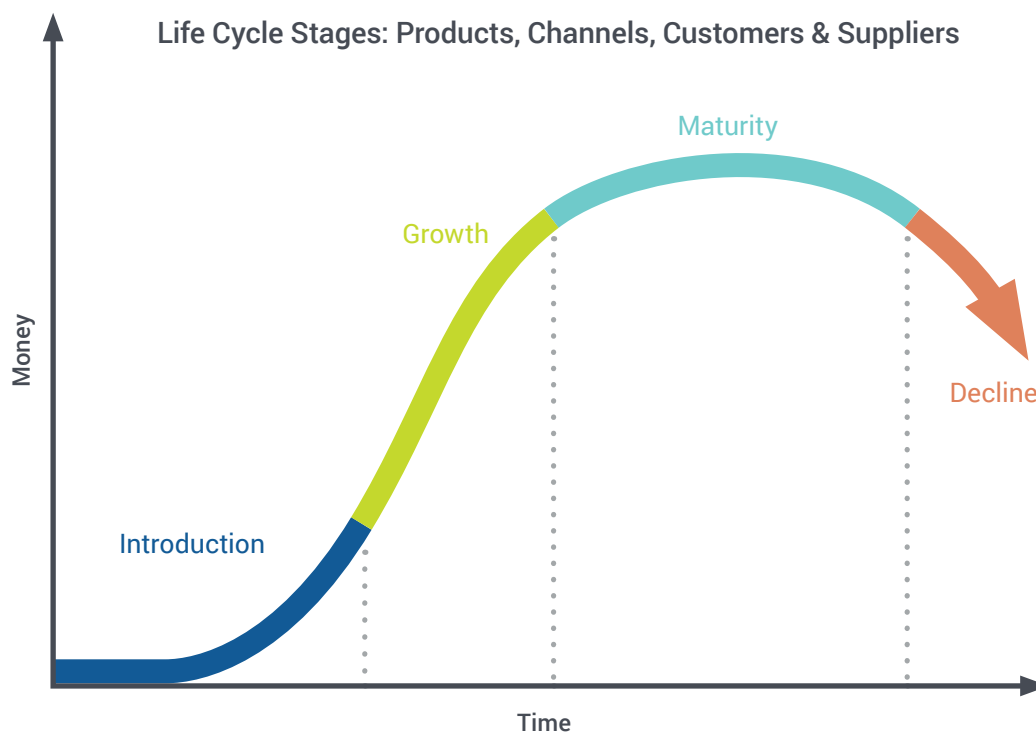
The challenge is that with each stage of indeterminate length you must pursue different, sometimes conflicting, actions as illustrated below.

Subject Area	Introduction	Growth	Maturity	Decline
Product	Testing display and pricing strategies, thin assortment	Expand assortment	Price promotion	Markdown consolidation, vendor returns
Channel	Store opening - intensive support and training	Modify assortments to meet demand	Optimization and expense reduction	Refurbishment, closure, intensive promotion
Supplier	Limited line	Formal distribution arrangements	Collaboration, optimization, intensive distribution	
Customer	Introductory offer, welcome	Retention	Loyalty and reward	Replacement

Informing, Alerting, Uncovering?

You first developed your basic reports many years ago when the world was simpler. Populations were more homogeneous and most goods were made in the USA. Your users didn't have laptops, tablets, and smart phones. We didn't have e-mail, instant messaging, or pervasive communication and retailing is much more competitive now.

Users typically were uninitiated to computers. Systems analysts designed detailed reports to help them track item movement and summarize classification performance. Today, most retailers use these same basic reports to inform them of trends, alert them to problems, and uncover opportunities, but those reports are now ill-suited to the task. The typical item movement report is inches thick and consolidates hundreds of thousands of data points. In today's retail climate, who has time to analyze a 300-page report?

A much better approach is to exploit business intelligence to constantly examine the hundreds of thousands of data points to find outliers and appropriately inform users along with supporting detail. What is appropriate depends on the user and what they are doing. It might be an e-mail, a dashboard alert, or a voicemail.

Best practice is to tune the alert mechanisms throughout the season, making your parameters sensitive to life stage changes. That way, users can spend 30 minutes a day resolving problems and pursing opportunities, impossible before with entrenched reports.
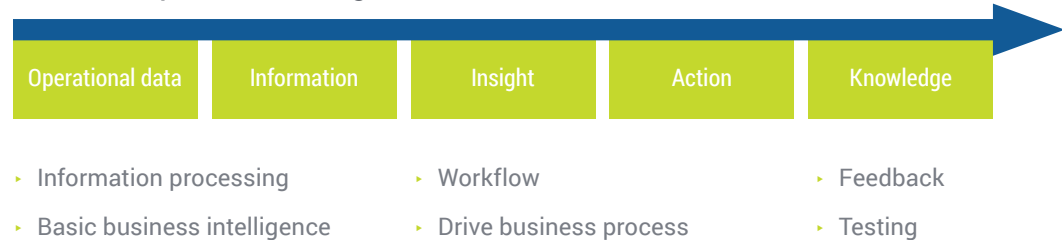
Getting to Insight

Your IT systems are very good at transforming raw operational data into information. Information is a vital building block for business intelligence, but information alone does not produce any benefits. In order for information to be valuable, it must be contextualized.

Effective reporting needs to look at the following six contexts:

‣ Performance summary

‣ Top performers

‣ Bottom performers

‣ Recurring problems

‣ Uncovered opportunities

‣ Trends

Within each context, users can gain insight from the information. Without insight there can be no response. More insight, better action. With action comes benefits and results.

Path to Competitive Advantage

Operational data	Information	Insight	Action	Knowledge

‣ Information processing

‣ Basic business intelligence

‣ Workflow

‣ Drive business process

‣ Feedback

‣ Testing

Transforming Insight Into Action

Once insight is gained, users want to take action. Action usually requires some digging into some unique condition of the data. In merchandising, for example, the insight might be lost sales due to an out-of-stock condition. The action is digging into the specific stores and exploring inventory availability in substitute items or nearby stores, or make new distributions. This type of repetitive workflow links to another Aptos innovation: Playbooks.

Very much like a quarterback of a football team, you want all of your players to know the plays. If the quarterback calls for the "Stockout Remedy" all of your buyers and allocators should know their role. When a new professional is hired, it will take them far less time to learn the plays, than to invent them.

Taking action from insight often also drives business processes such as ordering, canceling or revising orders, interstore transfers, price promotion, clearance mark downs, allocation, replenishment, assortment planning, in-season plan revisions, supply chain optimization, and price optimization. You want business intelligence to drive these processes rather than building business intelligence into each application and process.

Transforming action into knowledge

After you take action, you want feedback to learn if your response was effective. So your reporting system needs to snapshot the condition of the information before and after your action. You may want to test your response before a chain-wide rollout. Your reporting system must therefore inform you of the outcome after a sufficient period of time has elapsed.

Once you get enough feedback on enough action, you will gain knowledge. Soon, you'll know your operations better than your competitor knows theirs. That's competitive advantage. With the knowledge you gain, your advantage will grow sustainably.

Obstacles to Effective Reporting

Unfortunately, retail reporting is anything but easy. There are a number of well entrenched obstacles which can derail good intentions and hard work.

The first step is to understand how to measure and discuss the benefit of effective reporting in the following areas:

- ▸ Increasing knowledge
- ▸ Improving business relationships
- ▸ Improving return on inventory assets
- ▸ Improving return on non-inventory assets
- ▸ Reducing expenses
- ▸ Improving productivity
- ▸ Increasing sales

Legacy systems

The first obstacle to getting good information is the operational systems that hold the operational data for your company. You probably have several of these, some were home grown and others are packaged products. To get them to talk to one another can be a big and expensive effort. Replacing them with current, state-of-the-art systems would be ideal, but may not be possible. In that case, the smart thing to do is exploit your legacy systems by extracting information from them and loading an enterprise data warehouse. You can keep the data warehouse refreshed with operational data processed by your legacy systems and keep years of history. Whenever possible, make the data warehouse the source of all reporting.

With this approach you'll dramatically simplify the ongoing maintenance of your legacy systems, because they will be free of most reporting responsibility. Legacy systems are the friends of a good business intelligence solution; they work hand in hand.

Inconsistent measures

Many of the traditional retail metrics are complex: gross margin, weeks of supply, comparative sales. Your array of best-of-breed departmental Excel spreadsheets and home grown systems leaves you vulnerable to inconsistent measurement.

To achieve effective reporting, it is wise to define your metrics once in a central place. All reports and displays then utilize this single calculation.

Media limitations

Even with incredible advances of printers, displays, tablets, etc., there are still many physical constraints that represent major obstacles to effective reporting. Retailers are managing an enormous amount of data.

The best practice is to develop dashboards that can summarize a particular subject area and provide the context for insight. From that dashboard, the user can easily drill down into the gigantic reserve of information that is necessary for retailing. Wherever possible, you should move past printed reports and formatted displays from legacy systems. Otherwise you will always be fighting against the physical limitations of your media.

Overlapping software tools

The biggest obstacle for effective reporting is overlapping software tools, especially Excel. Excel is great for making calculations and performing one-time analysis: however, many retailers use Excel in some capacity as data repository. Excel is exceptionally troublesome because it is very easy for someone to make a small mistake which is virtually undetectable. Everyone in business has experienced the intense frustration of being in a meeting where two conflicting spreadsheets are presented.

Optimization software applications have been successfully installed in many retailers to tackle forecasting, replenishment, supply chain management, and pricing. Understandably the vendors providing these solutions need enormous databases with lots of history to provide their functions. This has increased the amount of overlap. When two or more similar databases reside in your organization, where do you go for information?

For reporting to be as effective as possible, it calls for an architecture where all reporting comes from a single source. You have one place to define your KPI's, store your history, and establish organization hierarchies. Otherwise, each of the optimization solutions evolves to become its own silo with its own way of reporting and measuring, for only the users with licenses to the software.

Driving business process

The biggest user frustration occurs when you have an insight and want to take action. Too often you must interrupt the natural flow to log on to a different system, then hand copy information, and then laboriously re-key it. Business Intelligence should drive business process whenever you can. IT people should be working on expanding these possibilities and monitoring the use of coupled systems.

Here is diagram showing the most fruitful areas to drive business process with business intelligence.

Where and when

Most retailers run their business on a weekly cycle which requires incredible coordination to produce the necessary reports on Monday morning. Our view is that performance reports and discussion documents all should be available to the participants on a Monday Morning Dashboard.

When providing reporting, you must deal with users' idiosyncrasies as to where they want the information reported and when.

Levels of expertise

In your organization, you have some expert users, intermediate users, beginners, and the uninitiated. In global organizations, language issues and currency conversion are also important. The challenge is to develop a single approach to satisfying each level of experience, interest, and expertise. IT professionals have historically responded to this challenge by "dumbing down" the interface to least common denominator. This leaves the expert user unchallenged and restless. Very often, their restlessness and hunger for analysis, has led to ambitious departmental projects, that have only exacerbated the problem.

Continuous improvement

It is folly to think that a report, however well designed, will persist for years without change. Once you see some information presented in a way that can lead to insight, you also see ways to make it better. Insight begets more insight. It's the nature of information.

The only effective way to deal with this is to give the users the tools to expand. Let them build their own reports, but with the KPIs and data structures available to everyone. Let them build their own Playbook Scenarios as they discover the opportunities. Let them build their own dashboards and alerts.

With each improvement ought to come more benefits, more value, and ultimately more competitive advantage.

Key Issues

Each of the primary areas of reporting is beset with thorny issues.

Enterprise performance measurement

Because of the tendency of retail enterprises to acquire best-of-class software and to develop point solutions, it is usually difficult for senior management to obtain a balanced view of performance. For example, your website might be doing the equivalent of three or four stores and growing 15% a year. But in your performance reporting, the website is treated like a store. In fact, the Web store costs and expenses are fundamentally different from that of running a brick-and-mortar store.

You consolidate all performance data into your financial reporting system which closes monthly. But your drill-downs are limited by your chart of accounts. In fact, you can't get insight on the three of the things you manage—product, vendor, customer—and limited insight on your channels (e.g., stores, catalog, and website). Worse, your financial reporting system lacks the robustness you need to see variations by region, by competitor, by type of stores, etc.

Another significant dilemma is the availability of consistent metrics across the enterprise. One system calculates gross margin one way while another calculates it another. These approaches may be adequate to summarize departmental performance, but the disparity confounds the ability to get a balanced picture of performance.

Our view is that senior executives should be working with a series of dashboards that show how the overall enterprise is doing in the four major subject areas: product, supplier, channel, and customer. At a glance they should see report cards for each with consistent metrics, top performers and trend. If they chose, they, too, should be informed of opportunities that might be uncovered through constant behind the scenes business intelligence. In every case, senior managers should be able to drill down to same levels as subordinates.

Monday morning meetings are traditional with retailers. Often the agenda is clouded with issues about data integrity and presentation. But with an effective reporting system, performance reporting becomes routine and focus shifts to understanding trend, pursuing opportunities that would otherwise do undetected.

Merchandising

Merchants have primary responsibility for product performance. In recent years, merchandising has become more a more compartmentalized as specialists, working with powerful software, have taken control of: pricing, allocation, space planning, web merchandising, sourcing, logistics, and replenishment. Even with all this specialization, the buyer selects and buys the merchandise, identifies sources and has bottom-line responsibility.

The level of specialization demands that each merchandising team is working with the same playbook. Otherwise, the potential exists for redundant efforts and conflicts. Business intelligence can deliver the same message to multiple team members with differing levels of priority and intensity. You must precaution against overreaction. The ideal scenario is that each team member is empowered to execute his/her part of the play (e.g., workflow) independent of the other.

An important factor is seasonality. Some apparel merchants are now geared up to manage 12 seasons a year. The metrics that spot top performers and trends must be tuned to the season.

Merchandising teams must learn to test well and test often. Enable teams to create a test case for special analysis including the affected styles, duration and channel participation. Metrics providing feedback on tests will signal the team how to price, how to promote, how to merchandise, and what items complement each other.

Store operations

Most store managers and first-line store managers have very limited access to information. Yet they are expected to increase store performance year to year in the face of aggressive competition.

Although insights gained through business intelligence are not a complete substitute for issues identified by walking around, store operations can gain tremendous insights by knowing:

‣ What are the best selling items in their region? Across the chain?

‣ How do your local top sellers compare to the region? Chain?

‣ What items are out of stock, or will shortly be out of stock?

‣ How many "lost sales" has the store realized in contrast to other stores, or history?

‣ What is customer retention rate in contrast to other stores?

‣ What are the busiest times in the store by area?

‣ What items are being shipped to store organized by promotional event?

‣ How do you rank in terms of sales per hour, sales per employee hour, average transactions? Trend?

‣ Who is your most profitable vendor?

Store managers should spend 15-30 minutes a day digging into recurring problems and opportunities uncovered by business intelligence. District managers should do the same, especially in advance of a store visit. Otherwise, the managers' energy is swept into the pressing issues of the day, or, worse, yesterday's problem. And the store can quickly get out of step with the mood of the customer.

Planning

Planners and buyers look at the same data, but in different ways. Yours planners are trying to understand what the current and past seasons say about the future. Your buyers are trying to understand what tactical actions can be taken to optimize the present seasons. They collaborate often in assortment planning, pricing, in-season plan adjustments, store allocations, and promotion. So, it is vital that the playbook between the planning and merchandise unit is well understood.

Planners can profit greatly with a reporting tool that addresses the following items:

How are customers responding? Total number of customers? By area? Retention rates? Average spend?

‣ What portions of the current season plan are the most variant from actual performance?

‣ Which vendors are performing best?

‣ Which stores and regions are best? Worst?

‣ Which categories are trending up?

‣ What would past season performance be without lost sales and distress markdowns due to inventory buildups?

Planners work with allocators who decide what allotment each store should receive for seasonal and fill-in distribution strategies. Allocators become expert on the requirements and idiosyncrasies of individual stores and regions. They are challenged to make the best possible merchandise presentation throughout the season.

Allocators can benefit when they are informed of:

‣ Stores with overstock

‣ Stores with significant holes in their assortments

‣ Stores with extraordinarily high rates of sales

‣ Top selling categories

‣ Lagging categories

‣ Stores with old or stale merchandise

‣ Stores which sell a disproportionate number of markdowns or promotional items

Supply chain management

In today's retail climate, most items are manufactured offshore. To achieve more competitive advantage, you probably are taking more responsibility for the supply chain. Many retailers have fully embraced private label merchandise and are designing their own merchandise. Delivery times are longer, and sourcing often requires you to coordinate many manufacturers and service organizations that are half way around the world.

This situation challenges most traditional purchase order systems and legacy merchandise systems which were originally designed with a one cost model. As a result you may be looking at reports showing gross margin based on poorly informed landed cost estimates.

A better solution is to load the data warehouse with as many costs as you can reasonably obtain from your supply chain partners.

Your supply chain analysts can profit greatly when reporting informs them of:

‣ Which suppliers are showing the greatest profits and gross margin returns

‣ Which supply chain costs are most volatile

‣ Which supply chain costs are increasing most

‣ Which inbound shipments are at risk of being late

‣ Which inbound shipments contain items that will replenish out of stock items

‣ Where their build-ups are in the supply chain

Financial

Retail accountants serve as the watch dogs for your company. But they tend to suffer, industry-wide, from an archaic accounting system which averages cost over entire merchandise categories. As a result, it is often difficult for accountants to know how margins are eroding. The so-called Retail Method of Accounting will persist in many retail locations because it is so entrenched. However, your business intelligence systems can provide the accountants with a more enriched view of margin erosion.

Retail financial managers will profit greatly if they are better informed of:

- ▸ Which vendors are showing the greatest profits and gross margin returns
- ▸ Based on order commitments, what cash requirements will be needed
- ▸ Which channels, regions, and stores are dragging down company performance
- ▸ Which assortments and merchandise categories are the most or least profitable
- ▸ Which customer segments are the most profitable
- ▸ Which promotional campaigns have the biggest yield

Marketing

Retailing is fundamentally a marketing activity. Yet marketing executives working in retail companies are typically relegated to more tradition marketing roles such as public relations, advertising, in-store signage, and direct marketing. If you are like most retailers, you have a customer data base and loyalty program with a departmental database used by the marketing department.

Your reporting must elevate customer data to enterprise-wide significance. Customer metrics are important measures that are just as important as metrics that measure product, channel, or vendor performance. Customer selling information housed in the data warehouse can take on much more significance when it is joined with vendor, channel, and product information.

The enterprise benefits from answers to the following questions:

- ▸ Which stores have the highest customer retention rate? Lowest? Trend?
- ▸ Which merchandise departments attract the most profitable customers? Lowest? Trend?
- ▸ Which stores have the greatest conversion rates? Lowest? Trend?
- ▸ Which merchandise categories require customers to drive farthest from the homes?
- ▸ Which stores are sharing the most business with your web site? Least? Trend?
- ▸ Which vendors are most attractive to your top customer segment?
- ▸ Which stores tend to attract bargain hunting customers?

It is time for customer data to be shared powerfully across your organization.

Conclusion

Legacy reporting approaches in retailing are increasingly inadequate to the job. Although there are many challenges that must be overcome, a new approach to reporting will lead to competitive advantage. The more insight can be gained by a retail manager; the more corrective action they will take, and the more they'll learn. Ultimately, knowledge leads to competitive advantage.

Before each functional area of your business is able to benefit, you'll have to free yourself from entrenched item movement and category reporting approaches. Also, you'll have to free Excel from its responsibilities to hold data in repositories. Adopting a dashboard approach will encourage sounder, more informed perspectives.

Each of the functional areas of your retail organization is ready to exploit business intelligence to address key issues. But you must tune your reporting tools to stage in life cycle of the four entities you manage—product, channel, supplier, and customer. You'll gain competitive advantage if your business intelligence solution will inform you of top and bottom performers, identify recurring problems, uncover opportunities and reveal trends.

Author Bill Robinson is a Professor of Marketing at Towson University in Towson, MD and draws from his 40 years of experience in providing technology-based solutions to retailers. Bill previously served as Vice President of Marketing for STS Systems, a leading provider of retail technology solutions with more than 300 clients. Throughout his career Bill pioneered successful applications in all areas of retailing including Point of Sale, Business Intelligence, and Supply Chain Management. Bill has a passion for the retail industry and has been an advisor and strategist for the Aptos Analytics solution, which delivers results-oriented business intelligence and data warehousing solutions for retail organizations. Bill is based in Baltimore, MD, where he pursues his passions of jazz piano, gardening and golf.

For more information on Aptos Analytics visit www.aptos.com.

About Aptos

Aptos: Engaging Customers Differently

In an era of virtually limitless choice, sustained competitive advantage only comes to retailers who engage customers differently—by truly understanding who they are, what they want and why they buy. At Aptos, we too, believe that engaging customers differently is critical to our success. We are committed to a deep understanding of each of our clients, to fulfilling their needs with the retail industry's most comprehensive omni-channel solutions, and to fostering long-term relationships built on tangible value and trust. More than 500 retail brands rely upon our Singular Commerce platform to deliver every shopper a personalized, empowered and seamless experience… no matter when, where or how they shop.

Learn More

Aptos maintains offices in Atlanta GA, Columbus OH, Monterrey MX, Montreal QC, and Newburgh NY. More information on Aptos is available at: info@aptos.com and www.aptos.com.

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