



BUSINESS INTELLIGENCE AND RETAIL

MAJOR APPLICATIONS OF BUSINESS INTELLIGENCE
SOFTWARE IN THE RETAIL INDUSTRY

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MAJOR APPLICATIONS OF BUSINESS INTELLIGENCE SOFTWARE IN THE RETAIL INDUSTRY

In the increasingly competitive and fast changing retail industry, retailers need to use all the tools at their disposal to operate more efficiently and increase revenue. Faced with mounting pressure to enter new sales channels, changing consumer demands, and continuing globalization, retail companies need information management solutions that allow them to make better business decisions.

Retailers handle immense amounts of information – everything from supply chains to sales information to store operations. It's hard to keep track of important information and even to know which information is valuable, and retail companies need the tools to take advantage of the myriad information at their disposal. The information technology available today allows retailers to make better business decisions and to better target performance goals. MicroStrategy offers the retail industry the business intelligence software to report on, analyze, and monitor the vast amounts of data through a business intelligence architecture that helps companies reduce costs, increase revenue, and maximize the value of information. Companies in every major retail segment, including apparel, discount retailers, department stores, discount drugstores, electronics, home improvement, specialty retailers, and specialty grocers, take advantage of the benefits of MicroStrategy's business intelligence software.

THE RETAIL INDUSTRY: THE SEARCH FOR NEW CHANNELS AND NEW PRODUCTS

Retail companies need to keep up with their constantly changing industry to stay viable and competitive. The diversification of sales channels offers retailers many opportunities for growth and expansion, but it also presents them with many new and different challenges. The days of only in-store shopping are long gone, and retailers now have many more opportunities to interact with customers – and so does the competition. While online shopping has garnered the most attention, consumers are also utilizing TV shopping networks, airport retail, direct mail, and other non-traditional channels.

Beyond the actual purchases, multi-channel retailing involves all interactions between retailers and customers, including product research, comparison, and inquiries. Consumers might research products through one channel and then make their purchases through another. This creates many new opportunities for retailers to reach consumers, but it also adds incredible complexity to retailers' efforts to understand consumer behavior and effectively target their marketing strategies. To yield profits from the opportunities multi-channel retailing affords, retailers must

have the tools to turn the massive amounts of information they acquire into useful, actionable knowledge. In addition, to effectively diversify their sales channels, retailers must integrate many internal systems and develop a unified operational infrastructure. This requires information systems that operate across the retail enterprise.

The proliferation of e-tail, among other factors, has also greatly increased consumer knowledge and demands. The Internet has made product information and purchasing much more easily available to consumers, making them more discerning and powerful buyers. Constantly changing and increasing consumer demands are putting great pressure on retailers to innovate with new product offerings, store concepts, and store locations. Since consumers can choose from more products and purchase locations than ever before, retailers must find new ways to spark customer interest and loyalty. To stay afloat, retailers must be able to understand consumer behavior and preferences to develop the most profitable product offerings. As retailers seek new ways to connect with customers, improve convenience, and attract buyers, they are becoming more consumer-centric. Competition in the retail industry is fiercer than ever, and retailers must find ways to differentiate their consumer experiences.

Finally, as retailers begin to saturate their home markets, globalization within the industry continues. Many of the top retailers are expanding to international markets. While globalization provides many new revenue opportunities, it leaves retailers with a much more diverse pool of suppliers and customers, as well as a growing collection of information and operational systems to monitor and manage.

Simplified View Into a Data Model of a Retailer Using MicroStrategy for Sales and Marketing Analysis, Category Management, and Merchandise Management

Promotion	Store	Transaction	Time
Start Date	Type	Type	DateTime
End Date	Chain	Payment Method	Date
Type	Region	Register	Week
Promotion	Location Type	Employee	Month
Valid SKUs	Size	Reason	Quarter
	Size Band	Customer	Year
	Floors	Customer Postcode	Season
Product	Lineal Feet	Card Number	Time of Day (Hour)
Category	Turnover	Card Type	Day of Week
Subcategory	Date Refurbished	Transaction	Day of Month
Size	Date Opened	Store	Week of Year
Brand	Competitive Store Information	DateTime	Month of Year
Supplier	Store Section	Receipt	Quarter of Year
Own Brand	Section Type	Transaction Detail	Special Day
Date Introduced	Section Lineal Feet	Product	
Date Retired			
Active			
Packaging			
SKU			
Alternative SKU			

INDUSTRY FACTORS DRIVING BUSINESS INTELLIGENCE SOLUTIONS AT RETAIL COMPANIES

All these challenges require retailers to be proactive in managing and utilizing corporate data if they want to keep up with or stay ahead of the competition. That's where business intelligence comes in. Business intelligence software gives retailers the capability to analyze the vast amounts of information they already have to make the best business decisions. The software allows these companies to tap into their huge databases and deliver easy-to-comprehend insight to improve business performance.

Retailers can now use business intelligence software to more effectively reach consumers, reduce operational time and costs, and allocate their resources more efficiently. MicroStrategy can outfit retailers with the software to maximize their information gathering and make the best use of the data to gain knowledge and improve business strategies. MicroStrategy enables retailers to reach wide and diverse user populations and to report on vast amounts of transactional data across multiple business dimensions.



The applications of business intelligence in the retail industry are far-reaching. First, companies must manage large volumes of data from many sources, everywhere from corporate headquarters to branch stores to online sales. Retail data easily reaches into the multi-terabyte range, and MicroStrategy's foundation in relational OLAP is uniquely suited to handle this depth of information. Further, MicroStrategy's unified business intelligence architecture allows companies to easily integrate and cross-reference vast amounts of information from multiple sources, identify relationships among the information, and learn how different factors affect each other and the company's bottom line. Companies also need to simultaneously analyze these multiple layers of information to better understand customer needs and behaviors. MicroStrategy provides an unrivaled depth and breadth of analysis down to the individual point-of-sale record.

In addition, a retailer will have many people in different locations with different skills who need to use this information for varying purposes – everyone from executives who need high-level customized summary data with drill-down capabilities, to power users who need to create and design custom reports, to data analysts who must identify and communicate market trends. Retailers also have extensive networks of distributed stores, and each store needs to track information in the company's database. MicroStrategy offers a single, easy-to-use Web interface, enabling multiple users to access the information relevant to them. MicroStrategy's

unique and intuitive analytical capabilities allow different users to manipulate the data to glean the most from the information that affects their decision-making. And store users can remotely access the information corporate headquarters has designated for them by running easy-to-understand and intuitive reports and analyses.

MicroStrategy's extranet applications also allow suppliers to track relevant and specific information in the retailer's database. Retailers can grant suppliers access to a secure Website where they can utilize MicroStrategy's extensive analytical and reporting capabilities. The MicroStrategy architecture provides unique abilities for retailers to reach both intranet and extranet users immediately and securely with extensive information reporting and analysis.

Finally, retailers must work to keep costs down while building profits. Business intelligence software allows retailers to analyze profit and loss, including product sales analysis, operational expenditures, and the cost effectiveness of different sales channels. Companies can grow revenue by identifying consumer trends and needs and providing the most successful products. And they can reduce expenses by minimizing inventory overages and increasing store productivity, as well as improving operational efficiency and overhead costs.

MicroStrategy's business intelligence software offers retailers a complete range of reporting and analysis, including complex retail analyses such as market basket analysis. Important retail applications include merchandise management, store operations reporting, marketing analysis, vendor analysis, and supply chain management. MicroStrategy's unique business intelligence architecture simultaneously accesses all this information, enabling analysis from many sources at once and providing the most thorough and integrated reporting. MicroStrategy then presents this information in user-friendly reports, scorecards, and dashboards and allows users to look at the information in different formats, offering the most intuitive and useful ways to analyze the information to get the desired results – business strategies that increase profits.



A Leading International Supermarket Operator Uses Executive Dashboards Running on the MicroStrategy Platform Against Data From Sales Source Systems, as Well as Employee And Customer Surveys to Monitor:

- Out-of-Stock Situations
- Scanning Percentages
- Sales
- Stock
- Devaluation
- Destruction
- Counter Cash Differences
- Personnel Retention Rate
- Average Hourly Wages
- Employee Satisfaction
- Customer Satisfaction
- Customer Acquisition Rate

RETAIL APPLICATION SPOTLIGHT

A large, independent food retailer relies on MicroStrategy for Point-of-Sale (POS), Market Basket, Billing, Advertising Campaign, Inventory, and Markdowns applications.

The retailer has five terabytes of data stored in a Teradata database. There are 15 high-level dimensions, such as location, product, time, and transaction, which are broken into close to 300 lower-level dimensions. The retailer has close to 1,000 metrics or measurements to provide different ways of quantifying the business. On any given week, users run more than 10,000 reports.

These applications are used by hundreds of employees from multiple functional groups across the enterprise, including accounting, regional offices, quality assurance, planning and analysis, marketing, and specific products and services teams. During peak business hours, there can be as many as 70 users simultaneously accessing reports and analyses. There are close to 50 so-called power users of the applications who are adept at building complex metrics and taking advantage of the more advanced features of the software. Business users comprise the vast majority of people who access reports and analysis from the MicroStrategy powered applications.

On the front end, there is a team of eight support staff for the MicroStrategy applications. This team of eight comprises only one administrator, which is a testament to the benefits of MicroStrategy's centralized administration and unified architecture. On the back end, there is a team of ten support staff for data warehouse operations.

An example of one application in use, the Point of Sale and Market Basket application is designed to provide merchants with information that will help buy product at a better price, keep inventory optimized, ensure proper unit sell-through, minimize costs and shrink, optimize markdowns, and drive profitable sales. Key metrics include Ad Expenses, Sales Revenue, Product Cost, Gross Profit, Unit Movement, Product Purchase Price, Customer Counts, Inventory, Billing, and Market Basket Penetration. Key business dimensions include Department, Category, Class, Commodity, Packaging Details, Vendor, Parent Company, Brand, Manufacturer, First and Last Scan Dates, Status, and Custom Product Groupings.

As a result of these business intelligence applications, the retailer has achieved over 50 percent market share in the region, improved profitability for each line-of-business, and a clearer view by region, by store, and by market, resulting in near real-time decision-making about what actions to take down to the SKU level.

APPLYING BUSINESS INTELLIGENCE TO THE NEEDS OF RETAILERS

Retailers can use business intelligence in many ways, creating smart business solutions across the myriad challenges in the retail industry.

SALES AND PROFITABILITY ANALYSIS

Product sales analysis enables retailers to continuously monitor point-of-sale data to uncover sales trends, track product demand, and optimize merchandising strategies. MicroStrategy's multiple levels of analysis allow executives, store managers, product managers, and marketing analysts, as well as external suppliers, to make sense of the growing volume of transactional data by identifying trends and opportunities, as well as planning according to seasonal cycles. In addition, MicroStrategy's market basket analysis enables store-level managers, marketers, and executives to quickly understand which product pairings, promotions, customers, and vendors are most profitable.

- Accounts Payable
- Accounts Receivable
- Advertising Expenses
- Customer Counts
- Discount Percent
- Gross Profit
- Inventory
- Product Cost
- Product Purchase Price
- Return on Assets (ROA)
- Sales Revenue
- Unit Movement

ACCOUNTS RECEIVABLE SUMMARY FOR SELECTED ORGANIZATIONS

Customer	Payment History	Invoice ID	Total AR	Paid Last 90 Days	30 Days	31 to 60 Days	60 to 90 Days	90 to 180 Days
Party Supply Company	Good	14587	\$9,342	\$3,114		\$3,114		\$6,228
		12765	\$0	\$9,000				
		18222	\$7,628	\$7,625	\$3,813	\$3,813		
			\$16,968	\$19,739	\$3,813	\$6,927	\$0	\$6,228
Parts Manufacturer	Fair	57990	\$70,250					\$70,250
		70002	\$35,885					\$35,586
		71225	\$9,899					
			\$116,035				\$0	\$106,136
			\$133,003	\$19,739	\$3,813	\$15,525	\$0	\$112,354

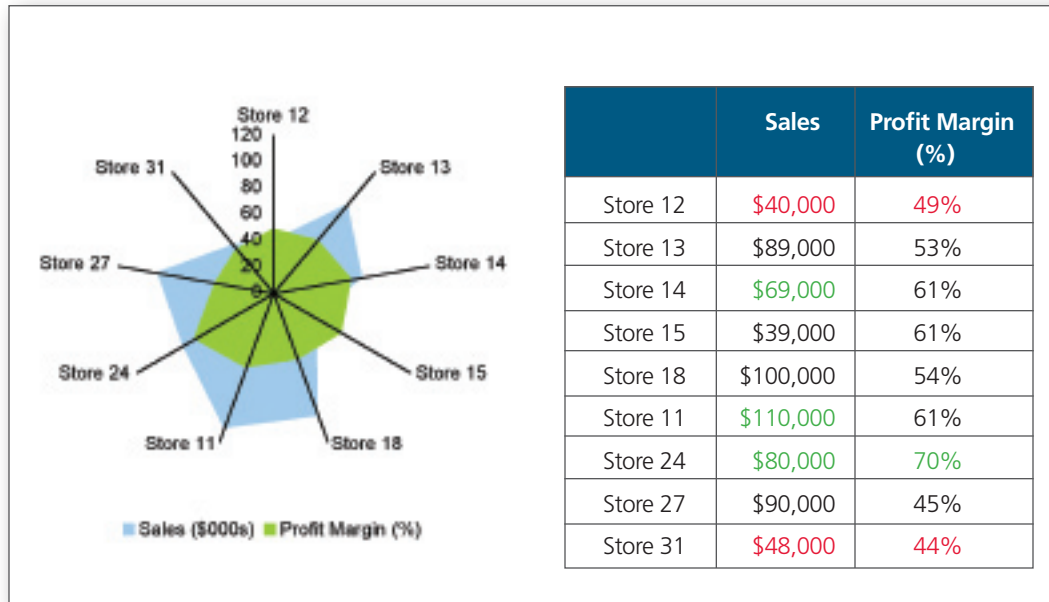
This summary report links invoice detail, A/R aging, and customer payment history. The report contains links to the invoice detail providing access to invoiced items, purchase order number and approver name. The payment history field is based on the organization's definitions for payment scoring and is calculated based on historic payment patterns. As a next step, users can navigate to reports showing all receivables greater than a certain dollar amount or trends in certain geographies or industries.

STORE OPERATIONS ANALYSIS

Information on store operations allows retailers to maximize the profitability of their sales channels and empower executives with fact-based decision-making. Store managers can effortlessly receive personalized sales, marketing, and inventory reports, store-vs.-store scorecards, and exception notifications, ensuring that time-sensitive issues are addressed and resolved. MicroStrategy's unified business intelligence architecture enables retailers to monitor store performance, analyze multiple store functions, improve category management, and increase the efficiency of sales management, marketing promotions, operations, and budgeting. A multi-billion dollar grocery chain turned to MicroStrategy to deploy business intelligence to hundreds of stores in the eastern United States for corporate and store management. Store managers access timely, detailed reports to make actionable decisions based on general ledger, category management, inventory, sales, margin, and other key information.

- Asset Turnover
- Comparable Store Sales
- Competitor Stores
- Direct Stores Delivery
- Front Store Sales
- Inventory Turnover
- Labor Cost Analysis
- Percent Sold at Markdown
- Reallocation
- Register Usage Analysis
- Return on Assets (ROA)
- Margin
- Sales per Linear Foot
- Sales per Square Foot

STORE OPERATIONS: SALES AND PROFIT ANALYSIS



District managers and financial analysts compare local stores on profit and sales key performance indicators. This dashboard excerpt includes a graphical radar plot of sales vs. margin alongside a report with visual thresholds for stores with red zones and positive performance.

CUSTOMER ANALYSIS

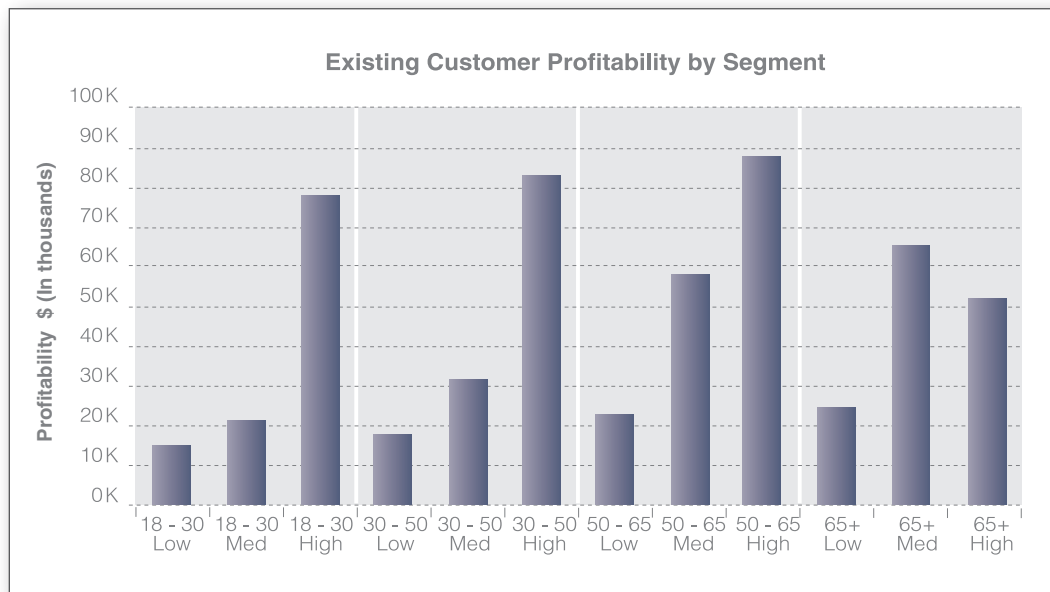
Understanding customer behavior is essential to surviving in today's retail environment.

MicroStrategy's business intelligence architecture helps retailers monitor customer life cycles and profitability by tracking customer interactions. In addition, MicroStrategy's in-depth analytical capabilities allow retailers to identify trends in consumer behavior, plan more strategic marketing campaigns, maximize customer acquisition and retention, and perform customer segmentation.

By analyzing consumer needs and life cycles, MicroStrategy also enables retailers to utilize relationship marketing and one-to-one marketing to develop long-term relationships with customers and provide them with the products and services they need.

- Attrition Risks
- Customer Profiling
- List Generation
- New Customers
- Post-Campaign Analysis
- Profitable Customers
- Segmentation
- Share of Wallet
- Target Marketing

EXISTING CUSTOMER PROFITABILITY BY SEGMENT



This customer profitability report analyzes customer profit for a selected segment by customer attributes. Marketing strategists and campaign managers use MicroStrategy to understand which customer segments to target with campaigns and loyalty programs to improve attraction and retention of profitable customers.

MERCHANDISE MANAGEMENT

By effectively managing merchandise, retailers can maximize the profitability of the merchandising process. MicroStrategy facilitates effective merchandising, enabling retailers to provide the right products to the right stores at the right times. MicroStrategy’s flexible analytical capabilities empower retailers to compare product performance and evaluate promotion effectiveness across individual items, categories, geography, and vendors. Retailers can monitor and forecast all aspects of the merchandising process, including returns, performance analysis, financial planning, assortment planning, and space allocation. In addition, MicroStrategy enables retailers to improve merchandising logistics, reduce out-of-stocks, and streamline inventory. A catalogue retailer uses MicroStrategy to view sales and stock data at all grouping levels and categories, including SKU and day levels. According to one merchandising manager, these detail-driven analyses run on MicroStrategy give “complete flexibility for investigating numbers.”

- Active SKUs
- Department Contribution
- Hot Item Report
- In-Stock Percent
- Inventory Turns
- Lineal Feet
- Markdown Percent
- Pull-Through
- Reallocations
- Seasonal Buying
- Sell-Through
- Weeks of Supply

MERCHANDISE RANKING BY QUANTITY SOLD LAST WEEK

Item	<1	1-3	3-5	6+
ChocolateLovers Cream Eggs	0	9	68	33
GenericBrand Easter Bunny 8"	0	9	65	36
GenericBrand Easter Bunny 4"	2	16	73	9
ChocolateLovers Foil Small Eggs 24 ct.	2	34	54	10
EverGreen Easter Bunny Grass	2	28	59	11
QuickFocus Digital SLR	8	46	34	12
TruCare Moisturizing Hand Sanitizer	24	50	20	6

This ranking report helps buyers determine final ordering for next week, positioning stores by items to be promoted and last weekend’s hot sellers.

INVENTORY MANAGEMENT

Faced with fluctuating demand, retailers need the tools to maintain appropriate inventory levels. MicroStrategy's monitoring capabilities help retailers avoid product losses due to changing economic, technologic, or consumer conditions. Retailers can run MicroStrategy reports to rapidly determine which products are fast-selling, where they are needed, and when they can be supplied, as well as determine effective strategies to deal with at-risk inventory, such as discounting or promotion. MicroStrategy enables retailers to optimize inventory levels, reduce stock shortages, and lower inventory costs by analyzing item movement. MicroStrategy also allows retailers to track inventory throughout the order and delivery process, monitoring inventory on order, in the warehouse, in transit to the store, and delivered to the store. In addition, MicroStrategy enables managers to quickly and easily produce reports of daily inventory details, weekly snapshots, and product level inventory. Retailers can monitor lost sales due to lack of inventory, track actual versus forecasted order quantity, and forecast utilization of inventory assets to enable higher inventory turns.

- Percent Defects
- Percent Delivered on Time
- Percent Shipped on Time
- Percent Space Utilized
- Percent Variability of Lead Time
- Average Inventory
- Back-Order Cost
- EOQ
- Excess Stock Cost
- Industry Ratio
- In-Stock Percent
- Inventory Carrying Cost
- Inventory Turns
- Item Fill Rate
- Markdown
- Obsolete Stock Cost
- Purchase Order Fill Rate Percent
- Rework or Scrap Rate
- Safety Stock
- Stock to Sales Ratio
- Stock-Out Percent
- Storage and Handling Costs

SALES & INVENTORY FORECAST

Distribution Center	Inventory as of Today (BOH)	Sales Last Month	Sales This Month Last Year	Projected Sales for This Month	Inventory Surplus (Projected EOH)
Northeast	100	66	35	51	50
Southeast	180	200	205	205	(25)
Northcentral	60	40	80	60	0
Southcentral	225	325	300	313	(88)
Rocky Mountain	175	155	215	185	(10)
Northwest	150	60	90	75	75
Southwest	320	315	425	370	(50)

This report links sales forecasts and inventory levels to ensure the right products are available in the right distribution centers to support sales demand. Sales and Distribution Managers use this report to reallocate existing stock, proactively route current orders to high-demand regions and place new orders. Beginning-on-hand (BOH) and end-of-hand (EOH) are common measures of inventory levels at the beginning and end of a time period. A next step would analyze projected inventory surplus over time, drill to another product to see if multiple products need to be rerouted, or create "what if" sales and inventory scenarios.

SUPPLIER PERFORMANCE MANAGEMENT

With extensive networks of suppliers, retailers need the tools to maximize supplier performance both individually and across their networks. MicroStrategy enables retailers to evaluate supply chain activities, logistics operations, and vendor performance across a wide range of variables. MicroStrategy’s unique relational analysis measures supplier performance with regard to quality, delivery, and price, isolates bottlenecks requiring immediate attention, and automatically notifies appropriate management of potential pitfalls and emergency situations. In addition, MicroStrategy’s robust security protects sensitive information.

- Aging Accounts Receivable
- Aging Accounts Payable
- Average Price
- Burdened Direct Labor
- Customer Service Rate
- Days in Inventory
- Days Sales Outstanding
- Direct Material Cost
- Fill Rate
- Fixed Asset Utilization
- Fulfillment Accuracy
- Inventory Turns
- Inventory Write-Offs
- Lead Time
- Manufacturing Equipment Utilization
- On-Time Rate
- Order-Fill Rate
- Plant Utilization
- Quantity
- Stock-Outs

ORDER FULFILLMENT PERFORMANCE BY SUPPLIER

	Cases Ordered (000)	% Delivered on Time	# Cases Damaged	% Cases Damaged (%)	Lost Sales Due to Stockouts (000)	Trend in Performance vs. Last Month
Supplier 1	4,587	98%	11.8	0.257%	\$ 97.74	→
Supplier 2	5,645	97%	20.1	0.356%	\$169.35	↓
Supplier 3	6,587	96%	12.3	0.187%	\$263.48	↑
Supplier 4	4,198	92%	6.6	0.157%	\$335.84	↓

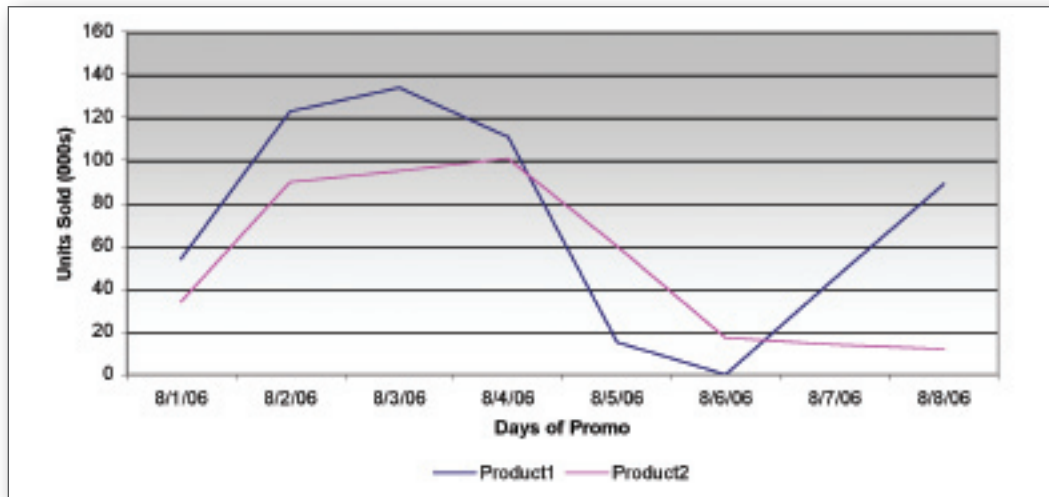
This MicroStrategy report supplies information on the fulfillment results across suppliers for a particular product, highlighting anomalies and providing a visual snapshot of performance trends. An operations analyst will use this report to determine regional performance and determine if steps need to be taken to mitigate lost sales and damaged goods. From the links embedded in the report, analysts use supplier reports to determine causes for lost sales, including supply shortages, impact of new packaging, or variation in performance of delivery methods - rail, sea, air or truck.

MARKETING AND E-COMMERCE ANALYSIS

Faced with diversifying sales channels, retailers must understand customer behavior across channels to best target their marketing efforts. By analyzing customers' transaction histories, stated preferences, and current interactions, MicroStrategy enables retailers to identify opportunities for improved promotions, special offers, recommendations, and targeted advertising. Marketing managers access Web-based reports and scorecards and can analyze further to reveal strategic opportunities for new sales and marketing channels. In addition, MicroStrategy allows retailers to monitor consumer activity by distribution channel and track the effectiveness of new advertising channels, such as the Internet, wireless devices, MP3 players, and satellite radio. Retailers can also deploy MicroStrategy to compare online and in-store sales and measure e-commerce by seasonality, as well as for secure Internet-based electronic data interchange (EDI) to exchange information with customers. By utilizing MicroStrategy's advanced analysis and monitoring capabilities, retailers can enable customer intimacy, strengthen consumer loyalty, and manage promotions, ensuring maximum return on investment (MROI).

- Ad Blocks
- Advanced Ship Notices
- Brick-and-Mortar Store vs. Online Sales
- Channel Share
- Click-Through Rate
- Coupon Distribution
- Customer Subscription
- Endcap Efficiency
- Feature vs. Display
- Grand Openings
- Lead-to-Sale Conversion
- Market Share
- Marketing Spend
- Pricing
- Promotional Lift
- Sell-Through

PROMOTIONAL EVENT GRAPH



Marketing analysts use Web-based dashboards daily to ensure maximum return on investment and manage promotions more effectively.

MARKET BASKET ANALYSIS

Market basket analysis allows retailers to determine which products customers buy in combination, as well as which customers have bought only part of the combination of products. MicroStrategy’s advanced analysis enables retailers to understand buyer needs by monitoring buying patterns and increase sales by capturing new buyers. In addition, by creating customer profiles and transaction histories, MicroStrategy helps retailers identify cross-sell and up-sell opportunities and develop cross-promotional programs. MicroStrategy’s market basket analysis also allows retailers to revise store layouts to optimize sales and improve customer satisfaction. A brand-name specialty retailer uses MicroStrategy to perform rapid analyses of what is selling in terms of size, color, and style and in which stores. Market basket analyses allow for further insights to determine which items are sold in which combinations. According to the CIO, MicroStrategy allows the company to “adjust our replenishments to better match the sales patterns of individual stores. So although we had a limited amount of inventory, we were maximizing it, and our chances of being out of stock were drastically reduced.”

- Attachment Rates
- Basket-Register Correlation
- Brand Switching
- Core Item Frequency
- Core Items
- Customer Loyalty
- Demographic Baskets
- In-Basket Price
- Items Per Basket
- Revenue Contribution
- Shopper Penetration

PRODUCT AFFINITY REPORT

Attached Items	Affinity	High Price	Low Price	% on Sale
Floss	34%	\$3.99	\$0.60	12%
Shampoo	25%	\$7.95	\$0.39	8%
Lipstick	23%	\$17.99	\$2.39	19%
Nail Polish	7%	\$5.67	\$0.39	0%
Chocolate	5%	\$9.98	\$0.59	0%

Marketing analysts use market basket reports to improve cross-selling and make key decisions on layout, merchandising, and promotions. The above affinity report is a snapshot of which items were identified alongside toothpaste purchases.

POST-CAMPAIGN PURCHASE ANALYSIS

Largest Responders	Basket \$	Quintile	Visits/Month	Average Basket \$	Variance to Average Basket
Sally Jones	259.87	2	2	101.65	158.22
Frank O’Gara	143.98	2	1	87.85	56.13
Ji-Hyun Park	143.07	2	1	167.98	-24.91
Shridar Damani	128.99	2	1	134.98	-5.99

Marketing analysts use customer reports for post-campaign analysis to measure sales associated with specific promotions.

CATEGORY MANAGEMENT

With increasing pressure to focus on the customer, retailers must understand sales and consumer trends by gaining insight into merchandise performance by product, category, geography, and vendor. MicroStrategy's category performance management applications allow product, store, and channel managers to analyze sales performance to optimize product assortment and pricing, ensure appropriate inventory levels, create category plans, and offer specific product selections demanded locally by consumers. In addition, MicroStrategy's unique relational analysis enables marketers to identify which products sell together, create effective promotions, and optimize merchandising strategies through predictive modeling.

- Assortment Optimization
- Average Quantity
- Category Contribution
- Market Benchmarks
- Pricing
- Role Analysis
- Season Changeover
- Section Percent of Store
- Share of Shelf
- SKU Rationalization
- SKUs in Category
- Vendor Performance

RETAILER SALES RANKING AND CATEGORY BREAKDOWN

UPC Description	UPC Code	Retailer Sales Rank	Retailer Sales	% Category Sales
ACME SuperCola 12 oz. Can	11123 98765 4	1	\$1,534,624	18.2%
ACME DietCola 12 oz. Can	11123 98097 5	2	\$892,421	10.6%
ACME DietCola Tallboy	11123 76987 0	3	\$882,432	10.4%
ACME Fizz 12 oz. Can	11123 57687 9	4	\$540,215	6.4%
ACME DietCola 2 liter bottle	11123 25349 4	5	\$489,253	5.8%
ACME SuperCola 2 liter bottle	11123 53409 2	6	\$422,412	5.0%
Orange-O 12 oz. Can	11123 76900 1	7	\$410,624	4.9%
Diet Orange-O 12 oz. Can	11123 87906 0	8	\$399,253	4.7%
Diet Orange-O 2 liter bottle	11123 54211 2	9	\$360,875	4.3%
ACME Fizz 2 liter bottle	11123 58942 8	10	\$302,624	3.6%
PunchyBoy 12 oz. can	11123 43215 2	11	\$290,512	3.4%
PunchyBoy Tallboy	11123 98097 5	12	\$289,888	3.4%
PunchyBoy Grape 12 oz. Can	11123 76987 0	13	\$267,512	3.2%
PunchyBoy 2 liter bottle	11123 57687 9	14	\$254,312	3.0%
ACME RootBeer 12 oz. Can	11123 25349 4	15	\$204,243	2.4%
ACME FizzyWater 8 oz. Bottle	11123 53409 2	16	\$200,799	2.4%
ACME RootBeer 2 liter bottle	11123 76900 1	17	\$196,902	2.3%
ACME FizzyWater 2 liter bottle	11123 87906 0	18	\$184,312	2.2%
Mr. Juice 12 oz. Can	11123 54211 2	19	\$169,208	2.0%
Punchy Boy Grape 2 liter bottle	11123 58942 8	20	\$155,902	1.8%

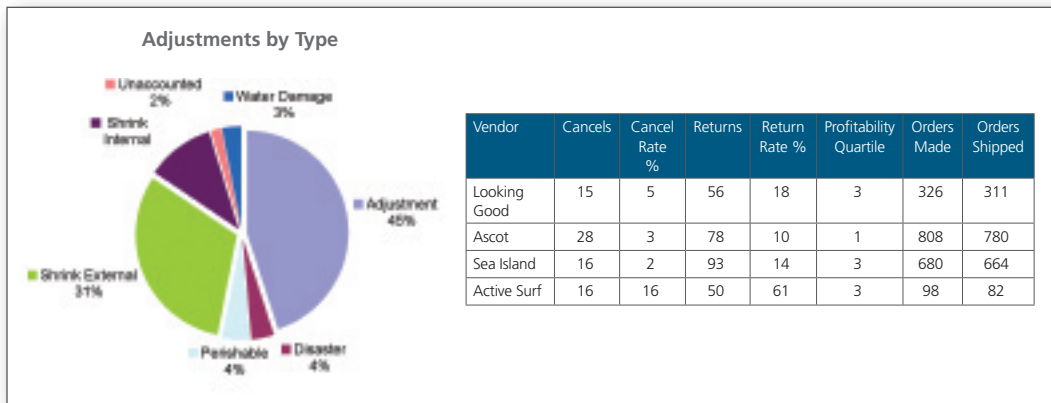
Category managers run ranking reports from any Web browser to optimize product mix, test promotional success, and offer specific product selections demanded locally by consumers.

LOSS PREVENTION

Retailers have a huge opportunity to reduce costs by minimizing loss across inventory and distribution channels. MicroStrategy enables retailers to perform shrink analysis and track changes in inventory movement by region and product category. In addition, MicroStrategy helps retailers prevent loss by monitoring back orders, order cancellations, return rates, damaged inventory, and other areas that lead to unnecessary expenditures and revenue losses. MicroStrategy also empowers retailers to foster customer satisfaction by reducing instances of damaged goods, returns, and cancellations.

- Back Orders
- Cancells
- Distribution Shrink
- Hot Customer
- Hot Staff
- Hot Stores
- Markdowns
- Natural Losses
- Return Rates
- Shrink
- Vendor Rationalization

LOSS PREVENTION ANALYSIS



Vendor	Cancels	Cancel Rate %	Returns	Return Rate %	Profitability Quartile	Orders Made	Orders Shipped
Looking Good	15	5	56	18	3	326	311
Ascot	28	3	78	10	1	808	780
Sea Island	16	2	93	14	3	680	664
Active Surf	16	16	50	61	3	98	82

Supply chain managers analyze adjustments by type to assess inventory damage and other key factors that could lead to customer dissatisfaction and in order to decrease potential for loss.

CREDIT SERVICES ANALYSIS

With the increasing importance of private-label credit business, new opportunities for financing programs, and more credit-based sales, retailers want to track their customers' credit habits to identify the most profitable customers and to protect themselves from loss through customer default on credit. MicroStrategy's unified business intelligence architecture allows retailers to analyze customers' credit activities to uncover new revenue opportunities through targeted up-sell campaigns and to reduce default and debt risk through credit risk and predictive analysis.

- Accounts Payable
- Accounts Receivable
- Cash-to-Cash Cycles
- Chargeback Analysis
- Fraud Outcomes
- Out-of-Pattern
- Payments Outstanding
- Rate Forecasting
- Risk Scoring
- Total Daily Risk

APPLICANT CREDIT RISK SCORING

Current Risk Applicants	Risk Score	Variance to Mode TY	Variance to Mode Outstanding	Count Cards	Lifestage	Lifestyle	Income
S. Downing	109	28	20	4	20-30	Upwardly mobile	\$98,000
G. Fallon	107	26	18	8	70+	Retired senior	\$45,000
R. Jackson	102	21	13	0	20-30	Student	\$12,000
P. Gupta	100	19	11	1	50-60	HOH	\$52,000

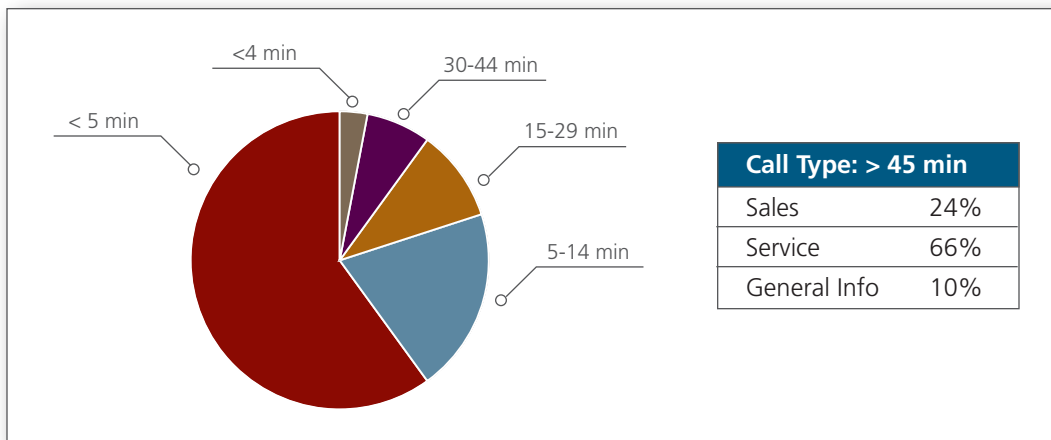
Financial managers analyze credit risk to determine best applicants and influence subsequent marketing and sales efforts.

LABOR SCHEDULING

To optimize the efficiency of their operations, retailers must monitor staffing needs and employee performance. MicroStrategy's advanced analytical capabilities enable retailers to identify the hours, days, and seasons that require the most staffing, as well as measure employee performance by sales, labor hours, store, and other variables. MicroStrategy provides employee performance and labor scheduling reports that help streamline staff usage and create efficiencies that boost bottom line performance.

- Best / Worst Stores
- Best Employees
- Budget vs. Actual
- Event Shortages
- Forecast Staff
- Missed Work
- Overtime
- Sales Per Labor Hour
- Task Breakdown

CALL DURATION TREND REPORT



This report shows the breakdown of incoming call volume for a user selected time period. By drilling into any of the pie sections, an Operations or Customer Service Analyst can determine the types of calls in the duration segment. Further analyses of interest might be departments to which calls were routed, individual agent activity records, or call duration for different customer segments.

ENTERPRISE-WIDE REPORTING AND ANALYSIS AT ACE HARDWARE

Ace Hardware Corp. selected MicroStrategy as its enterprise-wide business intelligence software solution. Ace Hardware has made a multi-million dollar investment in MicroStrategy technology and services and has more than 8,000 MicroStrategy users enterprise-wide. Ace Hardware has deployed MicroStrategy for enterprise-wide reporting and analysis on marketing initiatives, retail pricing, category management, merchandising, inventory, wholesale pricing, and customer loyalty programs. A variety of corporate employees, vendors, and Ace retailers use MicroStrategy to analyze and report on over a terabyte of data housed in a Teradata data warehouse.

“We decided to standardize on MicroStrategy enterprise-wide because we recognized the importance of having a single integrated platform that has the scalability to grow with us and our needs. MicroStrategy’s platform offers exceptional scalability for building numerous applications and accommodating very large databases and user populations. We are always looking for new ways to enhance operational efficiencies, and MicroStrategy provides us with the technology to do just that.”

– Ace Hardware

BETTER DECISION-MAKING AT THE CONTAINER STORE

The Container Store, the nation’s leading retailer of storage and organization products, deployed the MicroStrategy Business Intelligence Platform to support its merchandising system. The Container Store selected MicroStrategy to convert large volumes of merchandise data into actionable information for store buyers. From their desktops, The Container Store buyers can easily access SKU data via an extranet and then segment inventory purchased by store, by time, and by product. With MicroStrategy, The Container Store users are able to make well-informed business decisions, such as what products to retain in inventory and what products to retire. In addition, the information helps buyers identify emerging trends in materials, color palettes, and styles. The Container Store also uses daily exception-based reports, a self-service reporting system at the store and buyer level that alerts users to situations when they need to take action.

“With our daily merchandise reports, we gain a competitive edge over other retailers who wait for weekly or month-end reports. MicroStrategy gives our buyers and executives an up-to-date picture of our business and enables us to better understand what we sell, when we sell it, and where we sell it, which ultimately influences our high levels of customer service. Our buyers count on this information to make knowledgeable decisions about when to add or retire products, which has a positive impact on our bottom line.”

– The Container Store

RESPONDING TO CUSTOMER NEEDS AT FAITH SHOES

Faith Shoes selected MicroStrategy to track its key business parameters to ensure rapid response to customer needs. Faith Shoes has deployed the MicroStrategy platform to provide users at its 330 outlets with sophisticated sales performance and inventory analysis capabilities. As one of the U.K.'s leading shoe manufacturers and retailers, the company saw the need to enhance its sales and inventory tracking processes and hence improve its overall business operations to better react to market trends. The company selected MicroStrategy because of its proven experience in the retail sector.

“Right from the start, MicroStrategy demonstrated a clear understanding of our business needs. We need to have quick and accurate insight into sales trends and supply chain efficiency to rapidly modify pricing and promotion strategies. This knowledge, coupled with its scalable, reliable platform, left us with an easy decision to make.”

– Faith Shoes

UNDERSTANDING SALES TRENDS AND PRODUCT PERFORMANCE AT THE METRO GROUP

The METRO Group is the world's third-largest retailing group. Approximately 2,500 employees in multiple departments across the METRO Group organization are already utilizing the MicroStrategy platform as their business intelligence standard to perform reporting and analysis against a 34-terabyte Teradata data warehouse. MicroStrategy supports numerous business intelligence applications, encompassing merchandising, marketing, market basket analysis, category management, reporting and strategic business planning, and advertising effectiveness studies.

METRO Group employees, for example, utilize MicroStrategy to run reports to track sales trends and margins, as well as perform ad hoc analyses to understand the drivers behind product-line performance. The company also uses MicroStrategy technology for its MetroLink Project to provide its suppliers with scorecards on product performance.

“We're substantially expanding our deployment of MicroStrategy because it uniquely meets METRO Group's rigorous requirements for sophisticated yet user-friendly business intelligence reporting features and for a highly scalable platform. MicroStrategy enables our employees to track the performance of the entire company, optimize product assortment, and make decisions that help make us more customer-responsive and competitive to increase revenue and profitability.”

– METRO Group

MICROSTRATEGY: THE CHOICE OF LEADING RETAILERS

At MicroStrategy, we are fully dedicated to helping retailers stay competitive in a challenging industry. We believe that business intelligence properly applied to corporate data provides retailers with the insight they need to increase revenue, reduce costs, and meet consumer needs.

Today, two-thirds of Fortune's Global 500 retailers rely on MicroStrategy's business intelligence architecture for their reporting, analysis, and monitoring of corporate data. MicroStrategy's unified architecture offers retailers far-reaching opportunities for ever-expanding business intelligence. Whether starting with one or several applications, retail companies can evolve to utilize MicroStrategy's unique competencies: an easy-to-use unified Web interface with extranet and intranet capabilities, access for thousands of users, reporting and analysis of tremendous amounts of data across multiple sources, graphical dashboards and boardroom-quality reports, and unconstrained analytical flexibility.

With the increasing challenges the retail industry is facing, retailers need to stay one step ahead of the competition. MicroStrategy equips companies with the software platform they need to make the best use of the vast amounts of information available to them, allowing them to operate more efficiently and increase revenue. At MicroStrategy, we are committed to helping your company increase its competitive advantage by devising smart business solutions and making better business decisions every day.

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PATENT INFORMATION

This product is patented. One or more of the following patents may apply to the product sold herein: U.S. Patent Nos. 6,154,766, 6,173,310, 6,260,050, 6,263,051, 6,269,393, 6,279,033, 6,501,832, 6,567,796, 6,587,547, 6,606,596, 6,658,093, 6,658,432, 6,662,195, 6,671,715, 6,691,100, 6,694,316, 6,697,808, 6,704,723, 6,707,889, 6,741,980, 6,765,997, 6,768,788, 6,772,137, 6,788,768, 6,792,086, 6,798,867, 6,801,910, 6,820,073, 6,829,334, 6,836,537, 6,850,603, 6,859,798, 6,873,693, 6,885,734, 6,888,929, 6,895,084, 6,940,953, 6,964,012, 6,977,992, 6,996,568, 6,996,569, 7,003,512, 7,010,518, 7,016,480, 7,020,251, 7,039,165, 7,082,422, 7,113,993, 7,127,403, 7,174,349, 7,194,457, 7,197,461, 7,228,303, 7,260,577, 7,266,181 and 7,272,212. Other patent applications are pending.

