



# IBM Performance Event 2011

Smarter Decisions. Better Results.



**IBM Performance Event 2011**

Smarter Decisions. Better Results.



# Optimised Store / Branch Management through Analytics: Gain Visibility, Control and Prediction

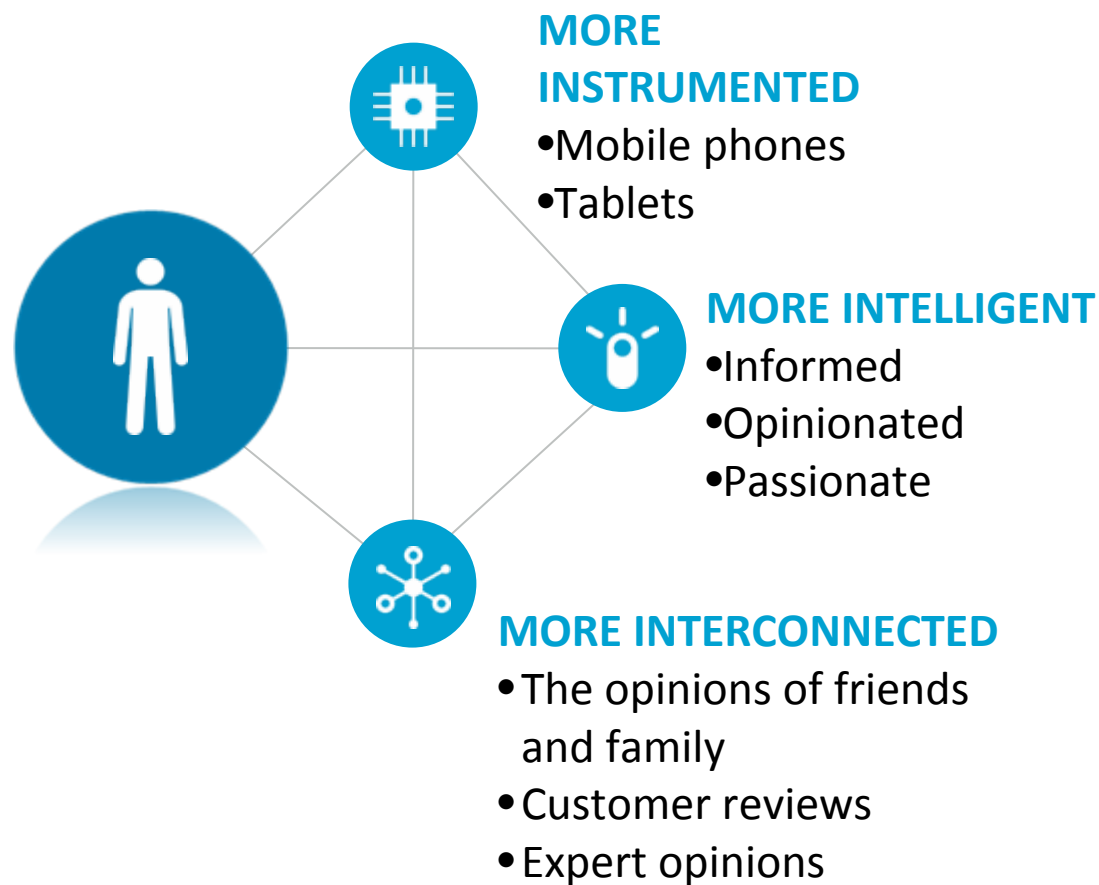
*Simon Ng*

*Senior I/T Specialist, Business Analytics*

*IBM Hong Kong*



# Customer expectations are higher than ever before



# The business requirements for retail success have changed

## DELIVER A SMARTER SHOPPING EXPERIENCE

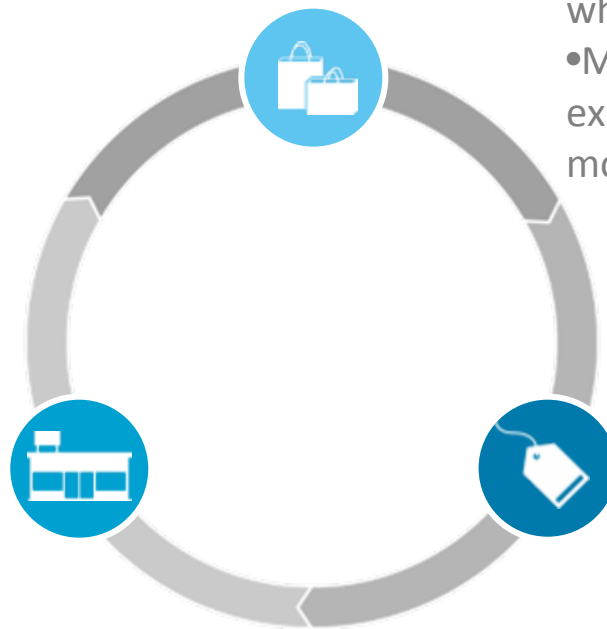
- Enable customers to shop however, whenever and wherever they want
- Match inventory and brand experience online, in stores and via mobile devices

## DEVELOP SMARTER MERCHANDISING AND SUPPLY CHAINS

- Gather customer information continuously at every touch point
- Manage and deliver assortments based on customer insights

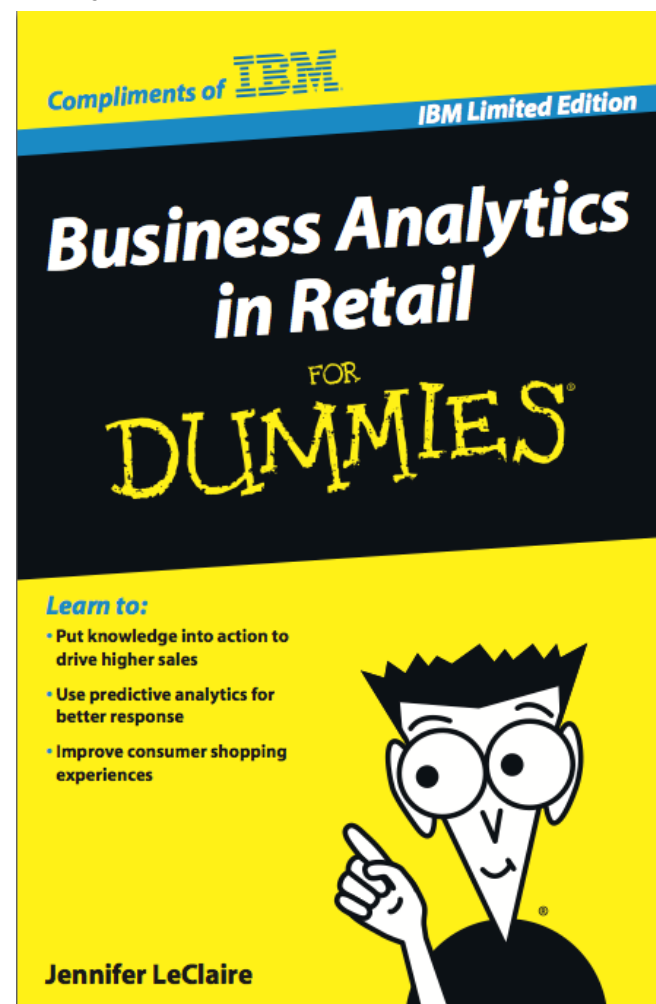
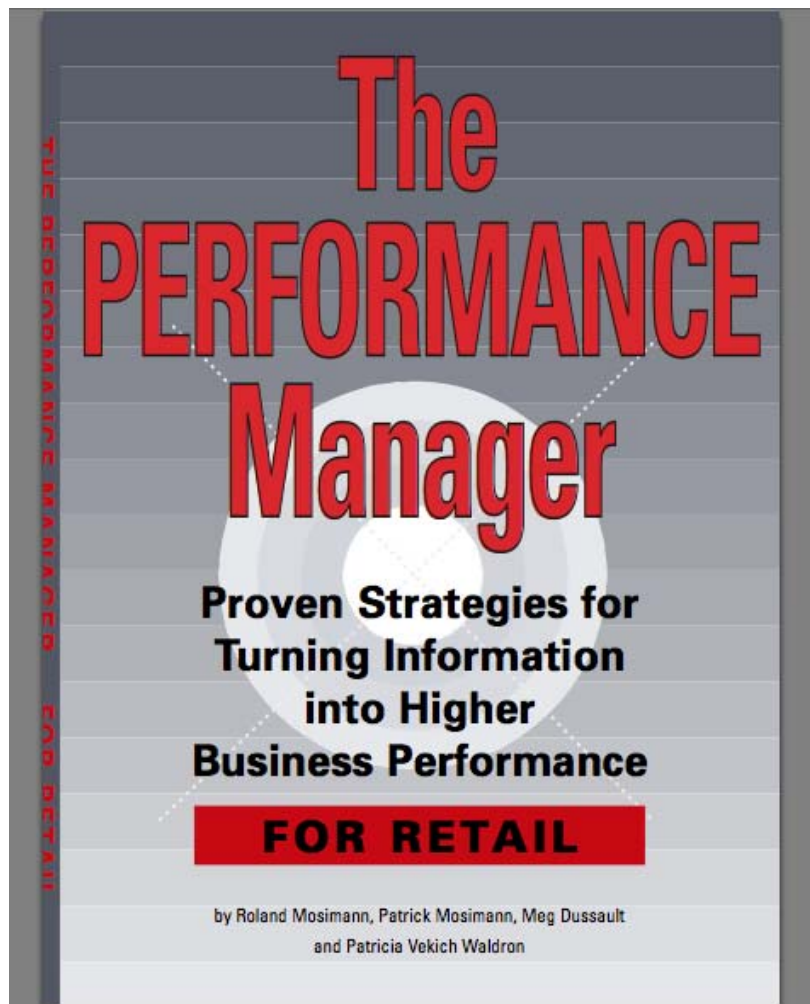
## BUILD SMARTER OPERATIONS

- Update systems to better handle customer demands
- Improve management across channels of labor, assets and business processes



# What IBM Offers

- <http://www.ibm.com/software/analytics/retail/>



# IBM Business Analytics software drives better business outcomes



## How are we doing?

*Deliver immediate insights into business performance*

- View at-a-glance results of flash sales
- Rank stores by region
- Compare labor expenses to budget
- Identify profitable customers



## Why? What is likely?

*Enable deeper analysis of trends and patterns*

- Perform merchandise analysis
- Compare and predict channel performance
- Optimize store level assortments
- Model future market segments
- Improve campaign outcome with better targeting



## What should we be doing?

*Provide the foresight needed to plan and allocate resources*

- Optimize merchandise profitability
- Improve financial and operational planning accuracy and agility
- Simulate effects of decisions and events
- Optimize store layouts
- Improve promotional effectiveness





## Consolidate customer and sales insights generated through multiple touch points to create a complete picture



### Capture structured and unstructured data

Surveys, focus groups	Browsing history
POS data	Loyalty program
E-commerce	Credit card
Web browsing	Complaints
Contact center	Crowd sensing
Social media	Returns

### Analyze data and predict future results by

- Extracting trends
- Exposing patterns
- Discovering relationships

### Use your analysis to drive improvements to

- Assortment
- Advertising campaigns
- Product promotions
- Pricing
- Public relations
- Store layout
- Staff training
- Supply chain
- And more



# IBM Retail Solution



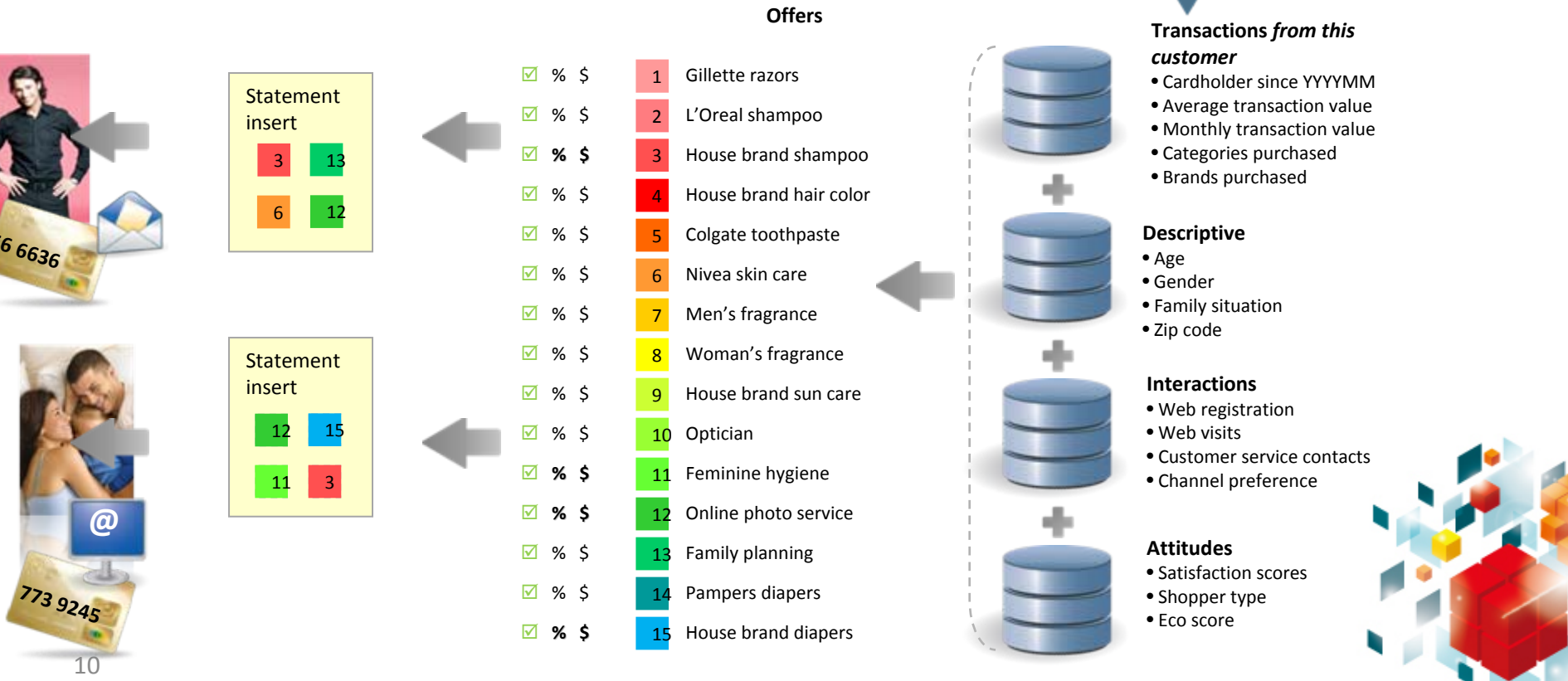
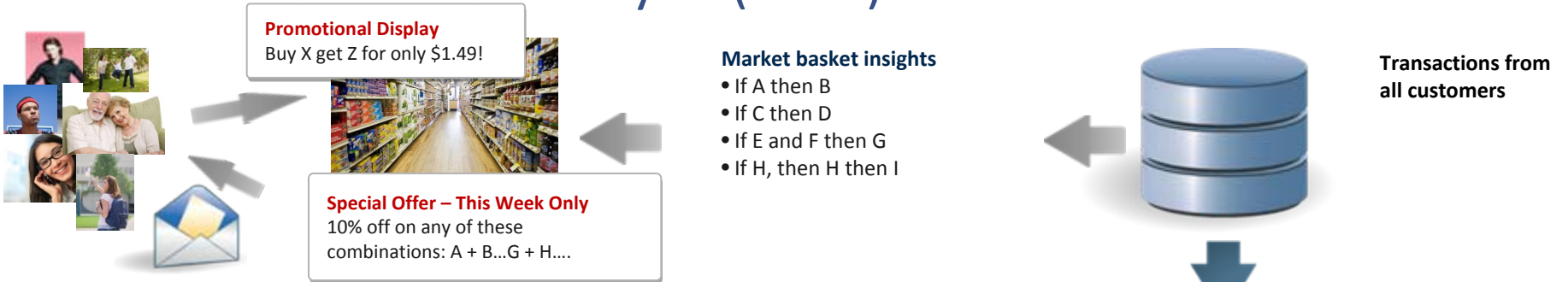


# Retail Market Basket Analysis (MBA)

- Better understand product sales patterns and customer preferences, increase marketing effectiveness and improve up/sell cross sell opportunities.
  - Increase basket size, with greater revenue per customer visit.
  - Increase return on marketing spend.
    - Product promotions, in-store offers, targeted offers to web shoppers and loyalty card holders.
  - Increase product sales and margins through differentiated product offers.



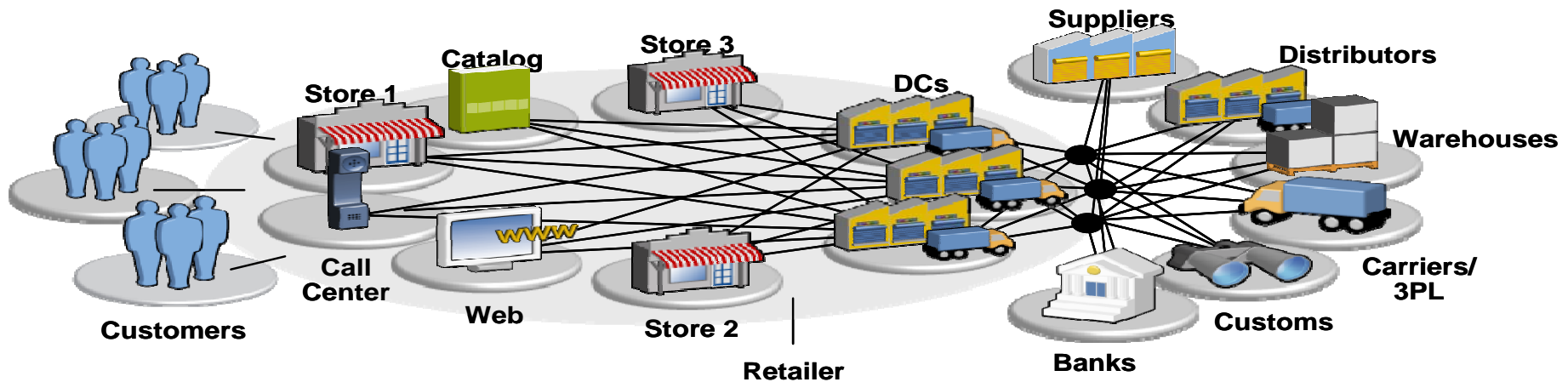
## Retail Market Basket Analysis (MBA)



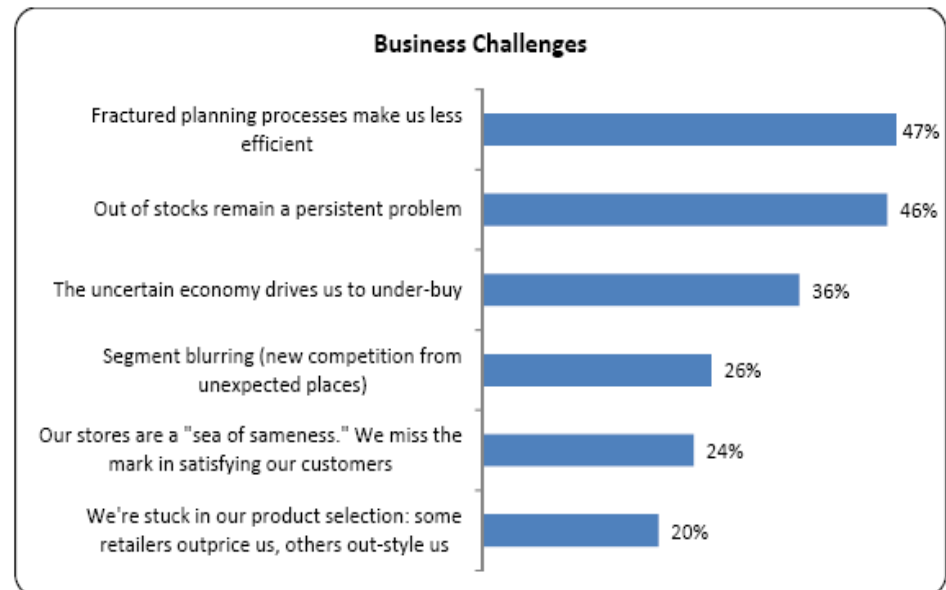
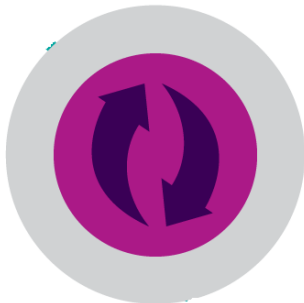
# IBM Retail Solution



*Retailers need to offer differentiated merchandise, while being profitable, flexible and efficient in an environment of accelerating market shifts*

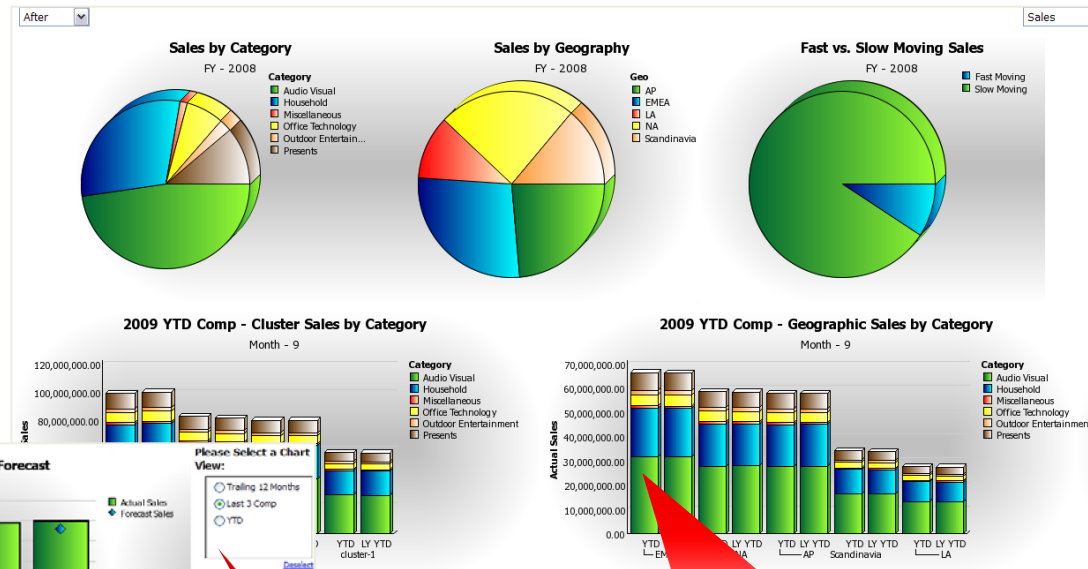


**Develop smarter merchandising and supply chains.**



# Understand merchandise performance

- Measure store sales by SKU
- Identify forecast accuracy
- Understand performance against plan
- View trending over time
- Monitor KPIs



### Set Dashboard Context:

Please select a GEO [Show Filter Prompt](#) Please select a Month [Show Filter Prompt](#)  
 Please select a Category [Show Filter Prompt](#)

**Alerts**  
**News Headlines**  
 NEW: Comp Sales are down YTD in N. America.  
 NEW: Out of Stocks Alert for the Visual Sub Category!  
 Recurring: Discounts are too aggressive for the Audio Visual Category.

**Retail Report Catalogue**  
**Report Catalogue**  
 Name\*  
 Historical Sales Chart  
 Sales Gauges - Relative Time  
 Sales Chart by Version  
 Top 10 Stores & Products  
 Sales Mix by Category & Geo  
 Sales by Geo & Cluster

**Self Service**  
**Analysis**  
 Name\*  
 Flash Sales  
 Product - Ad Hoc Query  
 Store - Analysis



Merchant Dashboard  
 Measure performance,  
 understand sales vs plan  
 across all geos

Understand Trends Over  
 Time



# Understand merchandise performance

- Sales and margin by product, category, store
- Rankings
- Deep-dive analysis
- Performance by attribute(s)

Please select a GEO:  Please select a Month:

Show Filter Prompt Show Filter Prompt

Please select a Category:

Show Filter Prompt

Alerts:

News Headlines

- NEW: Comp Sales are down YTD in N. America.
- NEW: Out of Stocks Alert for the Visual Sub Category!
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Retail Report Catalogue

Report Catalogue

- Historical Sales Chart
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- Top 10 Stores & Products
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### Top 10 Products, Month - 9

Top 10 Products	Slow/Fast Mover	Actual Sales	Forecast Sales	Comp %	Predicted Sales Likelihood	Top 10 GM	Slow/Fast Mover	Gross Margin	Gross Margin %	Predicted Sales Likelihood
9140217	Slow Moving	5,047,470	4,593,277	9.89%	0.99	9140217	Slow Moving	1,918,052	38.00%	0.99
9130217	Slow Moving	1,892,587	1,903,591	(0.58%)	0.55	9140214	Slow Moving	847,925	53.00%	0.98
9140214	Slow Moving	1,599,938	1,597,215	0.17%	0.98	9130217	Slow Moving	738,077	39.00%	0.55
9120209	Slow Moving	1,134,716	1,009,392	12.42%	0.53	9130216	Slow Moving	492,833	58.01%	0.95
9110219	Slow Moving	932,129	948,102	(1.68%)	0.42	9110220	Slow Moving	483,280	55.00%	0.37
9130201	Slow Moving	930,619	895,363	3.94%	0.52	9110218	Slow Moving	440,559	51.00%	0.49
9120201	Slow Moving	923,231	882,623	4.60%	0.36	9120209	Slow Moving	385,824	34.00%	0.53
9140213	Slow Moving	904,241	1,022,234	(11.54%)	0.41	9140212	Slow Moving	385,534	52.00%	0.79
9110220	Slow Moving	878,731	908,866	(3.32%)	0.77	9140213	Slow Moving	370,765	41.00%	0.41
9110218	Slow Moving	863,812	826,357	4.53%	0.36	9120201	Slow Moving	369,326	40.00%	0.36

Actuals vs. Forecast over Time

Sales - Actuals vs. Forecast - MTD    Sales - Actuals vs. Forecast - YTD    Sales - Actuals vs. Forecast - Prior

Ranking of Top Products

Ad hoc Query

File Edit View Settings Run Help

Insertable Objects

- BA - Assortment Planning
  - Data View
  - Business View
  - Dimensional View
    - Time
    - Store
      - Store
      - Cluster
    - Product
      - Product
      - Product Slow Fast
    - Measures
      - Predicted Sales
      - Forecast Sales
      - Actual Sales
      - Unit Cost
      - RRP
      - Sale Price
      - Gross Margin
      - Gross Margin %

Rows: Store(All) Columns: Time(All) Context filter:

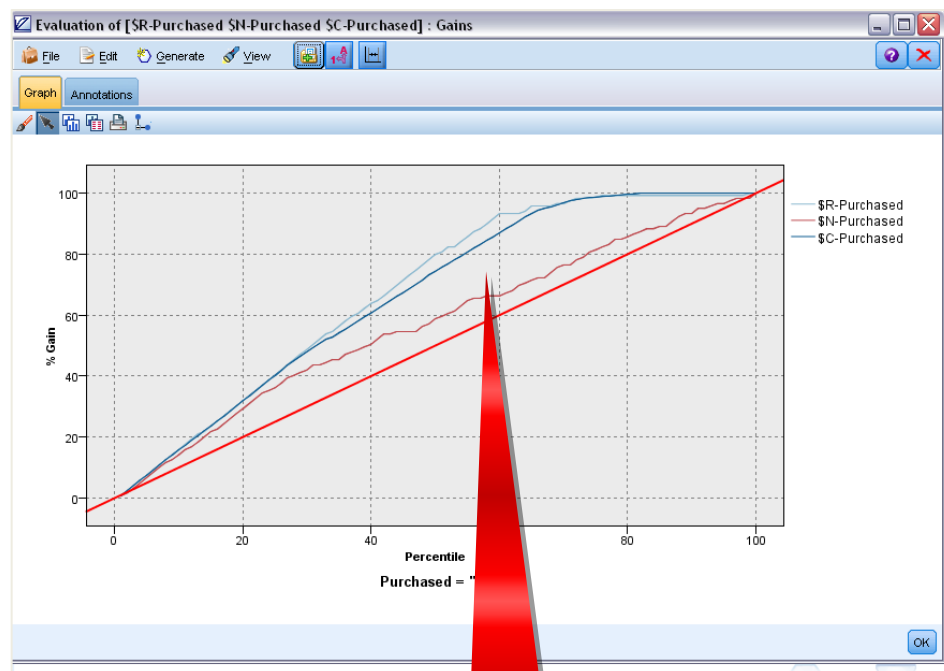
Actual Sales	2008	2009	Time(All)
AP	77,188,711.01	76,951,190.63	154,139,901.64
EMEA	88,667,946.79	88,778,109.41	177,446,056.20
LA	36,576,445.57	36,757,347.74	73,333,793.31
NA	77,403,815.74	78,874,120.64	156,277,936.38
Scandinavia	45,274,230.32	45,514,630.25	90,788,860.57
Store(All)	325,111,149.44	326,875,398.68	651,986,548.11



## Apply predictive and advanced analytics to generate optimized assortment plan by store for specific time period

### Determine likelihood of individual item selling on a store by store basis

- Take into consideration store / cluster attributes
- Use multiple modelling techniques to predict whether a store should stock individual SKUs such as: CHAID, C5 and Neural Networks
- Use multiple methods of scoring predictions from modelling techniques for best prediction



Minimize Lost Sales



## Review Predictions and Execute Plans

- Review SKU-Level Predictions against plan, history
- Model alternatives
- Finalize Plans
- Execute

Rows:		Columns:		Context:				
Financial Plan [Financial Plan]		Top Down Target Input [Top Down Target Input]		Top Down Target [Versions] Total Company [Divisions]				
	Seasonality Profile	2007 Actual	2008 Actual	2008 Actual Comp	2009 Plan	2009 Comp	2010 Plan	2010 Comp
Gross Sales	Prior Year	8,697,450	62,564,615	6.6%	86,964,815	39.0%	113,054,259	30.0%
Units	Prior Year	424,257.0	460,048.0	8.4%	610,216.9	32.6%	670,280.1	9.8%
Average Sales Price per Unit	Two Year Average	416.28	409.32	-1.7%	348.25	-14.9%	349.00	.2%
Returns	Prior Year	2,998,640	3,190,509	6.4%	3,755,134	17.7%	4,546,713	21.1%
Returns %	Prior Year	15.3%	15.3%	-1.1%	15.0%	-1.9%	15.0%	.0%
Returns % Override	Prior Year	.0%	.0%	.0%	6.0%	.0%	7.7%	28.3%
<b>Promotions</b>	Prior Year	5,289,611	5,630,815	6.5%	10,820,413	92.2%	11,657,710	7.7%
Promotions %	Prior Year	27.0%	27.0%	-1.1%	12.4%	-53.9%	10.3%	-17.1%
Promotion A	Prior Year	2,349,154	2,502,585	6.5%	3,755,134	50.1%	3,885,903	3.5%
Promotion A %	Prior Year	12.0%	12.0%	-1.1%	15.0%	25.0%	15.0%	.0%
Promotion A % Override	Prior Year	.0%	.0%	.0%	6.0%	.0%	.0%	-100.0%
Promotion B	Prior Year	2,940,457	3,128,231	6.4%	7,065,279	125.9%	7,771,807	10.0%
Promotion B %	Prior Year	15.0%	15.0%	-2.2%	30.0%	100.0%	30.0%	.0%
Promotion B % Override	Prior Year	.0%	.0%	.0%	.0%	.0%	.0%	.0%
<b>Markdowns</b>	Prior Year	5,282,771	5,630,815	6.6%	7,471,226	32.7%	6,994,626	-6.4%

Model scenarios, keep multiple versions of plans





# IBM Retail Solution





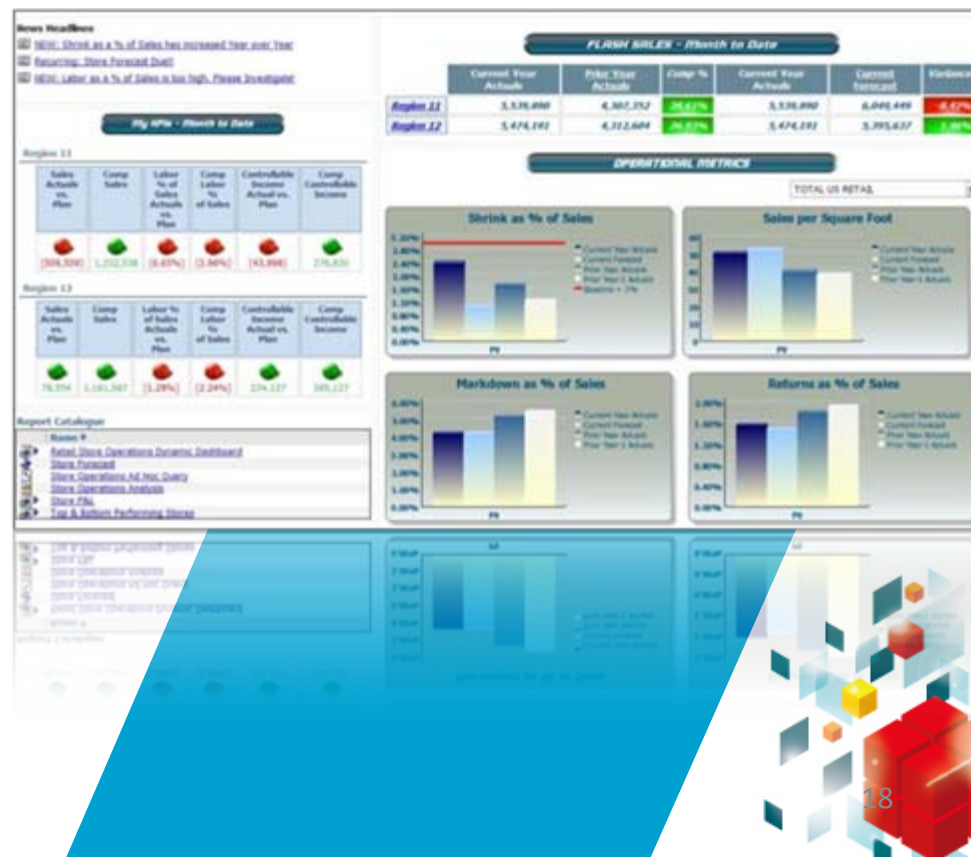
## Retail analytics solutions for smarter operations

*Superior analytics capabilities, best practices and models to accelerate time to value*

### Store operations

This solution helps integrate planning for stores, regions, divisions and the overall company to help you optimize operations

- Link scorecards and reports to measure KPIs and analyze performance
- Create driver-based, profile-driven profit and loss (P&L) reports for stores that include:
  - Revenue
  - Gross margin
  - Exempt and nonexempt headcount position-level
  - Controllable expenses, such as supplies, utilities, and repair and maintenance initiatives





## Retail analytics solutions for smarter operations

*Superior analytics capabilities, best practices and models to accelerate time to value*

### Store development

This solution helps you define and monitor projects with financial plans to help you manage store development initiatives

- Define, apply and manage attributes, drivers and assumptions
- Compare plans (revenue, expense) to determine initiative ROI
- Model and measure store, facility and initiative profitability, performance and contribution against goals
- Apply initiatives to regions, stores or groups of stores
- Manage resources by assigning them to projects
- Allocate expenses and capital expenditure to projects

Initiative Report Card

\* Green Initiative- Per 5      Actuals

Initiative	SMBs				Net Operating Profit				After Implementing		
	Before Initiative	After Initiative	Variance	% Variance	Before Initiative	After Initiative	Variance	% Variance	Expense	ROI	% ROI
<b>Initiative Stores</b>											
Dominick's	\$22,437.38	\$18,825.15	(\$4,412.01)	-19.66%	(\$17,379.41)	\$3,319.27	\$20,698.68	135.19%	\$18,801.28	\$1,897.40	10.10%
AlphaBeta	\$18,385.87	\$14,542.27	(\$3,843.60)	-21.01%	(\$3,729.68)	\$19,057.79	\$22,787.46	610.99%	\$18,801.28	\$3,986.18	21.20%
Retail 1	\$18,047.14	\$14,298.74	(\$3,797.46)	-21.04%	\$1,489.83	\$21,482.68	\$20,002.85	573.19%	\$18,801.28	\$1,201.57	6.39%
Retail 2	\$17,702.82	\$13,322.05	(\$4,380.87)	-24.80%	\$612.24	\$22,896.45	\$22,194.21	3,625.19%	\$18,801.28	\$3,263.93	18.83%
<b>Total - Initiative Stores</b>	<b>\$78,573.30</b>	<b>\$59,995.22</b>	<b>(\$18,623.88)</b>		<b>(\$17,007.83)</b>	<b>\$68,676.19</b>	<b>\$85,683.22</b>		<b>\$75,285.13</b>	<b>\$18,478.89</b>	
<b>New Initiative Stores</b>											
Washington	\$7,281.58	\$8,139.67	\$858.09	11.81%	(\$11,790.67)	(\$8,254.24)	\$3,536.43	-23.43%			
Birmingham	\$6,683.17	\$7,862.19	\$1,179.93	17.66%	(\$18,499.94)	(\$14,158.76)	\$4,341.18	-24.23%			
Memphis	\$5,429.87	\$5,625.25	\$195.37	3.60%	(\$18,848.83)	(\$13,528.79)	\$5,320.06	-6.89%			
Rocky Mount	\$6,493.33	\$7,465.92	\$972.57	14.99%	(\$74,580.64)	(\$89,136.50)	\$14,555.86	-7.27%			
Montgomery	\$6,413.85	\$6,722.57	\$308.72	4.79%	\$10,399.18	\$9,774.72	\$624.44	-6.00%			
Delray Beach	\$6,572.60	\$7,796.75	\$1,224.14	18.62%	(\$40,887.41)	(\$38,991.81)	\$1,895.60	-4.64%			
Pompano Beach	\$6,148.41	\$7,143.39	\$994.98	16.19%	(\$84,182.58)	(\$82,221.20)	\$1,961.38	-2.24%			
Palm Beach Gardens	\$7,560.91	\$7,898.43	\$337.52	4.46%	(\$88,245.85)	(\$87,746.19)	\$499.66	-0.60%			
Boynton Beach	\$7,390.88	\$7,436.75	\$45.87	0.62%	(\$17,112.18)	(\$17,056.34)	\$55.84	-0.33%			
FL Lauderdale	\$1,741.84	\$1,519.88	(\$221.77)	-12.73%	\$19,850.83	\$18,125.49	\$1,725.34	-8.70%			
<b>Hotels</b>	<b>\$1,854.88</b>	<b>\$1,854.88</b>	<b>\$0.00</b>	<b>0.00%</b>	<b>\$69,851.28</b>	<b>\$69,851.28</b>	<b>\$0.00</b>	<b>0.00%</b>			
LA - Pompano	\$7,247.68	\$7,319.88	\$72.20	1.00%	\$19,930.83	\$19,712.48	\$218.35	-1.10%			
Atlanta group	\$1,200.00	\$1,439.14	\$239.14	19.93%	(\$8,242.92)	(\$8,249.19)	\$6.27	-0.08%			
Los Angeles group	\$1,200.00	\$1,369.93	\$169.93	14.16%	(\$8,242.92)	(\$8,249.19)	\$6.27	-0.08%			
London group	\$1,200.00	\$1,745.38	\$545.38	45.45%	(\$8,242.92)	(\$8,249.19)	\$6.27	-0.08%			
Spain group	\$1,200.00	\$1,346.12	\$146.12	12.18%	(\$8,242.92)	(\$8,249.19)	\$6.27	-0.08%			
Unlabeled	\$1,200.00	\$1,123.51	(\$76.49)	-6.37%	(\$8,242.92)	(\$8,249.19)	\$6.27	-0.08%			
Other	\$1,200.00	\$1,200.00	\$0.00	0.00%	(\$8,242.92)	(\$8,249.19)	\$6.27	-0.08%			



IBM has the systems, people and processes to help you get there



## IBM Retail Industry Framework

One of the richest and most integrated and comprehensive frameworks in the industry



**IBM systems and services**  
Specifically designed to support industry-based solutions through ...



**IBM Business Analytics and Optimization Services**  
Transforming your business processes by integrating a single view across the enterprise with a unified ...



**Information infrastructure**  
Helping to ensure high-performing and cost-effective information availability, retention and compliance

