SAS® FORUM
RUSSIA 2017

Analytics in Retail for Strategic Growth

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THE POWER TO KNOW®

Understanding the New Consumer

Personal consumption is up, but retail sales remain sluggish (lowest since recession of 2008 – N. America)

"Conspicuous consumption" to **"conscious consumption"**

Shoppers **spending more on experiences** and less on products

Consumers, especially Milennials, see experiences as **building longer-term memories** than products

A major shift is happening in the way people shop and **what they want to buy**

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Understanding Milennial / Gen-Z Shopping Habits

In 2020, will represent **30%** of all sales; $1.4 Trillion in U.S.

Gather opinions on social media before decision

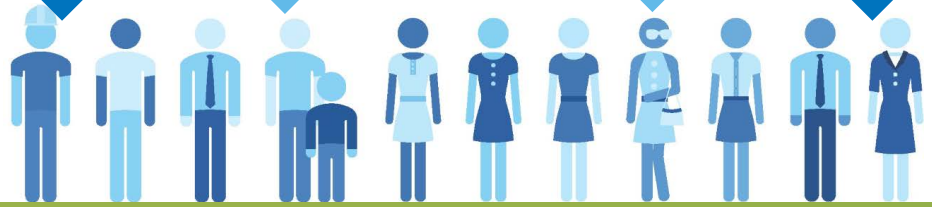
Prefer spending on **experiences** over tangible goods

16 – 36 years old

Most **tech saavy** generation

unimpressed by marketing or advertising

Want **Discounts Personalization & In-Store Experience**



19% of retail spending occurs on-line

88% would buy online & pick up in-store to save $10 on a $50 purchase

Check phone 45+ times/day; 3.2 hours spent on mobile /day

68% demand a truly omni-channel experience

Rent vs. Own

Individualism

Competitive Landscape

- Strong Web presence now the price of entry into retail
- Omni-Channel capabilities are an expectation
- “One-stop” shops like Amazon, Target and Walmart will continue to dominate
- Traditional malls will become a thing of the past
- Pop-up shops and showrooms will emerge as an appealing alternative
- Fast fashion retailers will continue to build their competitive presence

Priorities of the Retail CEO

"We need to be more agile in responding to our customers needs online and in store"

David Jaffe, CEO of Ascena Retail Group

"We need to enhance our in-store experience and Internet/Home delivery, offering state-of-the -art digital tools"

CEO,
Top 5 Grocery Retailer

"Improving technology to grow the linkage between the Internet & the Store to enhance the customer experience is our top goal"

Jerry Storch, CEO, Hudson's Bay

"We have seen a drastic reduction in the amount of people physically visiting the store. There's so much competition online, I am constantly thinking of new marketing techniques to get people to shop in my store"

CEO, Apparel & Accessories Retailer

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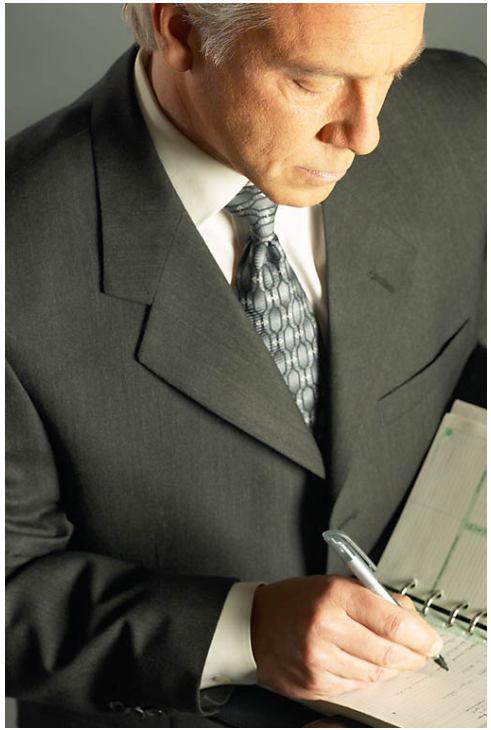
Out of the Backroom….into the Boardroom

"Enabling the CEO Agenda for Change"

Adding Top Line Growth Through Predictive Analytics



Its all about shareholder value!

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Focus on the right customers

Which customers should you target for the ideal customer lifetime value?

Analyze for opportunities

How do we detect, discover and determine the root cause of issues effecting your business?

Offer the right assortments

Based on online and in-store sales, are the right products available to the trade area and are they profitable?

Protect your business

With the vast number of returns, transactions, purchase orders and network connections, how do you determine what is legitimate?

Cover Demand

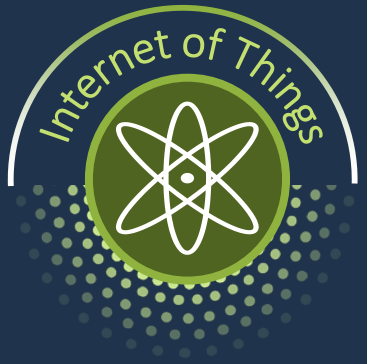
Enough inventory to cover demand?

Personalize Customer Experience

What is the best tuned path to purchase for each and every visitor ?

Efficient Stores

Is your Energy usage, Staff and Equipment performing at their best ?



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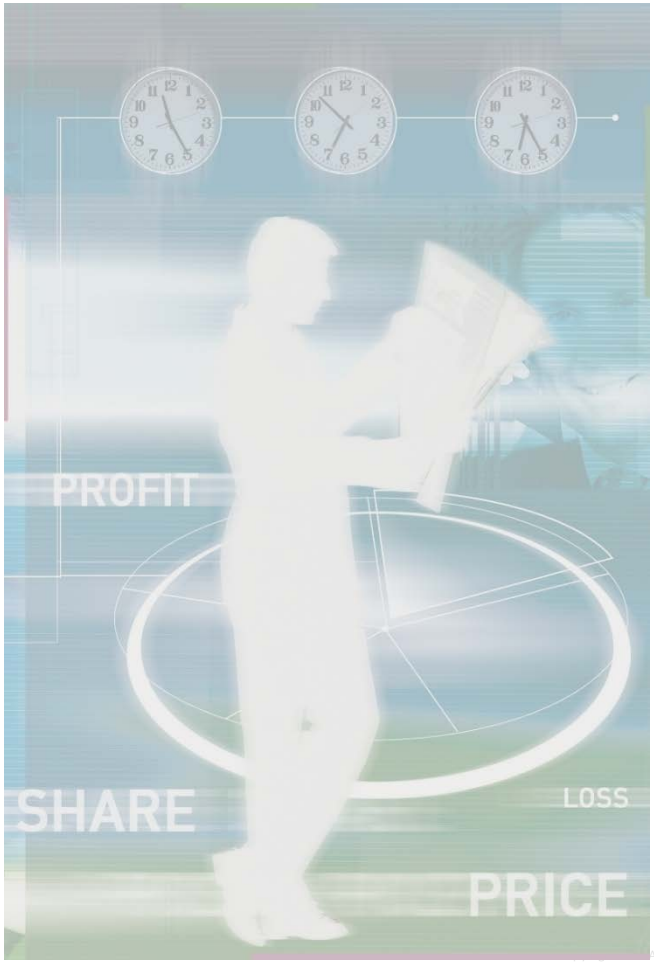
Case Studies



Assortment Planning tied to Allocation

- 17% Inventory Savings (2016 Financials)
- 24% increase in EBIT
- Over ₽1,2M to reinvest in the business without any additional inventory

Promotion Optimization / Demand Forecasting

- 10-30% inventory reduction
- 2-5% revenue increase
- 5-20% increase in product availability
- 10-50% improvement in forecast accuracy

Price Optimization

- 310 bps (3.1pp) gain in GM
- 91% increase in annual pre-tax profit
- 5.0pp increase in EBIT

Size / Case Pack Optimization

- 1% reduction in stock outs
- 30bps (.3pp) increase GM
- 70bps (10% gain) in pre-tax Profit
- 10% flow through to pre-tax profit

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Assortment Planning, Optimization & Inventory Allocation

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International Specialty Retailer

- Vertically Integrated Retailer; ₽295B in revenue, 5,000 stores globally

- **Increased Revenue and Profitability**
  - Better targeted assortments with clusters
  - Higher average ₽ sales and profitability
- **Reduced Inventory Cost**
  - Unique store inventory plans based on actual facings
  - Tighter managed product life-cycle (discontinued)
  - Eliminated duplicate stock with substitute/replacement
- **Increased Productivity**
  - Translating Assortment Plans into Vendor Forecasts/Purchase Orders
  - Consistent tools and business processes across divisions
  - Automation allowing for lower level decisions/execution

Planning / Forecasting / Allocation Value Proposition

Sample Income Statement – Using Actual Retailer's Results

	Rubles (RUB)	% of Sales
Net Sales	₽290,000,000,000	
Gross Margin	130,500,000,000	45.0%
Inventory @ Retail	72,500,000,000	25.0%
Inventory @ Cost	36,250,000,000	12.5%
Inventory Reduction (17% reduction)	6,162,500,000	2.5%
Yields ₽ 6,162,500M – Redeployment of $ Assets to New Store Openings		
EBIT	₽29,000,000,000	10%
Sales Improvement	₽8,700,000,000	3%
GM Resulting from Sales Increase	3,886,000,000	45%
GM Improvement	2,900,000,000	1.3%
Increase in EBIT	6,960,000,000	24%

Assumptions:
IMU of 50%,
GM of 45%,
Average
Turnover: 4

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Demand Forecasting

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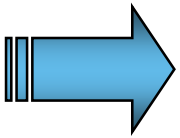
Before …

- Store Forecasting reacts to events, does not predict them
- 50% of short life line/store/day forecasts more than ½ case different from actual
- Warehouse forecasts inconsistent with store forecasts
- Use increased stock during promotions to overcome uncertainty in demand
- Forecast Accuracy too low



- Out-of-stocks / over-stocks during promotions and weeks following
- Over-spending on promotions / price-cuts
- Increased waste on fresh foods
- Lost sales and customer dissatisfaction
- Lower productivity

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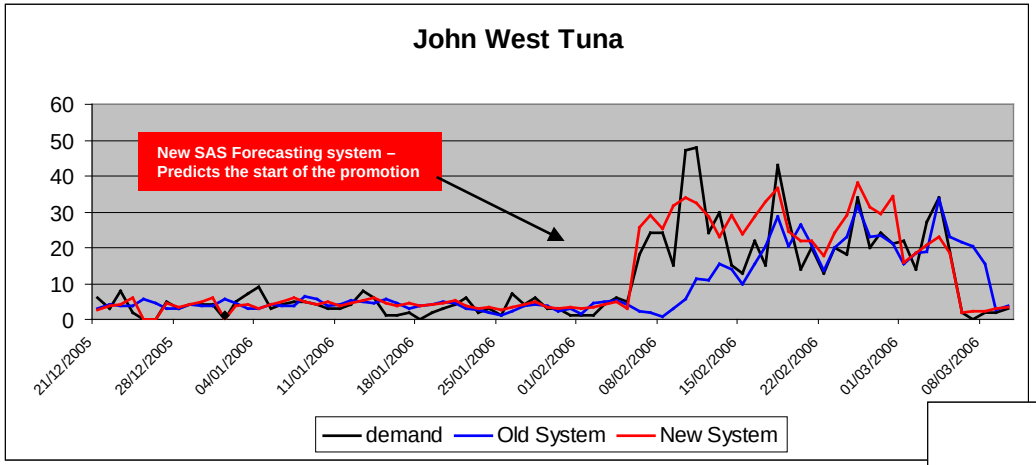
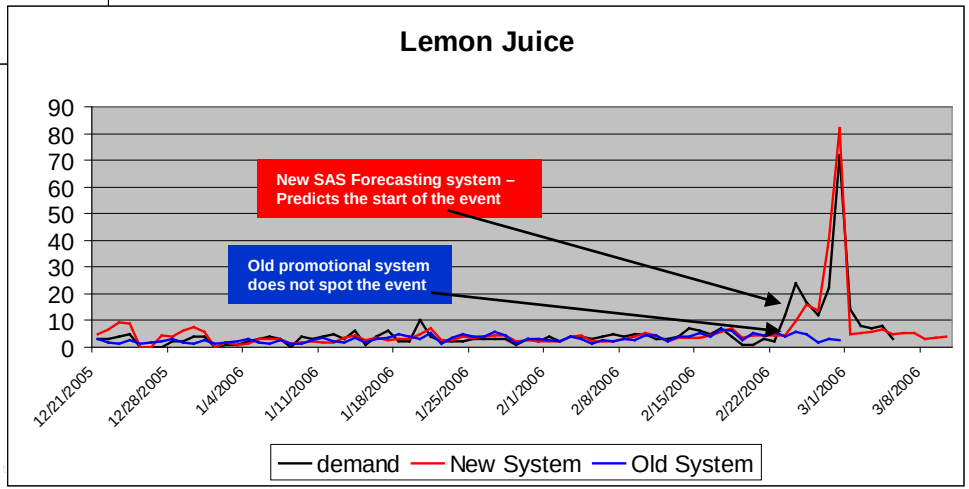
After….promotions – several sample items





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Results – Prepared Food

	Before	After
Forecast Error:	25%	15%
Safety Stock:	₽ 1,160M	₽ 684,4M
Lost Sales due to OOS:	5%	2%
₽ Revenue:	₽ 78,880B	₽ 81,200B

Reduced $ inventory by 41% and increased revenue by $2,378 Billion

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Revenue Optimization

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Revenue Optimization

Identifies SKU/store price points that maximize profits

Before

After

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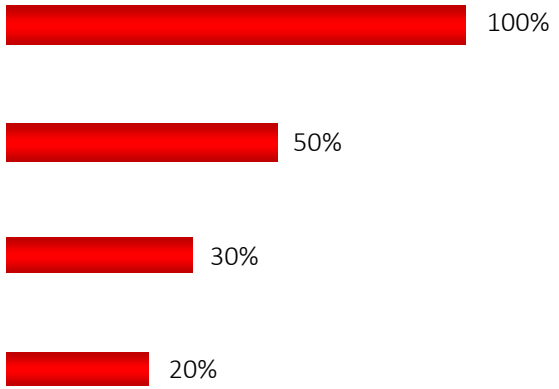
Revenue Optimization

Price is one of the most important retail profit levers.

A 10% change in . . .

Profit Lever	Original	After 10% Change	Original Profit	New Profit
Price	₽100MM	₽110MM	₽10MM	₽20MM
Unit Cost	₽50	₽45	₽10MM	₽15MM
Sales Revenue	₽100MM	₽110MM	₽10MM	₽13MM
Fixed Expenses	₽20MM	₽18MM	₽10MM	₽12MM

. . . Leads to a change in profit of



Note: Illustrative estimates based on a 50% gross margin and non-product variable costs at 20% of sales

Revenue - Markdown Optimization

Sample Income Statement – Actual Retailer's Results

	Rubles (RUB)	% of Sales
Net Sales	₽116,000,000,000	
Initial Markup	63,800,000,000	55.0%
Cost of Goods	52,200,000,000	45.0%
Promotional Markdowns	23,200,000,000	20.0%
Permanent Markdowns	34,800,000,000	30.0%
Total Markdowns (Sell)	58,000,000,000	50.0%
Total Markdowns (Cost)	26,100,000,000	22.5%
Gross Margin	37,700,000,000	32.5%

Markdowns are a fashion retailer's single largest expense.

The difference between IMU and Gross Margin Is 22.5 Percentage Points

Better managing markdowns directly improves margin which directly flows through to pre-tax profitability

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Revenue - Markdown Optimization

	Before Optimization (RUB)	% of Sales		After Optimization	% of Sales
Net Sales	₽116,000,000,000			₽123,888,000,000	
Initial Markup	63,800,000,000	55.0%		68,134,400,000	55.0%
Promotional Markdowns	23,200,000,000	20.0%		24,777,600,000	20.0%
Permanent Markdowns	34,800,000,000	30.0%		28,742,016,000	23.2%
Total Markdowns (Sell)	58,000,000,000	50.0%		53,519,616,000	43.2%
Total Markdowns (Cost)	26,100,000,000	22.5%		24,083,827,200	19.4%
Gross Margin	37,700,000,000	32.5%		44,054,572,800	35.6%
			Percentage Point Gain – 3.1		
PRETAX - Operating Earnings (EBITDA)	6,960,000,000	6.0%		12,760,000,000	11.0%
Net Result: 91% increase in Earnings					

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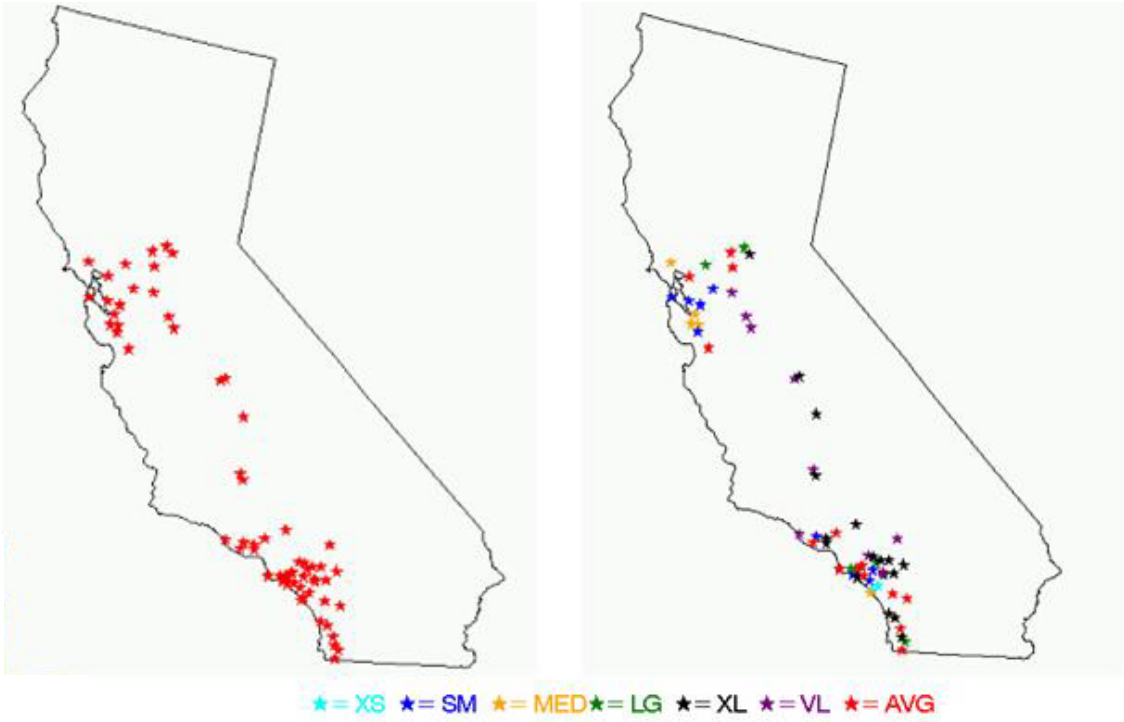
Size & Pack Optimization

- Get the right **size** to the right **store** at the right **time**.
- Recognize customer differences by store location, by department and by category.
- Improve in stocks by size for basic, seasonal basic and fashion merchandise.

Size Profiles – Women's Department

Current Size Distribution

Actual Demand



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2016 Stock-out Rates For All Stores By Sizes

- Stockouts are very high
- For those styles with 4 sizes, at least 1 size is stocked out by store/style/week over 55% of the time

Number of Sizes Store/Weeks Are Stocked Out				
Number Sizes Stocked Out	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	5,081	44.53	5,081	44.53
1	2,738	24.00	7,819	68.53
2	1,702	14.92	9,521	83.44
3	1,228	10.76	10,749	94.21
4	661	5.79	11,410	100.00

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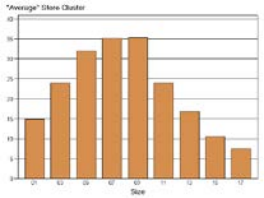
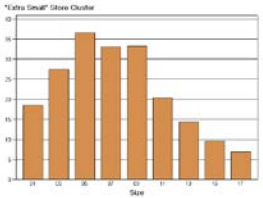
Cluster-based Size Allocations

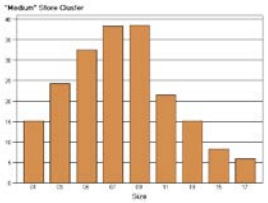
Average



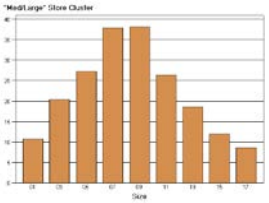
Extra Small



Medium



Med/Large



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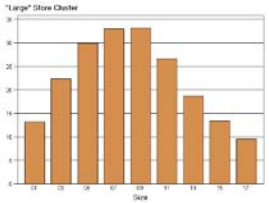
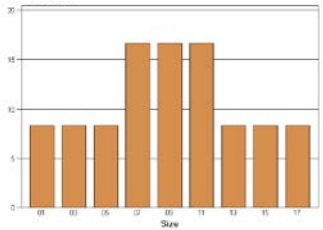


versus

“One scheme fits all”



Size Optimization Value Proposition

Sample Income Statement – Using Actual Retailer's Results

	Rubles (RUB)	% of Sales
Net Sales	₽ 58,000,000,000	
Gross Margin	23,200,000,000	40.0%
Pre-Tax Income	4,060,000,000	7.0%
Net Sales Improvement	580,000,000	1.0%
Gross Margin Improvement	232,000,000	0.4%
Pre-Tax Income Improvement	232,000,000	0.4%
Revised Pre-Tax Income	4,292,000,000	7.4%
Margin Improvement	174,000,000	0.3%
Revised Pre-Tax Income	4,466,000,000	7.7%

10% flow through to pre-tax income

Results: a 1% Reduction in Stock outs and 30bps Improvement in Gross Margin

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SAS in Retail

Recognized as Industry Leader by Forrester and Gartner

Open Analytics Platform

Industry Thought-Leaders

Global Presence

Analytic Expertise

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