

# SUCCESS STORIES



# How Wayfair And Pepsi Use Visual Analysis To Drive Business Results

# Introduction

Data can transform business decisions from a manual guessing game into a productive science. But collecting, analyzing and acting on the right data is the hurdle facing business executives today. By 2020, humans and devices connected to the Internet of Things (IoT) will generate 42 zetabytes of data every day, which is more than the total number of words spoken by all humans for as long as we have been speaking.

By tapping into **visual analysis**, businesses are better able to understand patterns that can lead to transformative decisions. Forward-thinking retailers are embracing the strategy: 73% of the Top 100 retailers are using visual analysis, including every one of the first 15 in the National Retail Federation (NRF) 2016 list.

These retailers also are taking advantage of **self-service analytics**, which empowers people to use data to make decisions and take action across the organization, in marketing, merchandising, operations, e-Commerce, talent management and the supply chain. Relying on IT for help with data analytics no longer works because retailers cannot afford a lag time of months, perhaps years, to gain actionable insights from their data.

During an exclusive webcast, Jeff Huckaby, Global Market Segment Director, Retail & Consumer Goods, for Tableau, and Lee Feinberg, Founder and President of DecisionViz, a Tableau partner, explained how visual analysis works, outlined the advantages of the self-service model, and provided examples of how retailers and CPG companies are using it successfully.

**"We're able to turn customer data around and present it to the rest of our company, in a way that everyone can understand, faster than our competitors."**

MIKE RIEGLING,  
SUPPLY CHAIN DATA  
ANALYST, PEPSI



# How Retail Companies Are Employing Self-Service Analytics

Different types of retail companies are unlocking business success using self-service analytics in a variety of ways:

## Enabling Real-Time Segmentation

**Wayfair** is an e-retailer that carries very little inventory. “Their model is to act as an interface between the vendors and the customers,” said Huckaby. These interactions generate more than 16 billion records. With a self-service analytics solution in place, Wayfair was able to whittle down the time it took to enable real-time customer segmentation, thereby facilitating proactive strategies in minutes vs. reactive strategies from results received days later.

## Gearing Up For Faster Reporting

**Pepsi** was getting data “in every different format you can imagine” before the company migrated to a modern analytics stack using several vendors, Huckaby recounted. The result was a 90% improvement in reporting build time. This gave the organization time to work on forecast algorithms and led the company to deny a \$1.1 million order “because they knew the retailer wouldn’t be able to sell the product quickly enough,” he said.

## Integrating Data Sets To Optimize Promotions

One **large retailer** had been operating in silos, with pricing information in one database and market-basket data in another. After years of dysfunctional operations, the two data sets were combined, and “They started to see that they were promoting items that were already being added to the baskets, therefore giving profitability away, but they weren’t competitive on the product that was driving the market basket,” Huckaby said. In a recent 4th quarter, the retailer boosted revenue by more than \$100 million using data that was previously buried in spreadsheets.

## Boosting Email Marketing Results

A **large department store** retailer uses email marketing analytics to determine which emails result in high conversions and sales. Through A/B testing, Huckaby said, “They know exactly where the content is, what content resonates, what content matters and the placement of that content within an email — and how that leads to higher conversion.”

## Cutting Bottom-Line Costs

**Two retailers** have been able to cut operational expenses by combining HVAC energy usage data with insights received via IoT data taken from heating and cooling systems. Combined, the two companies have saved \$11 million.

**"It's easier  
to see a  
phenomenon  
visually."**

KEREM TOMAK, VP,  
MARKETING ANALYTICS  
AND CRM, MACY'S



# The Before & After

## A Visual Representation Of Self-Service Analytics

Before...How can an executive easily answer the question about a profit problem?

### Typical Report

		Region											
Category	Sub-Category	Central			East			South			West		
		Sales	Profit	Profit Ratio	Sales	Profit	Profit Ratio	Sales	Profit	Profit Ratio	Sales	Profit	Profit Ratio
Furniture	Bookcases	\$24,157	(\$1,998)	-8.3%	\$43,819	(\$1,168)	-2.7%	\$10,899	\$1,339	12.3%	\$36,004	(\$1,647)	-4.6%
	Chairs	\$85,231	\$6,593	7.7%	\$98,261	\$9,358	9.7%	\$45,178	\$6,612	14.6%	\$101,781	\$4,028	4.0%
	Furnishings	\$15,254	(\$3,906)	-25.6%	\$29,071	\$5,881	20.2%	\$17,307	\$3,443	19.9%	\$30,073	\$7,641	25.4%
	Tables	\$39,155	(\$3,560)	-9.1%	\$39,140	(\$11,025)	-28.2%	\$43,916	(\$4,623)	-10.5%	\$84,755	\$1,483	1.7%
Office Supplies	Appliances	\$23,582	(\$2,639)	-11.2%	\$34,188	\$8,391	24.5%	\$19,525	\$4,124	21.1%	\$30,236	\$8,261	27.3%
	Art	\$5,765	\$1,195	20.7%	\$7,486	\$1,900	25.4%	\$4,656	\$1,059	22.7%	\$9,212	\$2,374	25.8%
	Binders	\$56,923	(\$1,044)	-1.8%	\$53,498	\$11,268	21.1%	\$37,030	\$3,901	10.5%	\$55,961	\$16,097	28.8%
	Envelopes	\$4,637	\$1,778	38.3%	\$4,376	\$1,812	41.4%	\$3,346	\$1,465	43.8%	\$4,118	\$1,909	46.4%
	Fasteners	\$778	\$237	30.4%	\$820	\$264	32.2%	\$503	\$174	34.5%	\$923	\$275	29.8%
	Labels	\$2,451	\$1,073	43.8%	\$2,603	\$1,129	43.4%	\$2,353	\$1,041	44.2%	\$5,079	\$2,303	45.3%
	Paper	\$17,492	\$6,972	39.9%	\$20,173	\$9,015	44.7%	\$14,151	\$5,947	42.0%	\$26,664	\$12,119	45.5%
	Storage	\$45,930	\$1,970	4.3%	\$71,613	\$8,389	11.7%	\$35,768	\$2,274	6.4%	\$70,533	\$8,645	12.3%
	Supplies	\$9,487	(\$662)	-7.0%	\$10,760	(\$1,155)	-10.7%	\$8,319	\$2	0.0%	\$18,127	\$626	3.5%
	Accessories	\$33,956	\$7,252	21.4%	\$45,033	\$11,196	24.9%	\$27,277	\$7,005	25.7%	\$61,114	\$16,485	27.0%
Technology	Copiers	\$37,260	\$15,609	41.9%	\$53,219	\$17,023	32.0%	\$9,300	\$3,659	39.3%	\$49,749	\$19,327	38.8%
	Machines	\$26,797	(\$1,486)	-5.5%	\$66,106	\$6,929	10.5%	\$53,891	(\$1,439)	-2.7%	\$42,444	(\$619)	-1.5%
	Phones	\$72,403	\$12,323	17.0%	\$100,615	\$12,315	12.2%	\$58,304	\$10,767	18.5%	\$98,684	\$9,111	9.2%

After...The profit problem answer is obvious... “Tables” are the negatively impacting profit across three regions



# Visual Analysis: The Key To Omnichannel Transition

Retail consultants and analysts are uncovering the benefits of visual analysis and self-service analytics as they respond to clients' needs for more powerful and sophisticated tools to lead them through the transition into true omnichannel businesses.

"The analytics department must develop new skills to drive business engagement such as storytelling, scenario building and rapid prototyping to communicate the business relevance of their insights," according to the Gartner report *Analytics and Business Intelligence Modernization Primer for 2017*.

Visual analysis is the key to communicating data insights within an organization, as well as between a retailer and its vendors and partners. In the report, *Growth Strategies: Chasing the Consumer With Technology*, Retail Systems Research found that retail winners are more likely to utilize visual analysis for both structured and unstructured analytics: "A majority of winners also seek to operationalize predictive analytics with [a] visual presentation of data, apparently in a bid to make the results of predictive analytics available to operators in the selling environment."

**"The analytics department must develop new skills to drive business engagement, such as storytelling, scenario building and rapid prototyping..."**

GARTNER, ANALYTICS  
AND BUSINESS  
INTELLIGENCE  
MODERNIZATION  
PRIMER, 2017





# 5 Steps To Success With Self-Service Data Analytics

Over the course of the webcast, Huckaby and Feinberg laid out the strategies retailers should employ when building a self-service analytics environment:

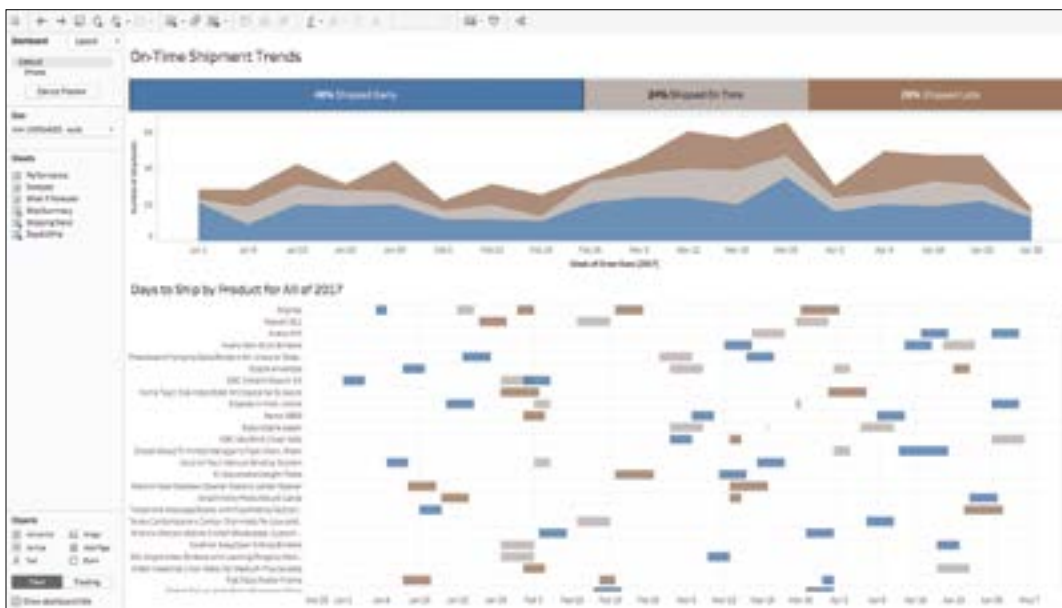
1. **Launch prototypes** to drive a quick test-and-learn culture;
2. **Create a unified data language** around training, security and data preparation;
3. **Use data blending** to achieve a unified brand message;
4. **Insert experience into data analysis** to drive collaborative learning; and
5. **Incorporate visual analysis and storytelling** to tap into the brain's strengths.

Huckaby, who previously worked at retail firms Belk and PetSmart in business intelligence roles, noted that retailers already have a vast amount of data locked up in various databases and systems that are not connected to one another. With modern analytics tools, “There is an incredible amount of information that could easily be at your fingertips in a few short hours,” he said.

Feinberg added that many companies get caught up in collecting and talking about data when “the only reason we really need the data is to make decisions and take action. The goal is to see things [revealed by the data] as quickly as possible with the least amount of effort that is necessary to produce results.”

**"The goal is to see things [revealed by the data] as quickly as possible with the least amount of effort that is necessary to produce results."**

LEE FEINBERG, FOUNDER  
AND PRESIDENT OF  
DECISIONVIZ, A TABLEAU  
PARTNER



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