

# TIBCO Industry Analytics: Consumer Packaged Goods and Retail Solutions

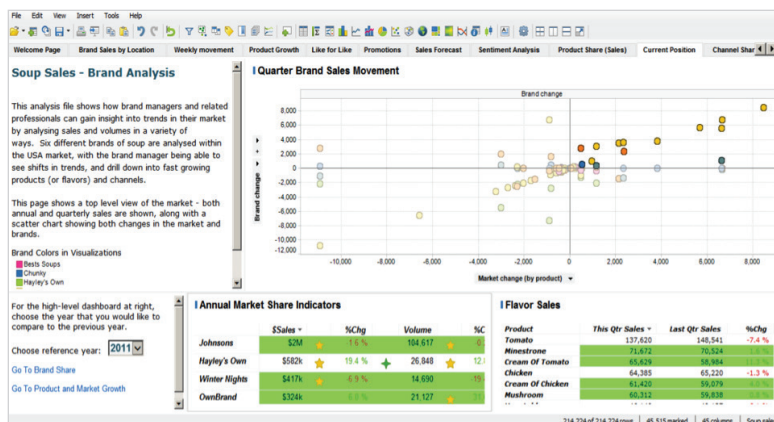
TIBCO's robust, standards-based infrastructure technologies are used by successful retailers around the world, including five of the world's largest mass merchandise retailers. Our collaboration with CPG and fast moving consumer goods (FMCG) organizations and retailers enables us to achieve deep industry expertise as we execute using proven methodologies and best practices. CPG / FMCG organizations and retailers use TIBCO solutions to solve a broad array of challenges, including some of the applications showcased here.

With TIBCO Spotfire® analytics for consumer packaged goods (CPG) and retail, you can seize new business opportunities and avoid risk with unmatched speed and flexibility. Using interactive dashboards, visualizations, and predictive and event-driven analytics on any device, you can quickly develop unexpected insights. Spotfire is an enterprise-class analytics platform that helps both business and technical users explore data to:

- Increase profitability through effective brand and category management
- Understand and respond to today's savvy shoppers and consumers who are increasingly digital and looking for more than just value and convenience
- Optimize the supply chain
- Innovate across online, discount, and convenience channels to sustain a competitive advantage

## BRAND ANALYSIS

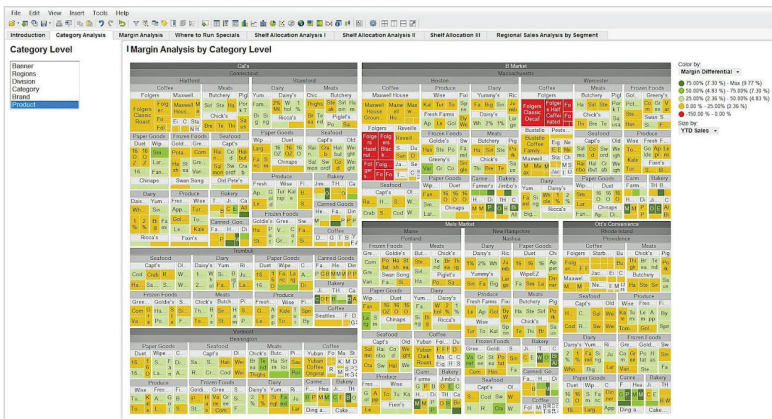
Brand managers use this type of Spotfire analysis to gain insight into the volume and value performance of products across brands and categories. Data input is typically point-of-sale, but any and all data types can be leveraged. With Spotfire, the brand manager is able to quickly and visually analyze trends in a variety of ways and can easily understand relative size and growth of brands. Intuitive visual markings immediately highlight top or bottom ranking of brands relative to each other and to the total market. The analysis enables users to mark high growth areas and click on points representing sub-brand, flavor, or any combination of attributes to see the detailed data on which the visualization is based.



## CATEGORY MANAGEMENT ANALYSIS

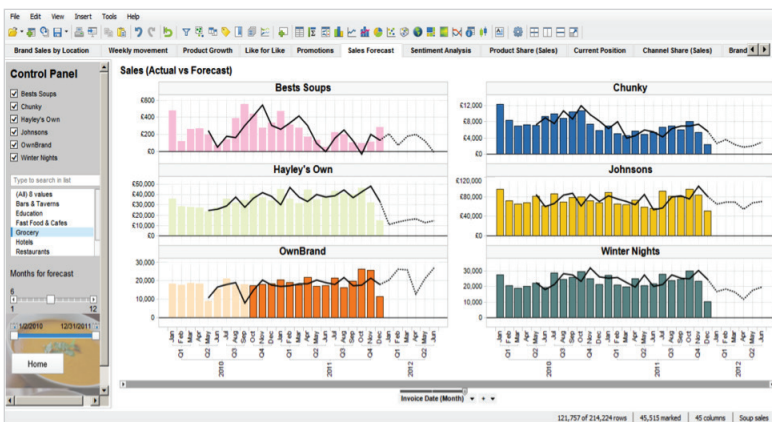
Category management is the continuous, collaborative process between consumer packaged goods (CPG or FMCG) manufacturers and retailers. The discipline is taking on ever increasing importance for CPG and retail in the era of big data. With increasingly granular information on shoppers and consumers becoming daunting to understand, Spotfire helps. Its analysis includes summarization and quantification across n tiers of categories and across n category perspectives (margin, margin differentials, period-over-period, and others), enabling:

- Retailers and CPG/FMCG manufacturers to analyze POS data, coupon conversions, velocity, volumes, and other transactional data to identify which categories resonate with specific shoppers and consumers.
- Formulation and simulation of offers and promotions that strike a balance between addressing category needs and securing the optimal profit margin for products in a category.
- Recommendations for product ranges specific to, for example, store sizes and banners.



## SALES FORECASTING

This Spotfire analysis empowers end users to forecast volume sales across brands against competitive brands. By using the Holt-Winters forecasting method and leveraging time-series data, organizational sales data is submitted to smoothing calculations that work to remove random variability and account for trends and seasonal factors. Menus and visualization options are available so non-statisticians can easily use forecasting analysis in day-to-day decision-making and planning simply by adding lines to represent confidence intervals.

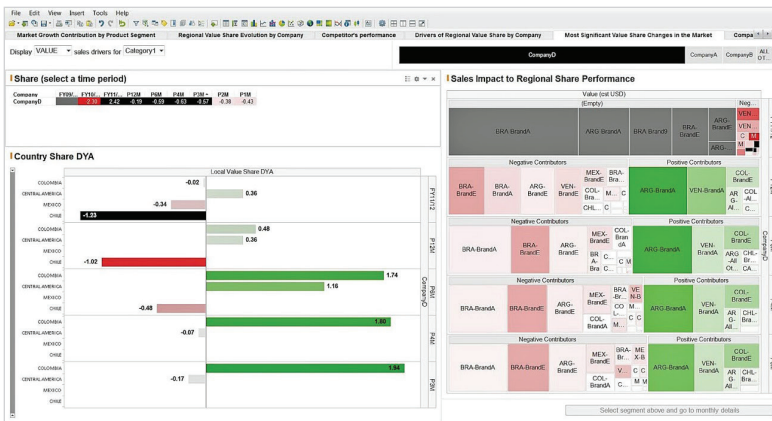


## PRICING AND PROMOTION ANALYSIS

Significant revenue potential is often hidden in everyday business strategy. This Spotfire analysis is designed to help understand market situations, assist in verifying or changing strategies, and further address revenue opportunities by answering questions such as:

- How effective are our promotions?
- What are the average prices versus competitor prices?
- How do average prices compare to the competition?

This analysis provides better understanding on whether changes in promotional intensity correlate positively with volume sales and share. And, if it is justified, how fast to increase promotional spending.

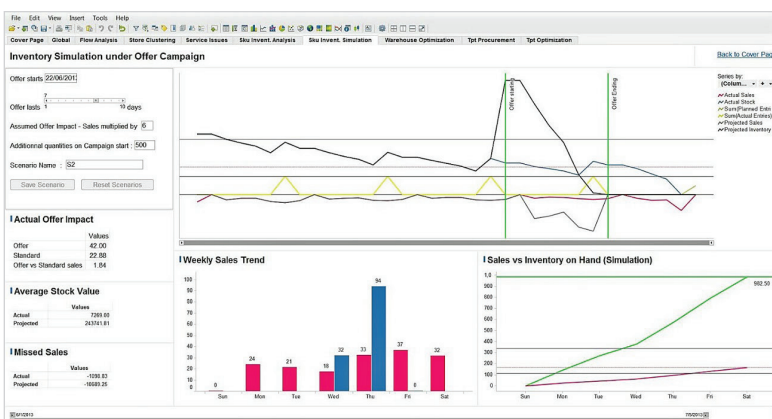


## PROMOTIONAL IMPACT SIMULATION ON INVENTORY

Sales promotions and offers are frequently used in CPG and FMCG, taking the lion's share of marketing spend resources. Heavy dependence on sales promotion is continually being questioned and despite the large sums spent yearly, the economics of promotion is poorly understood.

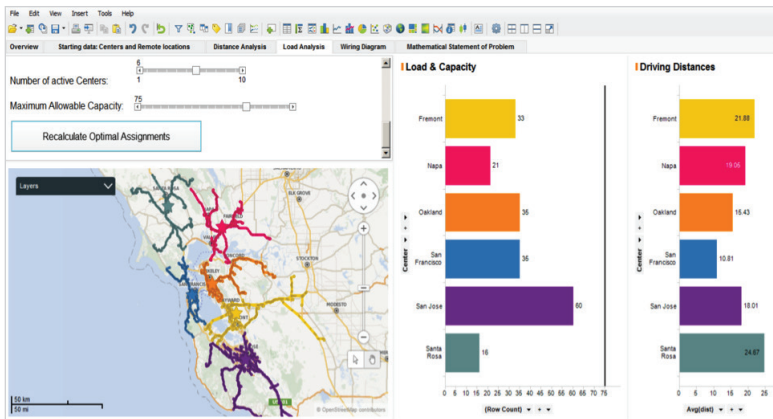
For retailer promotion, consumer promotion, or manufacturers direct trade promotion to retailers, this Spotfire analysis provides the ability to:

- Create baselines for demand and inventory
- Test offers and campaigns to determine quantities that must be ordered in advance of a campaign
- Determine offer impact across channels, regions, and stores on inventory and in advance of a campaign
- Proactively position inventory and then make adjustments in anticipation of the campaign towards reducing out of stock exposure



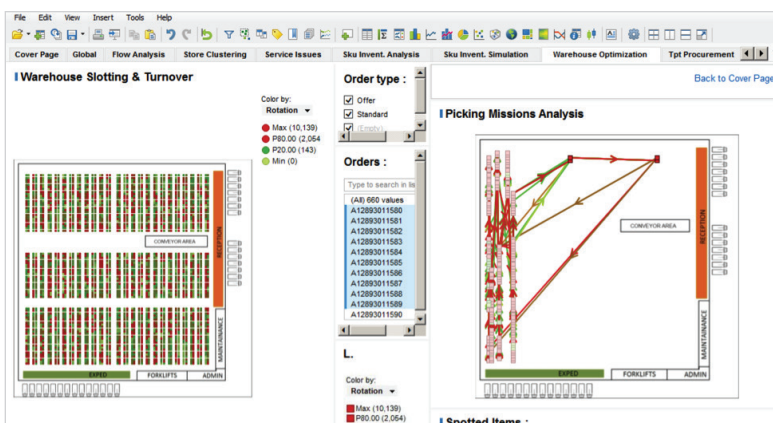
## GEO-ANALYTICS FOR CPG AND RETAIL SUPPLY CHAIN OPTIMIZATION

This Spotfire analysis uses the TIBCO® GeoAnalytics wizard to consolidate and optimize CPG and Retail supply chain networks as they respond to changing business demands. As an integral component of Spotfire, street level geocoding automatically positions stores, distribution centers, and n sorts of spatial entities against map layers. Multiple layers on the map can then simultaneously represent different types of data such as traffic congestion, weather variables, driving distance density, and others. Additionally, using TIBCO® Enterprise Runtime for R within Spotfire provides optimization routines of, for example, driving routes, by considering relevant constraints such as driving distance or total number of stores. The impact of a potential decision to close a distribution center is dynamically visualized and supports actionable decision-making.



## WAREHOUSE OPTIMIZATION

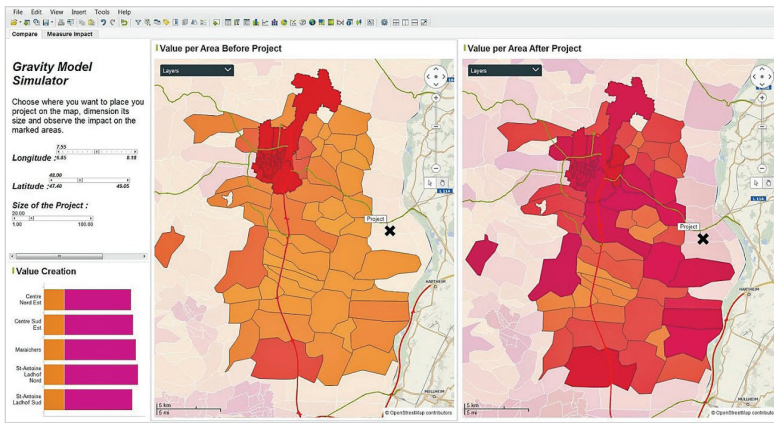
In this analysis, picking routes for products in a retail depot is visualized to clearly identify route inefficiencies. Product locations and the order of picking routes are possible data inputs, along with known constraints, such as maximum weight per picking route and requirements such as refrigeration. Statistical models built into Spotfire or using TIBCO Enterprise Runtime for R can recommend optimal routes and allow business users to run what-if scenarios. The impact of these scenarios is dynamically quantified and visualized. Warehouse optimization goals will be understood and achieved more effectively.



## GRAVITY MODELING ANALYSIS

Gravity modeling primarily takes into account the population demographics of two places and n variables to predict the movement of people, information, and commodities between places (indicated by zip code, DMA, region, country, etc.). For example, because larger places attract more people, ideas, and commodities than smaller places, and because places closer together traditionally have a greater attraction, the gravity model incorporates both of these features.

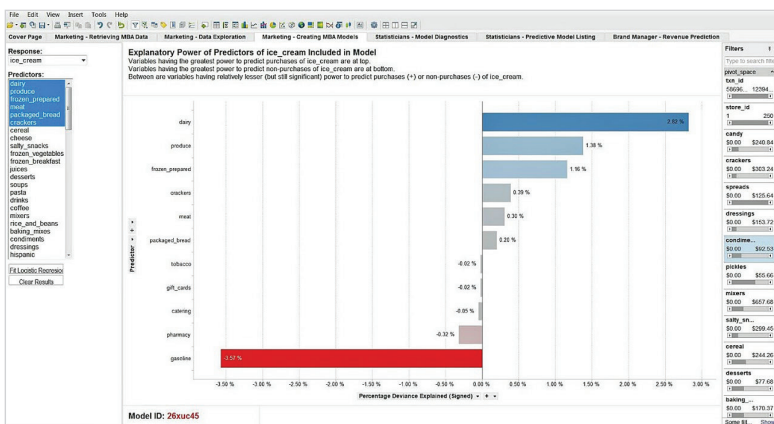
This Spotfire analysis enables better understanding of which consumers are served by which retailers, and hence helps in positioning physical stores, products, and services and choosing advertising options (such as outdoor, print, or broadcast). Using a proposed new store's projected volume, for example, you could determine its impact on existing stores in the over-lapping trade area.



## MARKET BASKET ANALYSIS

This Spotfire analysis helps you take action upon discovering groups of significant correlations between purchased items across categories, products, and transactions. Promoting a better understanding of predictor and response variables, and of what other products or categories influence product selection, the analysis leverages n data sources to produce various metrics including:

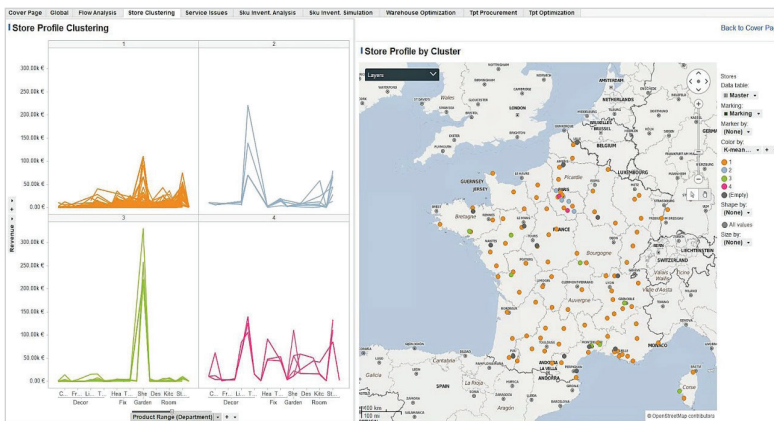
- Optimal campaign definition
- Campaign variable weighting
- Revenue lift (holistically and per store)



## STORE PROFILE CLUSTERING

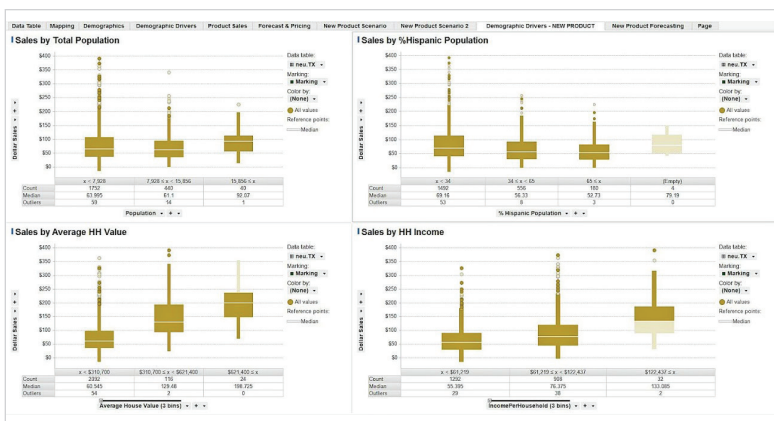
This Spotfire analysis provides a common language that enhances collaboration across stores and organizations and enables:

- Improving store planning, assortment, and merchandising
  - Tailoring store space to match shopper and consumer demand within each cluster
  - Offering differential cluster specific promotions
- At category and sub-category levels, determining the optimum assortment
  - Enabling informed predictions on demand optimization levels for core ranges and assortments
  - Optimizing stockholding levels versus demand
  - Minimizing overstocking
  - Reducing expensive returns of redundant stock
- Identifying the external attributes that drive cluster performance to achieve a closer match to the needs of the customer store by store
- Identifying the internal factors driving optimum performance and sharing of best practices across an organization



## SHOPPER DEMOGRAPHICS

This Spotfire analysis excels at supporting decisions on new product placement based on shopper demographic analysis. Providing for syndicated sales data to be viewed at n levels and matched to demographic data, Spotfire uses the demographic data to predict where—and at what level—the new product should be carried. Intuitive box plots help Spotfire users discover the effects of n demographic factors that affect sales.

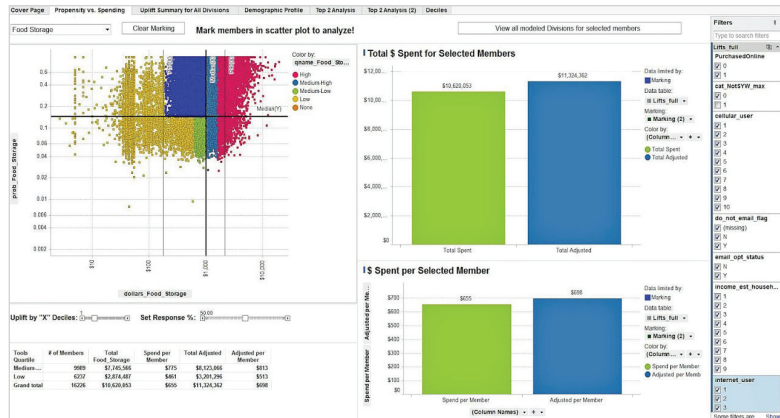


## CUSTOMER CLONING

If finding clones of your best customers is the goal, it is essential to understand who the best customers are and what characteristics they share that make them unique (and prized). This Spotfire analysis provides customer cloning insights with n segmentation techniques. The analysis can work with n number of inputs including:

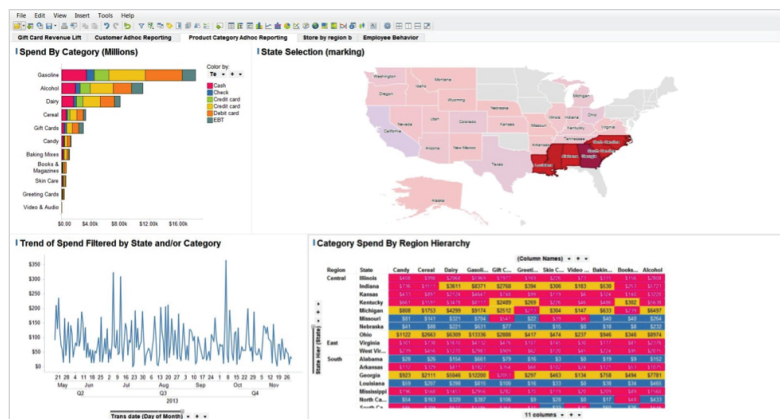
- Transaction data associated with specific customer records
- Promotion, source, customer satisfaction or feedback
- Household characteristic data

All of these (and more) can be used in the prediction of customer future behavior.



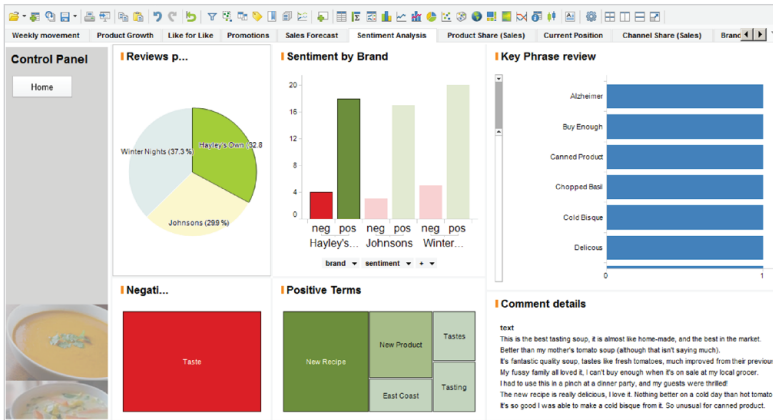
## CUSTOMER SPEND

It is no longer enough to know just how much the customer is likely to spend. The when, where, and what of spend make the analysis much more useful. This Spotfire analysis leverages transaction history and spend analysis to discover long-term spending patterns with predefined reports. Large volumes of multi-year customer data can be leveraged to build predictive models to better position best-fit products based on customer transactions and needs. Analytical insights based on transaction history can result in increased customer retention, improved customer servicing, and greater profitability and marketing opportunities for your organization.



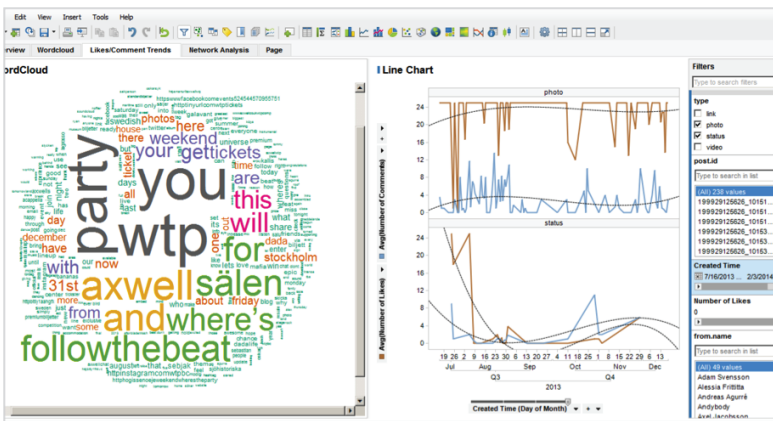
## SENTIMENT ANALYSIS

With Spotfire, data collected from social media and customer surveys can be immediately translated into insight about sentiment. This analysis allows you to drill down by brand, and then by positive and negative sentiments, and can accommodate n additional variables. Responses are categorized by key phrases and are organized into intuitive tree maps that show what consumers are saying about your brand and your competitor's brands. These sorts of analyses are extremely helpful during new product introductions, price changes, and product quality situations. The information can be used to modify messaging, and when combined with demographic data, to improve targeting of marketing campaigns.



## SOCIAL MEDIA

This Spotfire analysis empowers end users to review postings that are publicly available on social media sites via any type of visualization including visually impactful wordclouds and network graphs. These visualizations allow for quick identification of key influencers crucial for social media marketing. The analysis can split the data automatically by n variables (for example, by social media post type). Spotfire drill-down and data discovery features make it easy to deploy, detect, and review the details behind the most relevant words expressed. For digital marketers and other professionals, this type of analysis provides powerful insight into unstructured data.

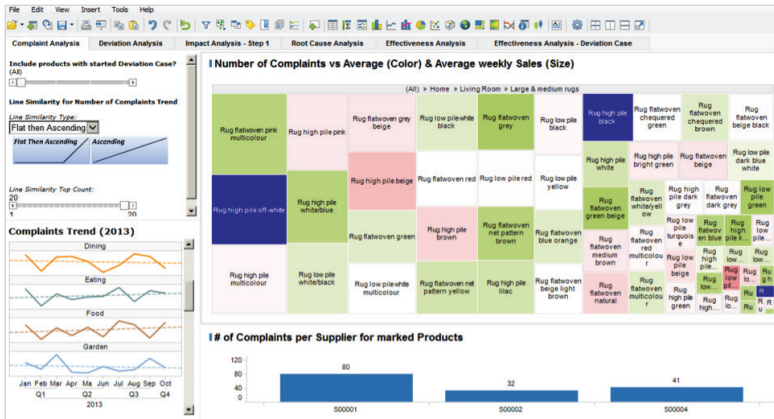




## PRODUCT QUALITY

This analysis was built to support the retail CAPA process (corrective action/preventive action) that is part of good manufacturing practice and various ISO business standards. The analysis links customer complaints data and product non-conformance data with supplier-, parts-, and product-testing data across the retailer’s full product portfolio. It focuses on the systematic investigation of the root causes of identified problems or risks in an attempt to prevent their occurrence or recurrence. Using patterns, the analysis also recognizes trends in complaints.

Visualizations include tree-maps, making it easy to determine what the key problem areas are in order to focus resources where they will have the biggest impact. Additional options within the analysis offer product pictures that can be dynamically displayed when drilling down to the detail.



For more information about TIBCO® Analytics call us directly at +1-866 247 8182 (US), +44-800-520-0443 (EUR) or reach us online: [http://forms2.tibco.com/contact\\_us\\_sales.html](http://forms2.tibco.com/contact_us_sales.html)



**TIBCO Spotfire**  
 281 Summer Street,  
 3rd Floor  
 Boston, MA 02210  
 +1 866-240-0491 US  
 +44-800-520-0443 EUR  
 www.tibco.com  
 spotfire.tibco.com

TIBCO fuels digital business by enabling better decisions and faster, smarter actions through the TIBCO Connected Intelligence Cloud. From APIs and systems to devices and people, we interconnect everything, capture data in real time wherever it is, and augment the intelligence of your business through analytical insights. Thousands of customers around the globe rely on us to build compelling experiences, energize operations, and propel innovation. Learn how TIBCO makes digital smarter at [www.tibco.com](http://www.tibco.com).

©2014-2016, 2017, TIBCO Software Inc. All rights reserved. TIBCO and the TIBCO logo, and Spotfire are trademarks or registered trademarks of TIBCO Software Inc. or its subsidiaries in the United States and/or other countries. All other product and company names and marks in this document are the property of their respective owners and mentioned for identification purposes only.  
 11/10/17