

# TOP 6

## TRENDS FOR 2017

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### RETAIL ANALYTICS



Because data is always trending, leading retailers are prioritizing analytics initiatives in 2017. What's more, business intelligence norms are evolving across the industry. More retail and consumer-goods companies are opening up their data to executives and front-line employees. As a result, the call for faster, simpler, and mobile-friendly tools is growing.

Each year at Tableau, we start a conversation about the data movement and new analytics trends in each industry. Here are our predictions for retail and consumer-goods analytics for 2017.

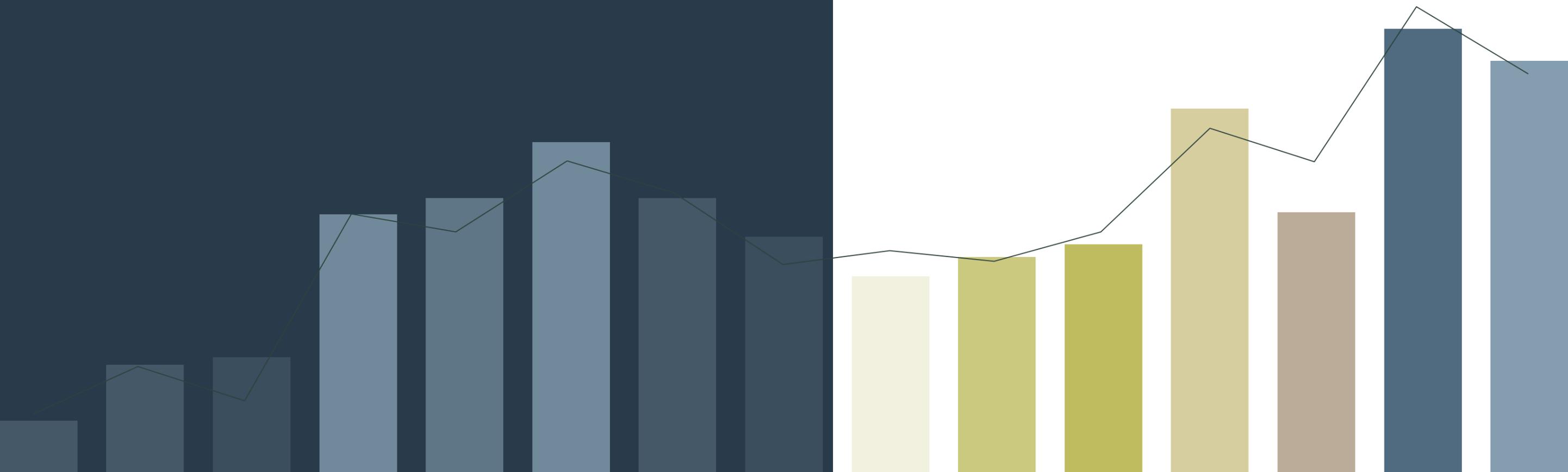
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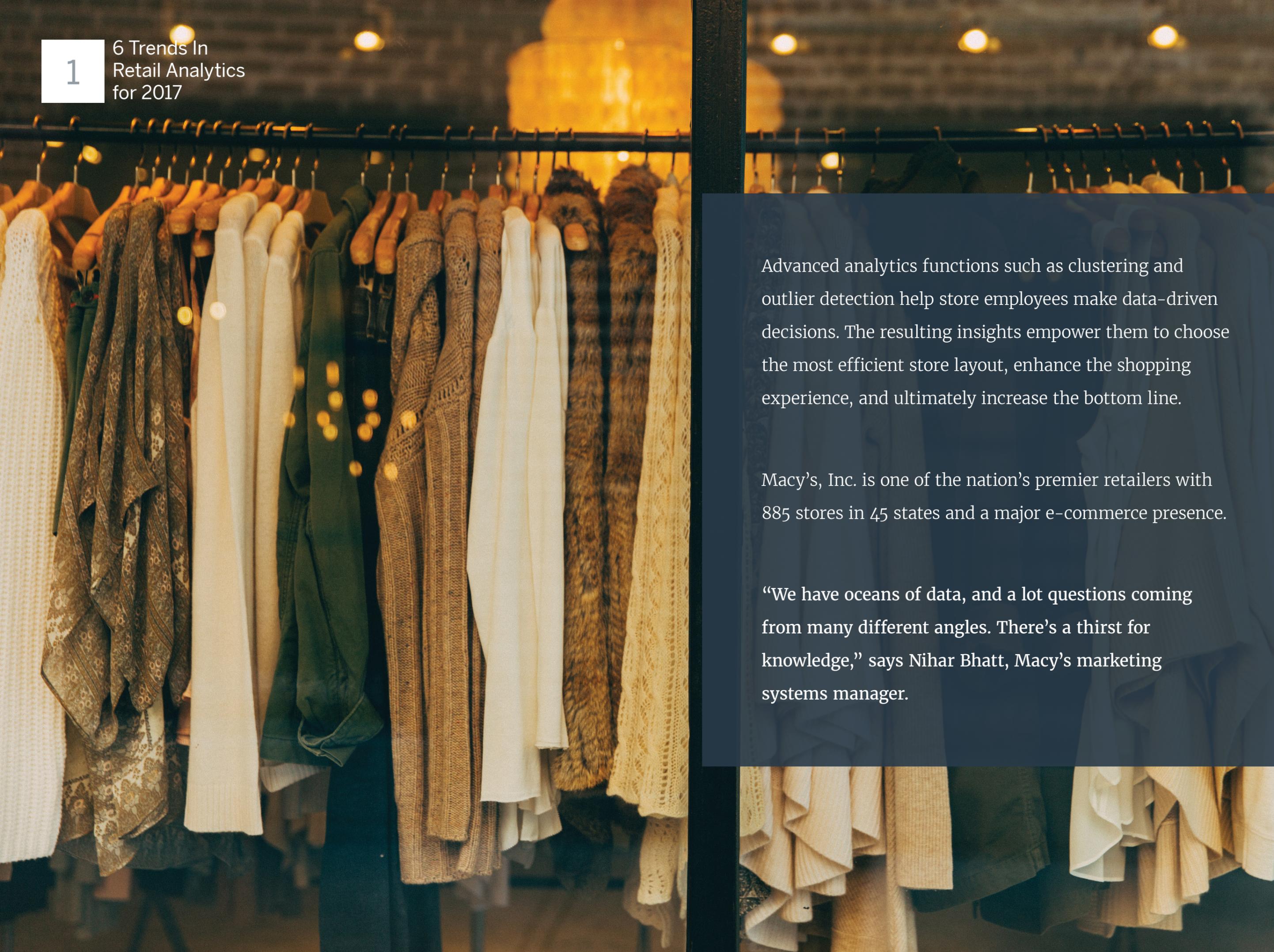
6 Trends In  
Retail Analytics  
for 2017

# Advanced analytics is no longer just for analysts

With the self-service boom, non-analysts throughout retail organizations are becoming increasingly data-savvy. Store managers and bookkeepers alike are digging deeper into data thanks to interactive visualizations that allow them to ask and answer their own questions at the speed of thought.

Most big-box vendors are also leveraging advanced predictive analysis to allocate labor during peak times and provide quality customer care.



A photograph of a clothing store interior. In the foreground, a rack of sweaters in various colors (white, beige, brown, green) is visible. In the background, another rack of blouses is hanging. The lighting is warm and ambient, with soft bokeh lights in the background.

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Advanced analytics functions such as clustering and outlier detection help store employees make data-driven decisions. The resulting insights empower them to choose the most efficient store layout, enhance the shopping experience, and ultimately increase the bottom line.

Macy's, Inc. is one of the nation's premier retailers with 885 stores in 45 states and a major e-commerce presence.

“We have oceans of data, and a lot questions coming from many different angles. There's a thirst for knowledge,” says Nihar Bhatt, Macy's marketing systems manager.

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Macy's makes many predictions, including what to stock in which stores, when it's a good idea to give a buyer a loan, and which items to feature on its website's home page. To help drive these decisions, Macy's relies on self-service dashboards that run on top of Hadoop.

Further Reading:

[Advanced Analytics with Tableau](#)



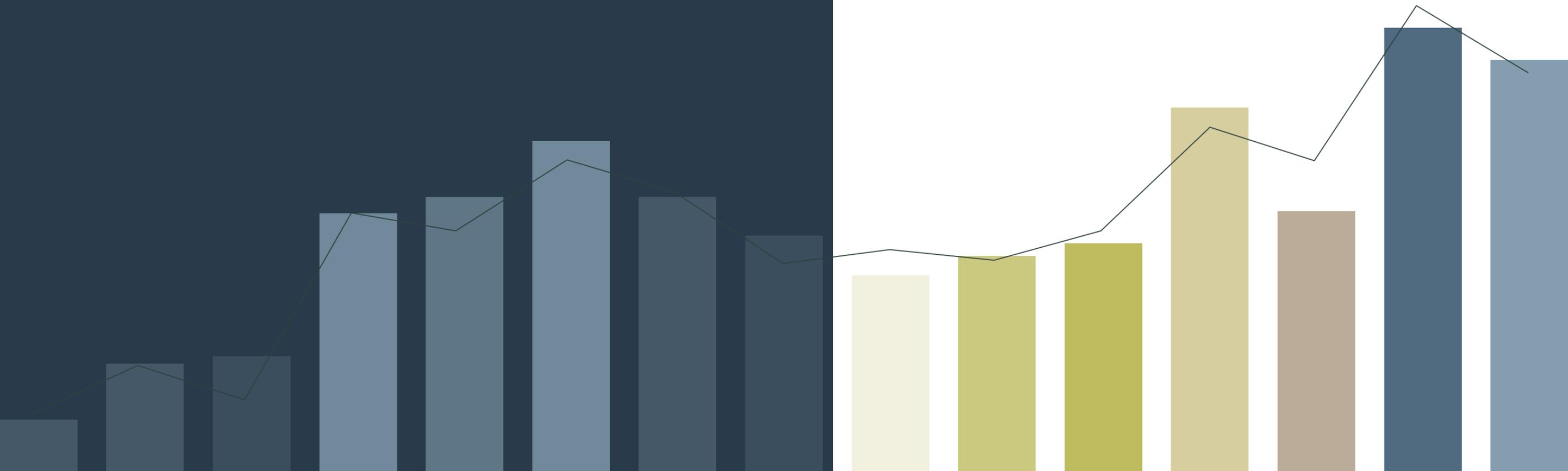
It's easier to understand a phenomenon visually.

— KAREM TOMAK, VICE PRESIDENT OF MARKETING ANALYTICS AND CRM, MACY'S

# Mobile analytics is fully realized

For retailers, finding actionable insights in the field with a mobile device is no longer just a pipe dream. Instead of interfacing via legacy business intelligence systems, modern mobile analytics lives at the core of decision making for major brick and mortar stores and their distribution centers.

More than ever, retailers are leveraging their in-store Wi-Fi investments to empower cashiers and even distribution associates with analytics in hand. For example, if a customer wants a product that isn't in stock, an employee with a mobile analytics app will have far more actionable insights and be able to provide the customer with a product or service much faster.





Also, retail and consumer-good employees working in back offices and distribution centers must stop relying on desktop computers and paper reports.

Working with live mobile data on tablets on a daily—or even hourly—basis is the new normal. Merchants, regional managers, loss-prevention associates, and even vendors have all ditched their old-school stacks of spreadsheets to instead collaborate using interactive visualizations on their mobile devices. This model enables them to make on-the-fly decisions about inventory, omni-channel supply chain, and operational efficiency.

Further Reading:

[Case Study: Eliminating the Reporting Bottleneck at Coca Cola Bottling Company with Mobile Analytics](#)



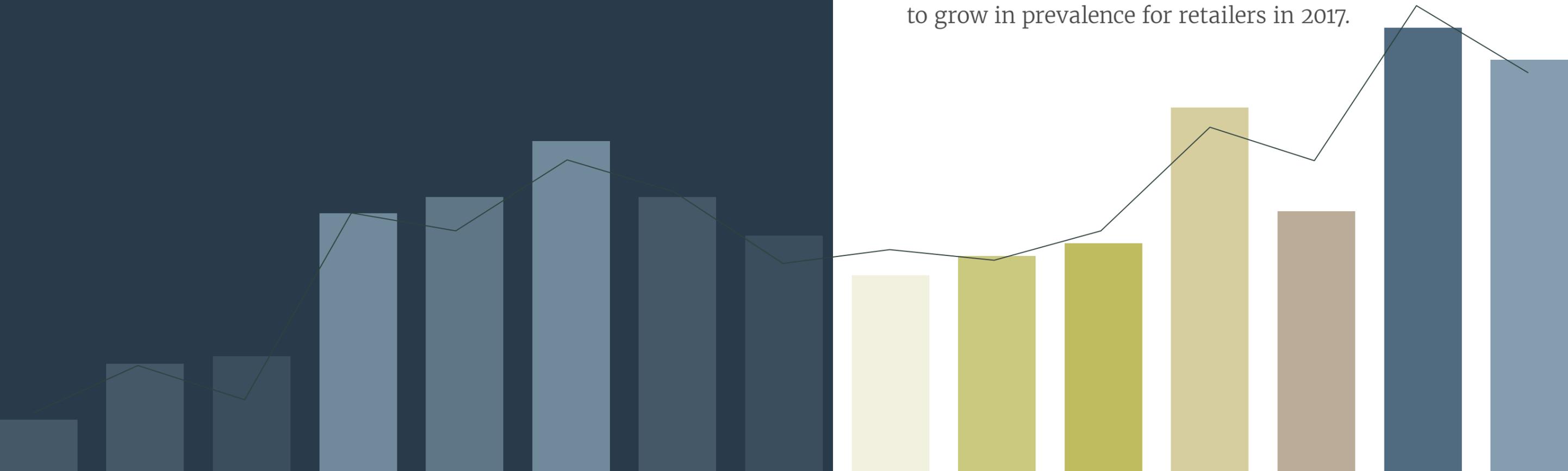
Mobile is key. We try to make sure our sales force is not stuck in the office, because we're primarily responsible for selling the product. They're out in the markets, they're out with customers. So if they have questions, instead of them having to pull up an Excel spreadsheet, or some kind of document, they can go straight to their iPad, pull up a dashboard and answer the questions right then and there.

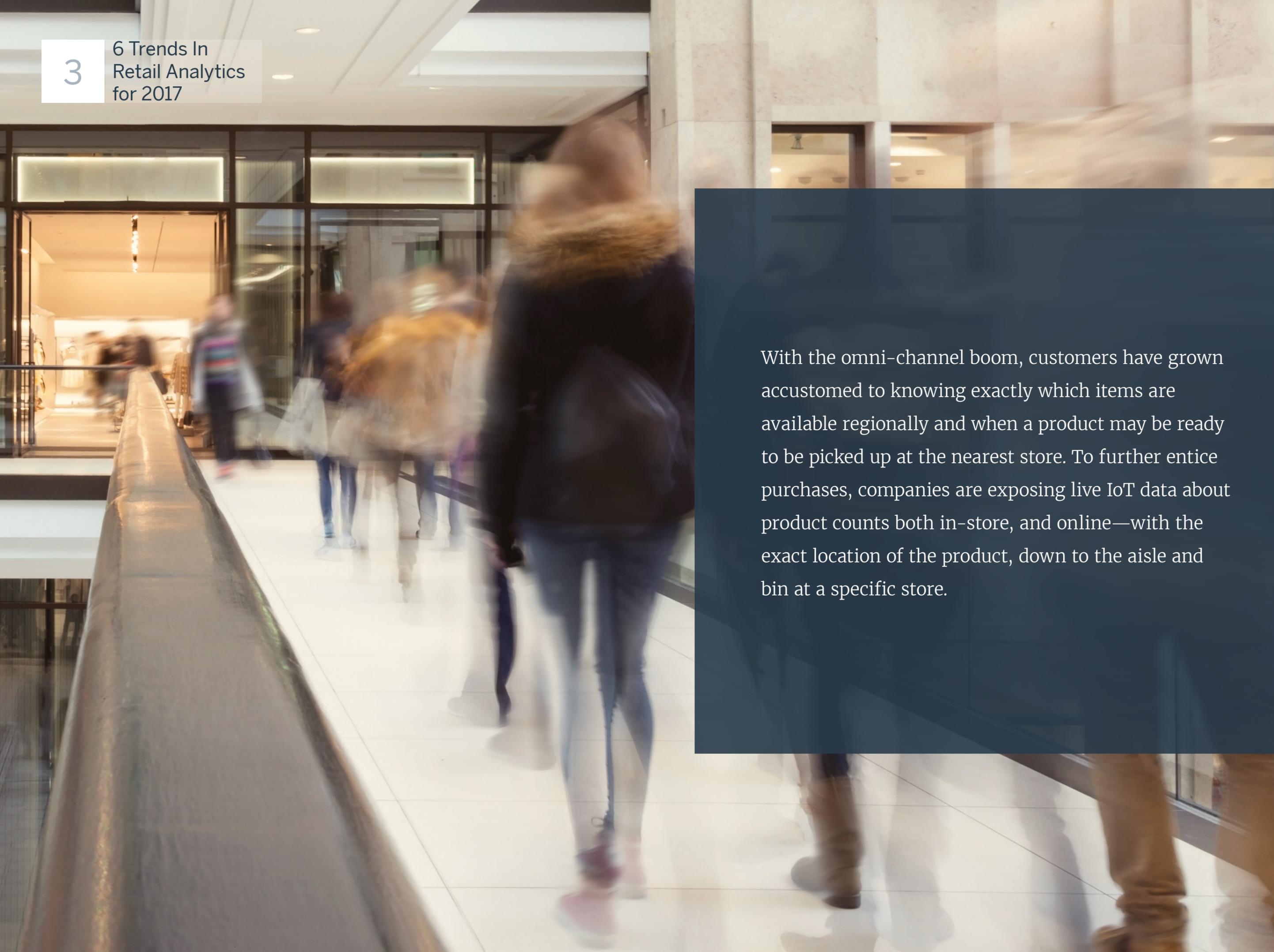
— SHAWN CRENSHAW, SENIOR BUSINESS ANALYST, COCA-COLA BOTTLING CO. CONSOLIDATED (CCBCC)

# The Internet of Things starts to improve data accuracy

It seems that almost everything—products, merchandising displays and even foot traffic pathways now have sophisticated sensors that collect and relay information for analysis. This year, an influx of beacons, Wi-Fi based sensors, and radio frequency identification (RFID) tags will be utilized to track items throughout the supply chain, and improve accuracy for in-store inventory levels.

With connectivity everywhere, and data from in-store mobile devices growing in volume, so too will the potential for actionable insights. IoT connected devices are set to triple by 2020, and the data produced is poised to grow in prevalence for retailers in 2017.





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With the omni-channel boom, customers have grown accustomed to knowing exactly which items are available regionally and when a product may be ready to be picked up at the nearest store. To further entice purchases, companies are exposing live IoT data about product counts both in-store, and online—with the exact location of the product, down to the aisle and bin at a specific store.

“I don’t know how, in an omnichannel, data-driven ... world, you can take data accuracy lightly,” Bill Connell, senior vice president of logistics and operations at Macy’s, told [RFID Journal](#). “The customer base is increasingly demanding. ‘I want it. I want to know you have it. I want to tell you how I want you to get it to me. And I want to do that right now.’ If you don’t have that level of confidence in your data, you have a pretty big problem.”





Major brick-and-mortar stores are also utilizing improved IoT data to understand shopper behavior. Mobile data helps retailers see which in-store marketing techniques work best, and which walking pathways shoppers use the most. Marketing teams then use this information to determine which visual breadcrumbs and shopping routes result in increased sales, and can use this data to market digitally to customers.

Further Reading:

[Macy's to RFID tag everything](#)



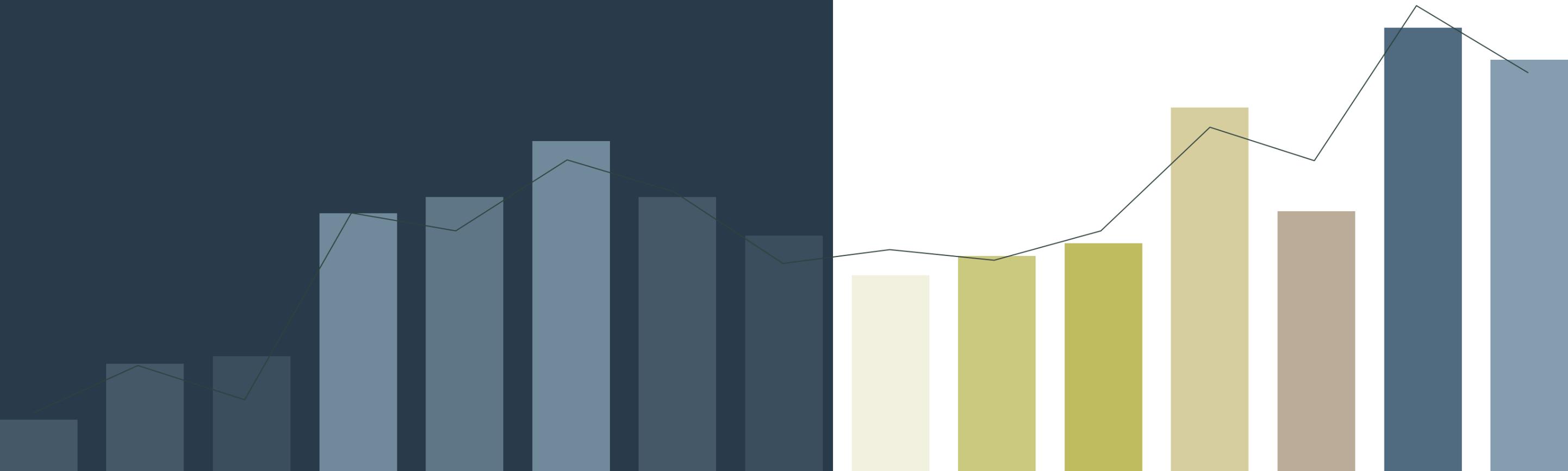
MiNODES' Wi-Fi-based sensor technology generates powerful consumer behavior insights, enabling retailers to optimize store performance and consumer traffic. We are able to intuitively visualize customer journey data in a single view, allowing for data-driven planning, and decision-making. Our technology has enabled retailers to increase storefront conversion up to 38% and shopper dwell time by 7-28 minutes.

— TIM WEGNER, MINODES, FOUNDER & MANAGING DIRECTOR

# Omnichannel data integration gets exciting

Retailers want and need agile analytics. Because timing is everything, it's essential to get the right data sets to the right people, and quickly. This is no small challenge since data now lives in many different places including legacy systems and different database platforms that include both on-premise and cloud data.

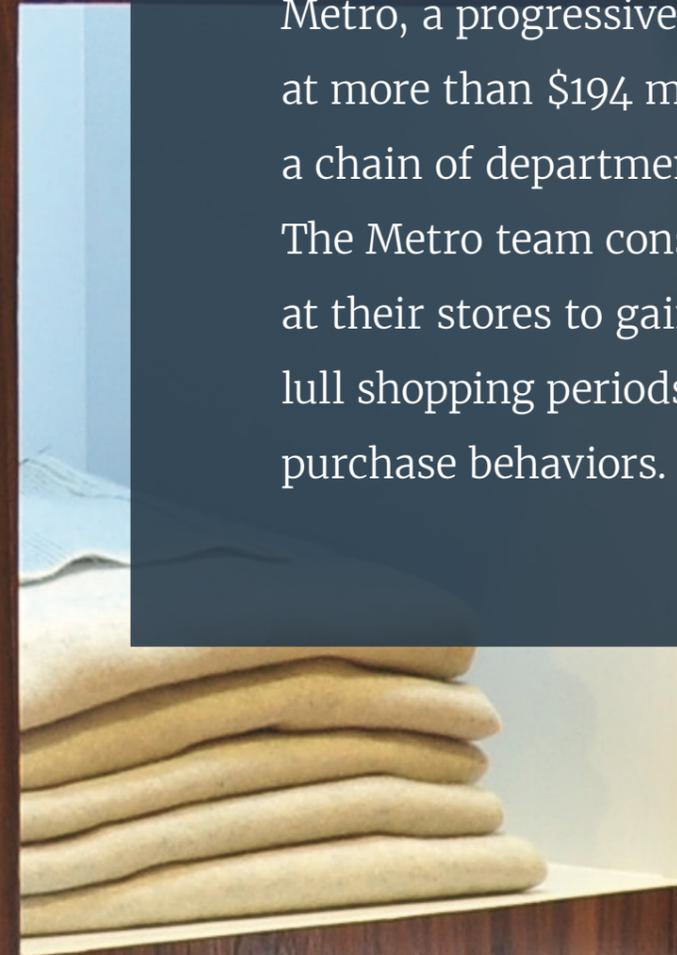
Successful retailers must be able to see and understand, in one holistic view, commerce-channel data, supply-chain data, and customer data. This is the promise of omnichannel.



Working across different channels and data sources can seem tedious, impossible, or both. In 2017, we'll see many new players in the data integration space. With the rise of sophisticated tools and the addition of new data sources, companies will stop trying to gather every byte of data in the same place. Retailers will connect to data sets where they live and combine, blend, or join other data sets with more agile tools and methods.

In fact, leading retailers services divisions are using a technique called a cross-database join to merge a main production database in Oracle with an employee tracking database in SQL Server. By doing so, users can look at their productivity based on actual staffing time.





Metro, a progressive retail business valued at more than \$194 million in FY2014, operates a chain of department stores in Singapore. The Metro team constantly collects a variety of data at their stores to gain valuable insights into peak and lull shopping periods, inventory flow, and customer purchase behaviors.



We had sales data in data source A, transactions data from source B, and customer data from source C. To put all these together, we need to extract data from multiple sources. What used to take us weeks has now been reduced to seconds.

— ERWIN OEI, LEAD BUSINESS ANALYST, CRM AND MERCHANDISE CONTROLLER, METRO

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By analyzing the trends with data from multiple sources, the team can set operational and promotional strategies, and continue to improve efficiency and performance.

Further Reading:

[Learn more about Project Maestro](#)

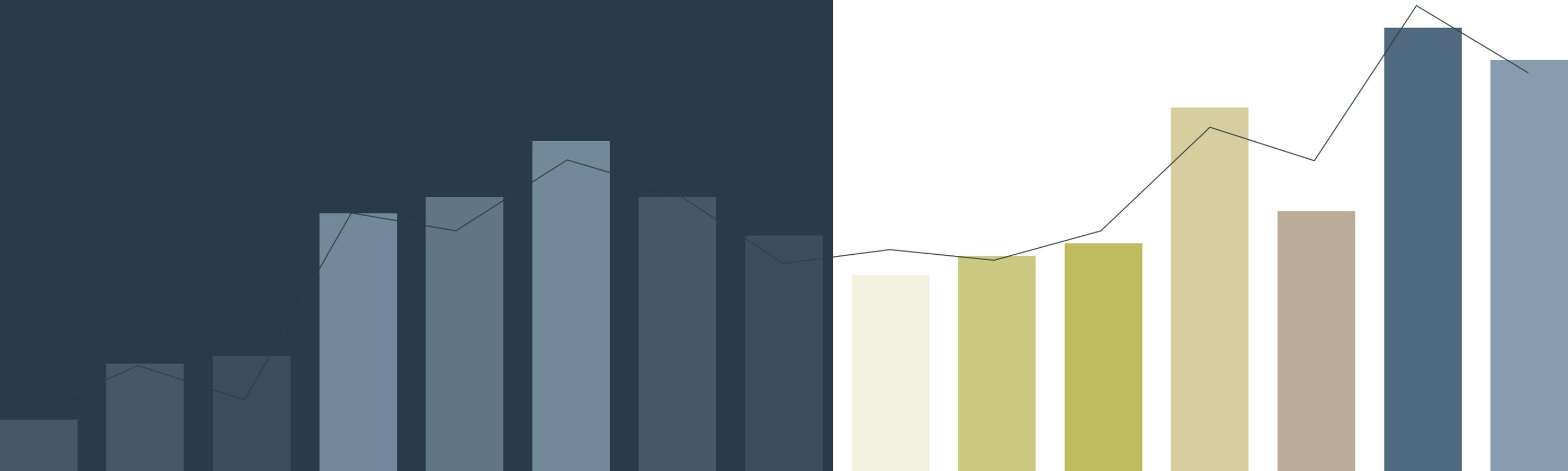


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# Robots bring big opportunity to retail data

For years, major retailers have employed robotics in distribution centers, but in 2017 robots will take center stage as part of the in-store experience. This year, we'll see machines, robots, and artificial intelligence begin to help retailers with routine tasks such as taking physical inventory, offering promotions, and even taking surveys and orders. These robots will begin to serve as new data touchpoints, gathering vital information about customer behaviors, and interactions that companies can eventually leverage.





Retailers will continue to work to extend loyalty way past point of purchase, and customer service data gathered from robots will be one of the differentiating factors between success and failure.

As social robots encourage customers to interact, they'll offer additional value such as advice, recommendations, reviews, and real-time information, creating a more authentic relationship between shoppers and retailers.

Further Reading:

[Robots are infiltrating retail](#)

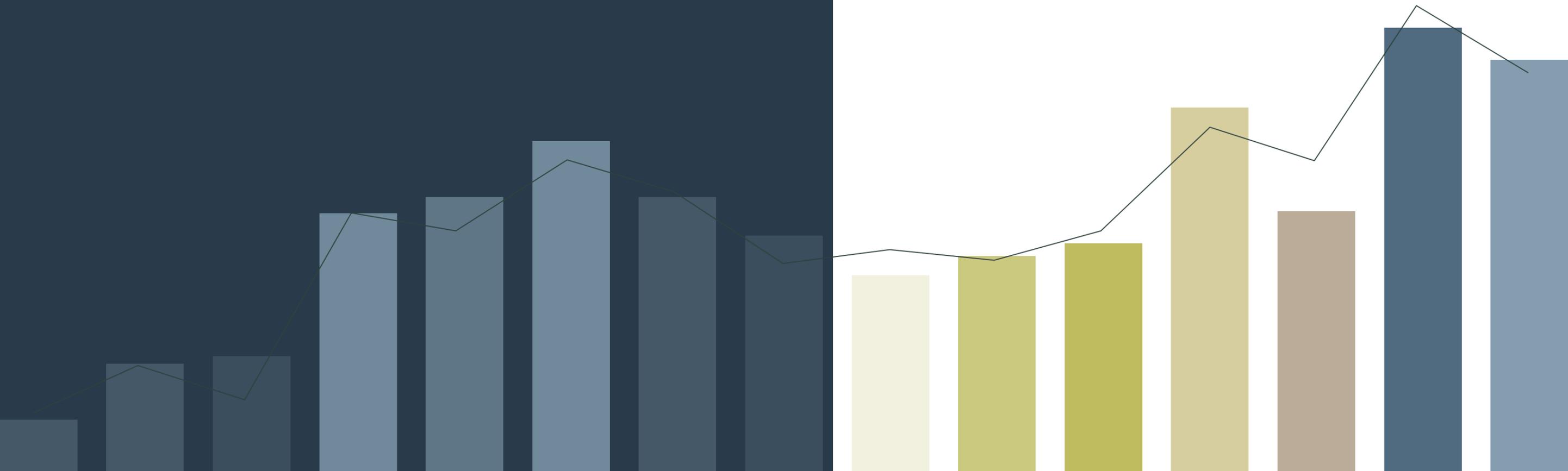


It's straight forward to use the robot to survey customers, to seek their opinions and reviews, helping the retailer to better understand customer perceptions. Doing this in real-time allows the retailer to act in the moment, as events occur.

— SVEN-OLOF, CHIEF MARKETING OFFICER, QMATIC GROUP

# Augmented and virtual reality add more insight to retailer analytics.

Ever wonder what a new couch would look like in your living room? In 2017, customers will be able to harness augmented reality (AR) and virtual reality (VR) to imagine potential purchases in their own lives. Taking guesswork out of a purchase cycle will likely improve sales, increase customer satisfaction rates, and minimize costly returns. Adding analytics to the mix, retailers can use data to provide customers with real-time inventory, visualized on store location maps, to show where products currently exist in-store.



Also, merchandisers will leverage AR and VR to visualize in-store scenarios. For example, instead of spending hours and dollars physically creating product plans for shelves and store layouts, retailers will review various arrangements and alternates via virtual reality.

The enterprise will pair these virtual reality cases with embedded data analytics to optimize revenue and profitably. Retailers will go through mock trials of stocking shelves with virtual products, and also use data to predict the outcome of each scenario.

Further Reading:

[Virtual and augmented reality will reshape retail](#)



The technology behind virtual reality has taken decades to build. Every industry will be impacted by this technology within the next year. When customers and retailers first see this technology, the common reaction is simply ‘wow.’ And this ‘wow’ experience is spreading to the masses with affordable VR/AR products.

— JOHN WRIGHT, CEO OF STRATA

# Hear from our customers



If I'm doing the same thing over and over again, I'm never able to step out the box. Tableau allows us to step out of the box. It allows us to be able to look at data in a totally different way.

— KEVIN KING, DIRECTOR, REPORTS & ANALYTICS  
COCA-COLA BOTTLING CO. CONSOLIDATED (CCBCC)

Further Reading:

[Eliminating the reporting bottleneck at CCBCC](#)



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, PEPSICO

Further Reading:

[PepsiCo cuts analysis time by up to 90% with Tableau + Trifacta](#)



Visualizing data in the clever ways that Tableau allows, you can quickly spot trends and areas that could be easily improved. Now when we're trying to communicate ideas, it can be faster and easier to show visually rather than trying to explain through tables and numbers.

— ADAM YEOMAN, SENIOR ANALYST, SUPPLY CHAIN DEVELOPMENT, TESCO

Further Reading:

[Tesco increases sales with supply chain data](#)

# About Tableau

Tableau helps people see and understand their retail data no matter how big it is, or how many systems it is stored in. Quickly connect, analyze, and share insights to reveal hidden opportunities that impact each sale, and your entire organization. With a seamless experience across PC, tablet, and smartphone, ask and answer deeper operational questions with expressive, interactive dashboards—no programming skills required. Start your free trial today.

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