



# 5 WAYS TO LEVERAGE GRANULAR RETAIL DATA



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# INTRODUCTION

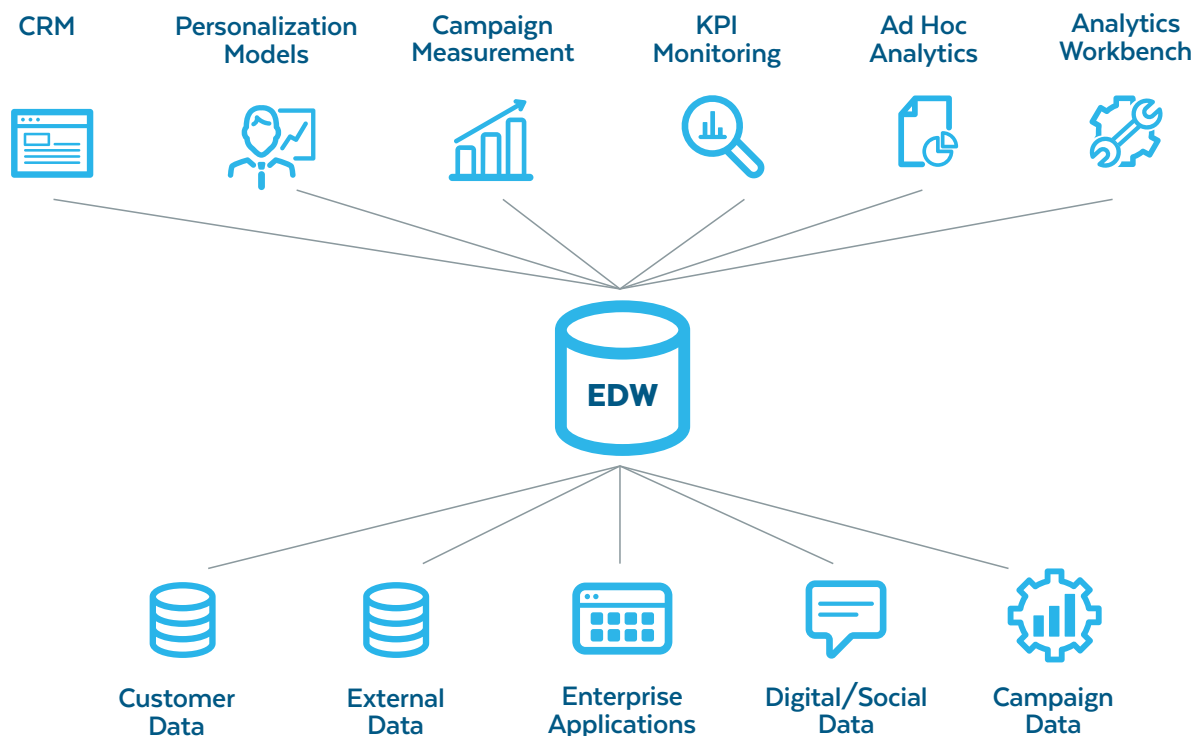
Consumers' expectations change daily. Brick-and-mortar and ecommerce retailers and consumer packaged goods (CPG) companies must adapt quickly to remain competitive.

Online and mobile transactions, data exchanges, social media, and the IoT provide massive volumes of data that can help organizations make data-driven decisions and increase customer satisfaction, but analyzing that data to get meaningful insights is challenging. Too often, outdated legacy systems hinder advanced analytics, jeopardize data security, and prevent real-time data sharing.

However, by implementing Snowflake's cloud data platform, retailers can optimize every area of their business, enhance data flow, and transform their analytics. Snowflake provides the platform to deliver the data-driven insights they need to determine the right assortments, achieve the most efficient supply chain, and optimize pricing, promotions and marketing campaign effectiveness.

This ebook describes five ways Snowflake's modern data approach helps retail and CPG companies leverage more granular data to create a better customer experience and increase profits.

## Snowflake's Cloud Data Platform Powers Everything in Your Tech Stack



# EXAMPLE #1: PERSONALIZE YOUR MESSAGING

## A GOAL TO REACH EVERY CUSTOMER

Reaching new customers with the right product at the right time is critical for retailers to grow and be profitable. Ecommerce and in-store POS streams produce massive volumes of consumer behavior data that can help marketers deliver what buyers need. Unfortunately, outdated systems and fragmented information silos thwart retailers from leveraging this data to provide targeted marketing. But Snowflake provides a single source of truth that empowers retailers to make data-driven decisions, enabling them to reach every customer.

## A HOLISTIC VIEW OF THE CONSUMER

Organizations need a reliable 360-degree view of their customers, but internal data alone can present an incomplete picture. Combining internal data with external data such as weather and demographic information can provide powerful insights into consumer lifestyles, purchasing behavior, and preferences. Snowflake enables marketers to supplement internal point-of-sale, loyalty, and

customer service data with data from third parties to better understand customers. With Snowflake Data Marketplace, retailers can securely access live, governed data in near-real time without copying or moving data.

## A PERSONALIZATION ENGINE

Marketing departments have a colossal task to personalize the promotion and sales of their products and services for each customer. Today's consumers expect nothing less: 63% of consumers in a 2019 Harris Poll said they expect personalization as a standard of service, and 52% feel recognized as an individual when sent special offers.<sup>1</sup> Snowflake enables personalization at scale with its ability to handle massive amounts of data with virtually unlimited concurrency. For example, retailers can build tailored product and service recommendations

for each customer based on purchase history, past brand engagement, demographics, and regionality. Likewise, marketers can leverage engagement metrics at scale to learn about customers' preferences, such as their preferred channel, the time of day they shop, and their desired communication frequency. Leveraging all this data in parallel through Snowflake enables marketers to give their customers personalized experiences that drive higher conversion and brand loyalty.



<sup>1</sup> <https://bit.ly/3hLHuaY>

## EXAMPLE #2: PERSONALIZE YOUR ASSORTMENT

### THE OPTIMIZED IN-STORE EXPERIENCE

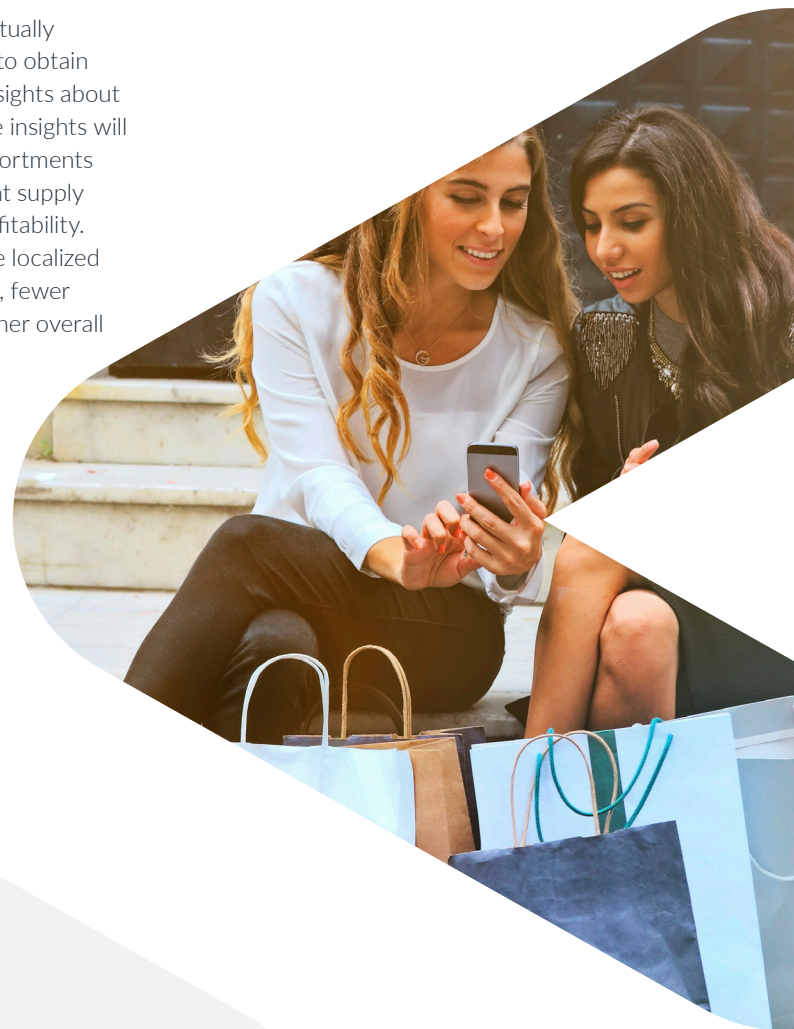
As marketing organizations accelerate digital personalization capabilities, many forget the importance of the in-store experience. Despite the meteoric rise of online shopping over the last decade, brick-and-mortar stores still make up approximately 90% of retail market sales, so retail organizations must also focus on personalizing assortments in their stores.<sup>2</sup> But analyzing millions of rows of store and item sales data has been daunting until now. With Snowflake, organizations can access the data resources they need to effectively build a data-driven assortment strategy.

### UNIQUE STORE PROFILES

Understanding each store's unique demographic and traffic profile enables national and regional retailers to meet local consumers' needs. With Snowflake, retailers can leverage granular data at scale to uncover each store's unique personality, driving a deeper understanding of which items should be in which stores. For example, households in urban areas tend to have less storage, so customers buy smaller sizes and visit more frequently than rural customers who might buy larger sized items and in bulk, but less frequently. Data analysis can also lead to better assortments of regional or local items, leading customers to believe that their national chain cares about their local flavors and culture.

### CONSISTENT AND EFFICIENT ASSORTMENT

With Snowflake, retailers can access a virtually unlimited amount of data, enabling them to obtain previously hidden, revenue-generating insights about their stores. As they are uncovered, these insights will produce localized shelf sets and store assortments that increase sales, lead to a more efficient supply chain, and most importantly, increase profitability. Retailers capitalizing on their data to drive localized store assortments will see higher margins, fewer markdowns and inventory issues, and higher overall customer satisfaction with their stores.



<sup>2</sup> <https://bit.ly/2Xbte3w>

## EXAMPLE #3: OPTIMIZE INVENTORY

### THE IMPORTANCE OF INVENTORY PLANNING

Faster product life cycles, increased localization, and increasingly complex consumer preferences are forcing retailers to identify how they can optimize the supply chain to maximize profits and reduce costs. For example, retailers must fine-tune inventory planning. With too little inventory, they might not be able to meet customer demand, thus

leaving shelves empty, customer needs unmet, and revenue lost. But too much inventory can lead to high storage costs, unwanted markdowns, and drastically lower margins. Data can provide insights that help retailers optimize their supply chain, but many data analysts still use spreadsheets and analyze limited and outdated data to make key decisions. Fortunately, Snowflake provides the power they need to forecast demand and optimize inventory, staffing, and supply chain logistics.

### PREDICTIVE ANALYTICS

By powering advanced analytics and data modeling, Snowflake helps retail and CPG companies predict demand so they can make faster, better supply chain decisions. Snowflake natively ingests immense volumes of granular semi-structured and fragmented

data from every phase of the supply chain, including log, sensor, and machine data, collecting it in one place for easier analysis. Using real-time visibility into supply and distribution networks, advanced analytics help retailers decrease inefficiencies in the supply chain and anticipate item availability. And with unlimited concurrency, retailers can run several models in parallel without performance degradation.

### ACCURATE FORECASTING DESPITE VOLATILITY

Demand volatility is a challenge in modern supply chain planning. Although disruptive global events can never be predicted and will forever pose a challenge, new technologies have greatly improved the accuracy of demand forecasting. Machine learning, for example, can analyze massive volumes of structured and semi-structured data to identify patterns that indicate potential product inventory issues or unforecasted demand. Algorithms can develop predictions within minutes or hours, compared to the days or weeks needed with traditional demand forecasting methods. Snowflake can enable supply chain teams to build much more accurate demand forecasting models, while detecting abnormalities early and making adjustments to maintain continuity within the supply chain, leading to higher in-stock percentages and, therefore, higher revenue and profits.



## EXAMPLE #4: TEST AND LEARN

### CONTINUAL LEARNING: THE NEW NORM

The abundance of available data, greater investment in analytics, and growth of personalization has enabled retailers to test new products, ideas, and assortments to greater depths more routinely than ever before. Machine learning enables retailers to

test hypotheses, providing a continual feedback loop of data into the test model. The model then learns what does and doesn't work, informing future assortment strategies at the store level. This capability is generating a new approach to retail. As analytics capabilities grow, retailers feel more empowered to try new ideas. Of course, some ideas won't succeed, but failures are discovered quickly and help the model learn for the next test. Machine learning, empowered by Snowflake technology, enables retailers to generate continually smarter messaging, assortments, and pricing strategies.

### INCREASED MODELING AND TESTING WITH SNOWFLAKE

Snowflake's unique architecture and scalability enable more thorough testing than ever before. Tests and resulting knowledge used to be limited by outdated technologies. Row and column limits, slow processing, and a lack of concurrency meant that retailers could execute only a few tests at once, or in some cases, only a few tests a year. This meant that retailers were slow to adapt to changing consumer landscapes and, therefore, missed opportunities to capitalize on

new trends. Snowflake's high availability and high concurrency enables retailers to analyze thousands of test items or stores, with scalable control ratios to ensure they're getting trustworthy results. In addition, they can test as many new hypotheses as their stores can handle.

### MACHINE LEARNING WITH SNOWFLAKE

Snowflake's architecture and network of leading BI and analytics tools enable retailers to analyze results in near real-time at the most granular levels, learning which assortment strategies to expand, which pricing strategies are the most effective, or which email subject lines drive the highest open rates. Learning in real time enables teams to make quick decisions on trustworthy data, driving better outcomes for their stores and customers. With Snowflake, retailers can effectively adapt to shifts in consumer behavior and become the destination of choice for new, hot products or services that hit the market. Snowflake has unlimited scale to analyze all of the data and connect directly to leading measurement tools, providing unlimited learning.



# EXAMPLE #5: OPTIMIZE PRICING TO DRIVE VALUE

## THE COST OF NOT OPTIMIZING PRICE

Pricing optimization is a priority for many retailers and CPG companies today. In an industry where margins can be razor thin, simple adjustments to prices can make a huge impact to the bottom line, but determining the right strategies can be challenging. Price is driven simply by consumer willingness to pay. Consumers won't buy a product if they don't perceive they're getting appropriate value, so low sales may indicate that the price is too high. But pricing products too low means losing precious margin dollars that drive product innovation and line extensions. Plus, it's difficult to raise a price once it's already established in the market. Most retail organizations are investing in new revenue growth management analytics capabilities to drive effective pricing strategies across channels, ensuring they're capturing the revenue and margin from prices that their customers are willing to pay.

## THE IMPACT OF GRANULAR PRICE CHANGES

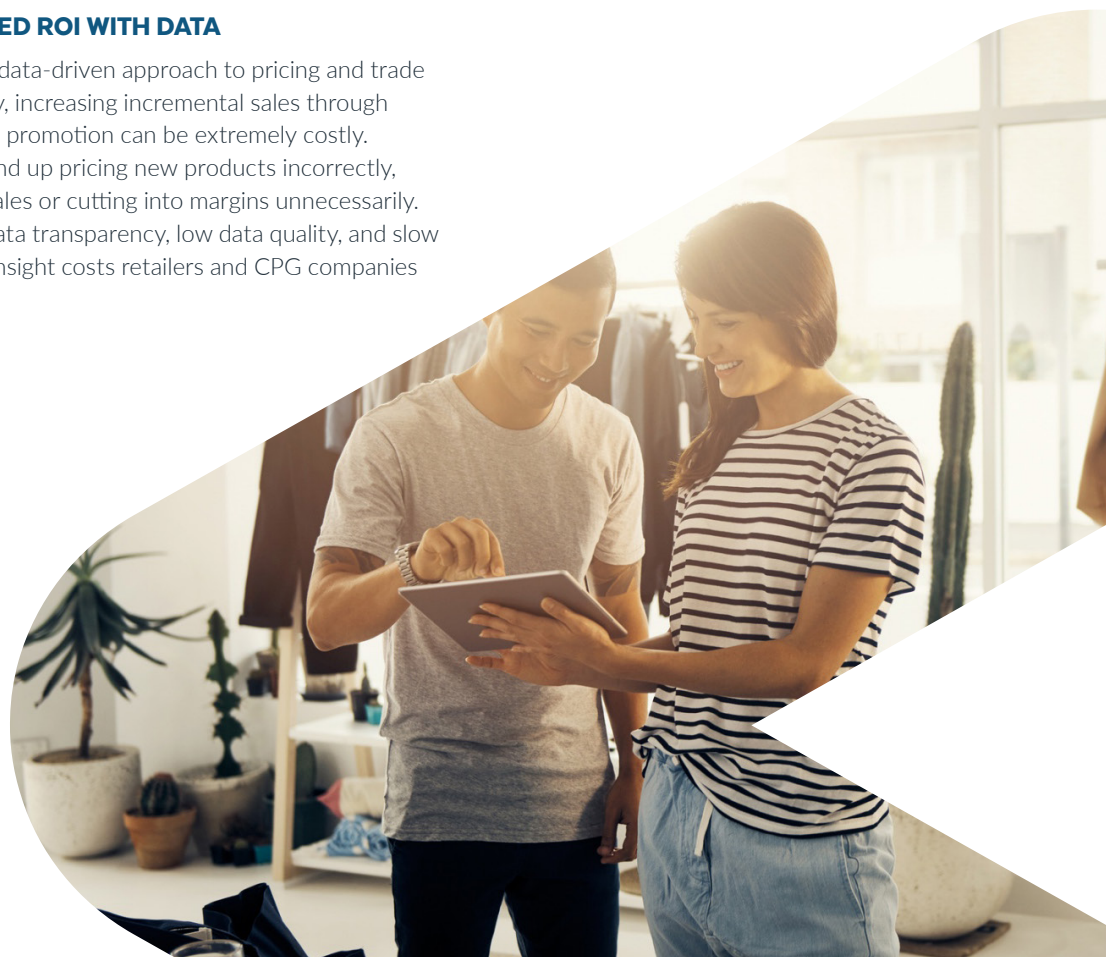
The biggest challenge with pricing optimization is that it requires a vast amount of data. To fully understand pricing, retailers must analyze granular item-, store-, and time-based data. This quickly becomes hundreds of millions of rows of data, which is too much to handle with legacy tools and technology. But with Snowflake, data size is no longer an issue. Analysts can store, analyze, and run pricing models against

the data at its most granular form, which is exactly how retailers need it. This enables retail analysts to generate insights across both base and promotional pricing activities, building strategies for how to effectively price and promote each individual item for each retailer. With unlimited data and several analysts working simultaneously, retailers can optimize price faster and more efficiently than ever.

## INCREASED ROI WITH DATA

Without a data-driven approach to pricing and trade profitability, increasing incremental sales through pricing and promotion can be extremely costly. Retailers end up pricing new products incorrectly, reducing sales or cutting into margins unnecessarily. A lack of data transparency, low data quality, and slow speed-to-insight costs retailers and CPG companies

millions of dollars each year. With Snowflake, those dollars can be recaptured. Snowflake enables data-driven pricing and promotional strategies. By increasing visibility to the most granular levels of pricing and promotional data, retailers and their CPG partners can drive higher profitability while maintaining sales and providing their consumers the value they're looking for.





## CONCLUSION

Today's retail and CPG companies need to harness the power of granular data and take advantage of the capabilities that Snowflake's cloud data platform provides, including performance, concurrency, scalability, and security. With Snowflake, organizations can leverage data to build personalized, multichannel, and in-store customer experiences while targeting their marketing campaigns more effectively. They can drive performance and efficiency across the value chain as well as regionally and in stores. In addition, they can securely share and exchange data to strengthen partnerships and obtain customer insights. Snowflake enables hundreds of retailers and CPG manufacturers to achieve these capabilities and become truly data-driven.





## ABOUT SNOWFLAKE

Snowflake's cloud data platform shatters barriers that have prevented organizations of all sizes from unleashing the true value from their data. Thousands of customers deploy Snowflake to advance their businesses beyond what was once possible by deriving insights from their data by all their business users. Snowflake equips organizations with a single, integrated platform that offers the data warehouse built for the cloud; instant, secure and governed access to their network of data; and a core architecture to enable many types of data workloads, including a single platform for developing modern data applications. Snowflake: Data without limits. Find out more at [snowflake.com](https://www.snowflake.com).

