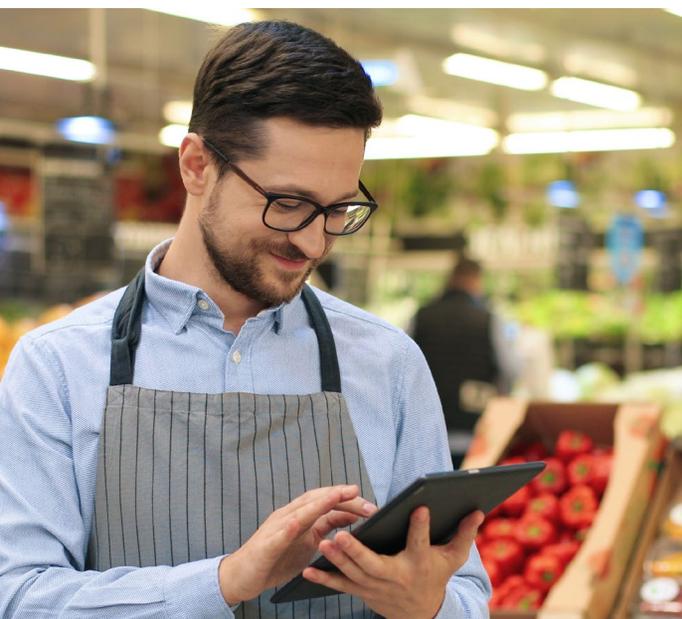


Become a resilient retailer:

How to use data insights to save money
and create new revenue streams





Between global tensions, economic uncertainty, surging inflation, and supply chain snarls, retailers face a volatile landscape. It's an uncertain and highly competitive environment — one that favors retailers focusing on building resilience and creating efficiencies.

Whether you're dealing with quickly changing customer preferences, poor visibility into a mountain of data, or inventory mismatches, three questions are top-of-mind for retailers:

How do we eliminate waste and reduce costs?

How do we drive growth with constrained resources?

How do we build resilience to manage uncertainty?

4 key opportunities for retailers

In this guide, MongoDB and Google Cloud will explore 4 key opportunities for retailers and provide insights on how a data-driven approach to each can give you the ability you need to achieve efficiency and profitability goals with resilience built in. You'll also discover how retailers and their developers can reduce data sprawl and complexity to build mission-critical apps faster and more flexibly.

1	Supply chain unpredictability and logistics optimization	
2	Changing customer expectations and uncertain demand	
3	Omnichannel sales productivity online and offline	
4	Environmental impacts and sustainability	

The state of retail: It's a jungle out there

If the goal is to be less vulnerable in a risky climate, retailers need to make the most of their resources and drive revenue streams that are less sensitive to economic cycles.

Data and AI are key drivers for both. Yet, retailers are still underutilizing data. Fewer than 30% of retail and consumer goods firms are leveraging data on lifetime customer value or propensity to purchase, and just 1/3 are taking advantage of data to guide product development.¹

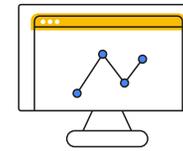
And while AI adoption continues to grow — up to 56% in 2021, according to a McKinsey survey² — it may be limited to just one function.

Retailers often lack the insights they need to manage supply chain uncertainties, understand their customers, maximize revenue across online and offline channels, and inform sustainability initiatives.

An incomplete view

When data is spread across numerous silos, it makes it nearly impossible to get a complete view. This can lead to duplicative efforts, increased costs, and lower profit margins.

Let's take a look at how gaining data insights at speed in 4 key areas can help you achieve the dual objectives of increasing efficiency and profitability.



What does it mean to be data-driven?

Retailers that take a data-driven approach to their business share these 5 characteristics.

Data-driven retailers:

- Have built a transformation strategy centered around their data
- Organize their business data (store, manage, prepare, and analyze) in one place
- Ensure data quality, security, and governance
- Put their data into action, leveraging automation and AI
- Operationalize their data by treating data sources as business assets or products



Supply chain unpredictability and logistics optimization

Good supply chain planning relies on solid decision-making and the ability to act in near-real time. Retailers need practical and highly cost-effective solutions that usher in a more proactive and predictive approach to planning and decision-making. Accurate forecasting is critical to ensuring the right volumes of the right products are delivered to the right locations at the right times.

Customers don't like to see items out of stock, but too much inventory is costly and wasteful. Both cases cause inventory distortion, which costs retailers nearly \$2 trillion dollars a year, according to IHL Group³ — whereas a 10% to 20% improvement in demand forecasting accuracy could directly produce a 5% reduction in inventory costs and a 2% to 3% increase in revenue.⁴

The next best thing to a crystal ball

Retailers can now infuse machine learning (ML) into their existing demand forecasting to achieve higher forecasting accuracy. Google Cloud [supply chain and logistics solutions](#) as well as products and services from its ecosystem of trusted industry partners can help with supply chain visibility and optimization. Tools such as [Vertex AI](#) can ingest large volumes of structured and unstructured data, allowing planners to include many relevant demand drivers, such as weather, product reviews, macroeconomic indicators, competitor actions, commodity prices, freight charges, ocean shipping carrier costs, and more.



10%-20%

improvement in demand forecasting accuracy can directly produce a 5% reduction in inventory costs.

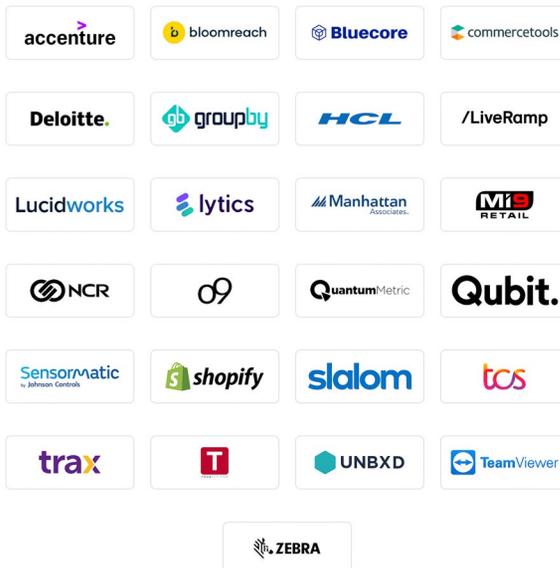
ML insights can then reveal how each of these drivers contributes to the forecast and help decision-makers take corrective action early.

At [Lowe's](#), the hardware giant creates accurate hierarchical models that balance between SKU- and store-level forecasts at 1,700 store locations. These models take into account the company's SKU-, store-, and region-level inventory, promotions data, and multiple other signals — yielding more accurate forecasts.

[PVH Corp.](#) was able to quickly pivot by adjusting its business rules in Manhattan Active Order Management running on Google Cloud to expose store inventory to online consumers and reroute its fulfillment processes. In a matter of days, PVH was able to leverage both its distribution centers and vast store network to fulfill its online orders.

Recommended retail partners

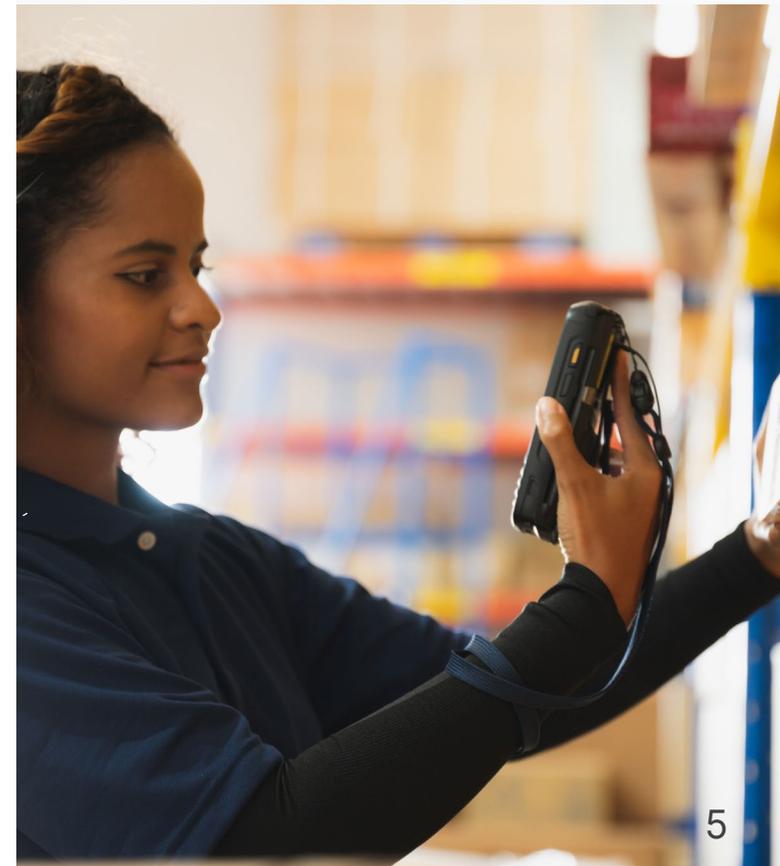
The Google Cloud ecosystem of trusted industry partners can help you plan, design, and deploy across your value chain.



Lowe's Customer Insight

1,700 stores

have access to hierarchical models with SKU- and store-level forecasts.



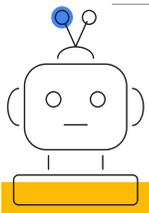
Changing customer expectations and uncertain demand

Deriving meaningful insights from data has become a larger focus as consumer expectations for more personalized shopping experiences both in store and online continue to rise. Fully 73% of consumers in 2022 expected companies to understand their unique needs and expectations, up from 66% just 2 years prior.⁵

In addition to those high expectations, how, why, and where your customers shop is a constantly moving target. Challenges in retail do not begin or end during the holiday season. Retailers must be prepared to adapt swiftly as sudden shifts in customer preferences and overall demand ebb and flow year-round.

Retailers need to meet these consumer experience expectations, but they need to do it in the context of optimizing sales and marketing efficiency through reduced churn and reduced cost of acquiring and retaining customers.

How do you create a delightful, personalized customer experience while staying laser-focused on efficiency and maximizing profitability?



The same improvements to your IT and data infrastructure can help you prepare for changes in demand and for year-round innovation. With data and AI, you can strengthen your competitive position by capitalizing on untapped company data and differentiating your offerings.

73%

of consumers expect companies to understand their unique needs and expectations.



Create delightful, personalized shopping experiences

Personalized in-store and online shopping experiences are a key competitive differentiator for [Ulta Beauty](#). The company has built AI- and AR-powered tools that enhance shoppers' experiences, including the ability to try on makeup virtually, undergo a skin analysis, get beauty recommendations, and match their skin tone to an accurate shade.

A strategic shift to building and deploying cloud-native applications on Google Kubernetes Engine and integrations with solutions from partners, including commerce and data platform companies MongoDB and commercetools, allowed Ulta Beauty to accelerate time to market for new products and services and deliver new ways to engage with customers more quickly.

These efforts add up to create “wow” experiences for Ulta Beauty’s guests, who can now discover and experience products that are served to them based on individual preferences.

When combined with an [enterprise data warehouse](#), [customer data platforms \(CDPs\)](#) and [analytics tools](#) offered by Google Cloud and its partners are also helping retailers look “under the hood” to better understand digital operations and customer behavior — giving them the real-time data they need to make informed decisions that have an immediate and direct impact on revenue.



Retailers look “under the hood” to better understand digital operations and customer behavior.



Ulta Beauty
Customer Insight

Data-driven

solutions enable Ulta Beauty to accelerate time to market for new products and services and deliver new ways to engage with customers more quickly.

Omnichannel sales productivity online and offline

In the previous 2 years, companies were in hiring mode. Now, market uncertainty and slowing consumer activity are putting a premium on sales productivity in store, online, and via contact centers.

Automate processes and boost employee productivity

With data, you can see what's happening in a store at any given moment and use that visibility to help store associates take the next best action. At [Nuuly](#), the clothing rental and resale subsidiary of Urban Outfitters, workers are equipped with customized Android devices that guide order tracking and fulfillment, plus cleaning, repairs, and reselling of garments as needs change throughout their lifecycle. Yet the insights go even deeper. The data science team closely analyzes routes and repetitive motions to make strenuous jobs lower impact. Over a 5-year period, the data insights saved workers over 300,000 miles of steps — enough walking to circumnavigate the globe 12.5 times.⁶

Using [Contact Center AI](#), retailers can improve customer service with AI that understands, interacts, and talks. In addition, [Google Business Messages](#) combines Google Search, Maps, and a brand's mobile experience to deliver a comprehensive business-to-consumer messaging experience. Retailers can share answers to frequently asked questions and drive loyalty, purchasing, scheduling, and upselling through rich features like carousels, suggested replies, and photos. This frees up agents to focus on more specialized calls and provides them with real-time information, workflows, and step-by-step guidance.

Retailers can then turn these conversations into insight through analytics and reporting that uncover key call drivers, customer sentiment, and more. At [Marks & Spencer](#), the multinational retailer has reduced store call volumes by 50% and ensured a 92% customer intent match using Contact Center AI.⁷



Nuuly Customer Insight

300,000 miles

Over a 5-year period, data insights saved workers over 300,000 miles of steps — enough walking to circumnavigate the globe 12.5 times.



Stay laser-focused on innovation, not infrastructure

While each retailer has a unique modernization journey, all share something in common: Effective approaches to DevOps and data analytics underpin your success. Established retailers sometimes struggle to change previous retail models into the more personalized and real-time retail experiences that consumers now want, whether shopping in-store or online. As retailers continue to need more powerful systems of engagement and data analytics, the combination of MongoDB Atlas and Google Cloud solutions provides a solid mix of proven IT infrastructure and expertise.

Cultivating speed and agility for 1-800-FLOWERS.COM, Inc.

[1-800-FLOWERS.COM, Inc.](#) is an example of what can be achieved with modern data and DevOps solutions. The company is laser-focused on delivering new personalized experiences by continually innovating customer-facing services. To best manage all the eCommerce environments associated with its family of brands and ensure outstanding customer service, 1-800-FLOWERS.COM, Inc. tapped MongoDB and Google Cloud to revolutionize its DevOps.

MongoDB Atlas provides 1-800-FLOWERS.COM, Inc. with aggregation pipelines and a distributed system design that help it to scale quickly, while the speed and agility of Google Cloud help the company keep up with constantly changing customer preferences.

With proven cloud solutions that at once increase overall IT effectiveness and decrease the burdens on IT teams, 1-800-FLOWERS.COM, Inc. is better positioned to constantly experiment, innovate, and deliver experiences that delight customers.



“The fully managed MongoDB Atlas database on Google Cloud has unlocked tremendous potential in our IT architecture. From agility in scaling and improved resource management to seamless global clusters and premium monitoring, MongoDB and Google Cloud reduce complexity and allow our teams to stay lean and focused on innovation rather than infrastructure.”

—Abi Sachdeva, Chief Technology Officer, 1-800-FLOWERS.COM, Inc.

Environmental impacts and sustainability

Sustainability plays a significant role in many consumers' buying decisions. According to Google research, 82% of consumers now say this issue is more top-of-mind today than it was before the COVID-19 pandemic.⁸

Achieving full visibility into the environmental footprint of retail, from the sustainability of product packaging to the complexity of resource-intensive supply chains, can be extremely challenging.

How do you weave improvements in areas such as water usage, packaging, and carbon emissions into a practical sustainability strategy — one that reconciles the interests of consumers and the needs of the planet with a brand's growth, profitability, and performance goals?

Shape and inform sustainability decision-making, and ensure better outcomes

Retailers today can use cloud-based IT infrastructure, analytics, and AI to gain a clear and detailed understanding of consumer preferences and purchasing patterns. Those data-driven consumer insights, in turn, support timely, accurate, and reliable forecasts that brands can use to choose where and when to produce goods, make better sourcing and replenishment decisions, and plan more efficient distribution and transportation.

82%

of consumers say that sustainability is more top-of-mind today than it was before the COVID-19 pandemic.



Take [UPS](#), for example. The company saves up to \$400 million a year while reducing fuel consumption by 10 million gallons a year using a routing software powered by Google's data cloud that tells delivery drivers exactly where to go, every step of the way.⁹

And at [Unilever](#) — the global powerhouse with more than 400 brands — sourcing decisions affect communities and consumers across the planet. With the help of [Google Earth Engine](#), Google Cloud [Compute Engine](#), [BigQuery](#), and Google Cloud's advanced [AI and ML capabilities](#), the company can visualize the ecosystems around its supply chain and the effect of its supply chain on local communities and their forests, water cycles, and biodiversity. With the tools to store and analyze massive amounts of geospatial data, Unilever and its suppliers can take protective action as needed and improve accountability in the supply chain.

Create the sustainable retail store of the future. [Watch how.](#)



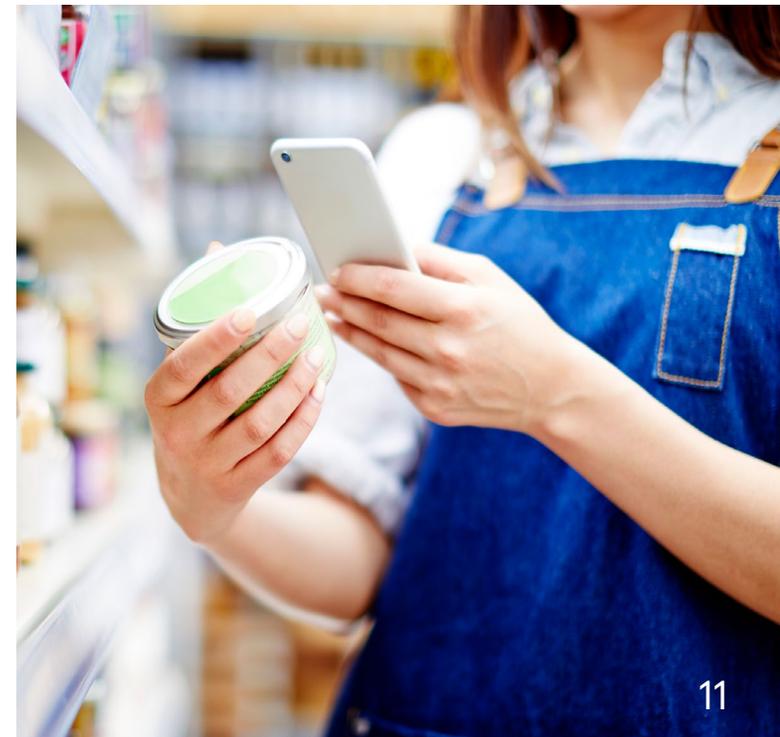
Retailers today can use cloud-based IT infrastructure, analytics, and AI to gain a clear and detailed understanding of consumer preferences and purchasing patterns.



UPS Customer Insight

\$400 million

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Stress-proof your retail business

Digital transformation in the retail industry is more than just a requirement, it's a race, and the retailers that transform the fastest will be the most successful in the long term.

MongoDB Atlas and Google Cloud work together to reduce development friction so retailers can quickly and intelligently innovate with data — and to keep the apps you create running smoothly, swiftly, and securely.

By helping to eliminate waste, reduce costs, and streamline workflows, modern data and AI tools are the driving force to overcome supply chain unpredictability, meet customer expectations, and improve associate productivity — all while helping retailers meet their sustainability goals.

Data done right is connected, intelligent, and secure, and unlocks business growth across the entire value chain. A data-driven approach to retailing is also a resilient approach — one that can drive innovation, efficiency, and profitability, as well as the ability to weather whatever comes next.

Learn more about [MongoDB on the Google Cloud Marketplace](#).

Sources

¹ Economist Impact, [Retail and consumer goods](#)

² McKinsey, [The state of AI in 2021](#)

³ IHL Group, [Is this the end of retail just-in-time inventory?](#)

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⁵ Salesforce, [Salesforce report: Nearly 90% of buyers say experience a company provides matters as much as products or services](#)

⁶ Google Cloud, [Nuuly does it: How technology is weaving sustainability into the future of retail](#)

⁷ Google Cloud, [M&S: Calling on Google Cloud for personalized customer services that's both digital and human](#)

⁸ Consumer Insights, [Three surprising ways people prioritize sustainability in the wake of the pandemic](#)

⁹ Google Cloud, [UPS uses Google Cloud to build the global smart logistics network of the future](#)



About MongoDB

MongoDB is the developer data platform company empowering innovators to create, transform, and disrupt industries by unleashing the power of software and data. Headquartered in New York, MongoDB has more than 39,100 customers in over 100 countries. The MongoDB database platform has been downloaded over 325 million times, and there have been more than 1.5 million registrations for MongoDB University courses.

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