



# RETAIL AND CONSUMER GOODS **DATA + AI PREDICTIONS** **2024**



There's no facet of society that artificial intelligence (AI) hasn't begun to touch, and while it's affecting some aspects of our lives more subtly than others, there is no question that the retail and consumer goods industry will experience massive upheaval as a result. We can thank the surge of generative AI (gen AI) technology for that, plus changes to customer engagement and the way products are sold in general.

To learn more about the impact AI and other developments will have in the coming year, we sat down with our in-house experts to hear their predictions. In our report [Data + AI Predictions 2024](#) we cover the AI, cybersecurity and open-source technologies that will transform the broader landscape in the years to come. Here, we'll take a deeper dive into the impact of data and AI on the retail and consumer goods industry in particular.

## THESE ARE THREE OF THE MOST IMPORTANT INDUSTRY TRENDS WE'RE TRACKING FOR 2024:



1

Experimenting with gen AI will put retailers and consumer goods companies ahead of the curve on productivity

2

Data monetization will play a massive role in driving revenue

3

A strong data strategy will distinguish industry leaders from followers

Consumers are still figuring out how to wrap their arms around AI, with feelings of both awe and distrust. While shoppers try to work out exactly what to think of these technologies, the businesses that move quickly to incorporate AI and new data strategies into their operations will be best poised for success — no matter which direction AI goes from here.

# EXPERIMENTING WITH GEN AI WILL PUT RETAIL AND CONSUMER GOODS COMPANIES AHEAD OF THE CURVE ON PRODUCTIVITY

Even just a few years ago, it was hard to imagine the power and reach that AI would be seeing today. Who could have predicted that we would use AI to generate photorealistic artwork and write reports for us — and that anyone with a computer or cell phone would be able to do as much?

The rise of ChatGPT, DALL-E and similar gen AI tools has instilled in people the kind of wide-eyed wonder at technological advances that we haven't seen in over a decade. At the same time, many people are wondering if they'll soon be replaced by an algorithm at work, or if the customer service rep is a real human or not.

Early adopters of AI tools are already reaping success, but efforts to measure that success haven't been fully fleshed out. Yes, AI saves time, and yes, it makes things possible that weren't before. But how does that translate to the bottom line? As time goes on, businesses will need to more clearly quantify how AI is impacting the enterprise, particularly in the cutthroat retail and consumer goods segments.

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—ROSEMARY DEARAGON,  
Global Industry GTM Lead, Retail and CPG, Snowflake

## Gen AI is improving employee productivity in many ways

Gen AI's first inroads into our daily lives were halting and limited. It could be used to automate chatbot support calls or summarize a long document into bullet points, for example — but the number of use cases are now multiplying exponentially. Businesses are experimenting with large language models (LLMs) to find new ways to leverage gen AI as a part of daily operations, increasing personalization for customers, optimizing supply chain operations and enabling data-driven merchandising activities.

Rosemary DeAragon, Global Retail and CPG Industry GTM Lead for Snowflake, predicts that the top applications for gen AI and LLM in retail and consumer goods will revolve around shopping assistants, market signal analysis and content creation. “The hype of generative AI is not over,” she says, “and the building of gen AI capabilities within a secure environment has just begun.” DeAragon says she sees gen AI helping content managers evaluate and improve product descriptions and listings, and aiding marketing teams in the use of natural language to quickly generate audiences and segments, based on data. “Flexible models can also analyze disparate sources of textual data,” she says, “like customer reviews that can be translated into a reliable numeric signal for later modeling on-demand signals, mixed marketing and more.”



## Data will dictate how to best use gen AI — for both customer and business needs

So you've invested in an AI platform; now what are you going to do with it? The early days of gen AI felt a lot like giving a toolbox to each employee and letting them loose on a construction site to see what they could build. As business use cases become clearer, the fervor is fixing on opportunities to drive innovation. Enterprises are still in the experimental phase, but the push to monetize gen AI investments and quantify their value is becoming stronger. Leading that charge are decisions around how to use valuable internal data to maximize the value that gen AI is creating.

Initially, companies will use data based on how their targeted consumers feel about AI. In the retail environment, some gen AI use cases work, but some don't. Gen AI-driven customer service, gen AI-curated product recommendations and the use of "virtual try-on" have been widely accepted in the apparel world. However, where a human touch is valuable and expected — think jewelry or luxury watches — a virtual assistant may not be ideal. Privacy is also a major concern. For example, few shoppers are apt to upload images for AI-driven virtual underwear try-ons. Very complex purchases, like new automobiles, probably aren't the best use case for AI assistance either.

Gen AI's ability to extract market signals by digitizing and analyzing data across multiple channels will help improve matters. Analysis of customer reviews, social media posts, support emails and other text-based material can help brands enhance the customer care process while honing marketing strategies. As gen AI matures, expect to see this type of unstructured data being analyzed and converted into a reliable numeric signal (similar to a Net Promoter Score) that can be used to quantify consumer sentiment and track it over time.



## AI leaders will define the metrics that measure success

As AI adoption skyrockets, it's the ahead-of-the-curve enterprises that will define the metrics which determine the technology's impact on any given brand's bottom line.

"2024 is shaping up to be the year of experimentation for generative AI and LLM," says DeAragon. "And while there is a lot to be excited about here, success metrics will need to be considered before launching enterprise-class AI applications. Creating these applications requires company resources, and just because you can ask an AI assistant what you should make for dinner tonight or what color sweater you should order, it doesn't mean there is going to be a positive ROI for retailers. Experimenting is good, but it needs to be measured with clearly defined metrics that indicate whether they are successful."

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So what do effective AI success metrics look like? They will vary based on the use case of course, but here are some of the most important indicators:

- **Quantifiable time savings:** If an AI tool allows workers to avoid having to complete repetitive manual tasks, that savings can be quantified and measured financially.
- **Improved productivity:** Productivity can be a bit more difficult to quantify, but employees who are more effective at their jobs improve the bottom line accordingly. For example, an AI security tool that helps operators find more exploits on the network ultimately generates positive return on investment (ROI).
- **Direct cost savings:** In some cases, AI can help reduce headcount directly — such as when chatbots replace some number of live phone or web chat operators.
- **Increased revenue:** Do AI tools such as recommendation systems and customized products resonate with customers, enticing them to pay more or shop more often at the store? This ROI can also be quantified.

There are additional “soft returns” that are less numerical in nature, including better customer experience and satisfaction, more employee skills retention, and improved operational agility for the business.

The bottom line: Companies need to start thinking now about how they will measure the impact of their AI investments, since this can help direct the development of programs customized to their business in the near term — and set them up for longer-term success.

# DATA MONETIZATION WILL CREATE NEW REVENUE STREAMS — AND THEY COULD BE MASSIVE

Since the dawn of retail, sellers have had two primary ways to drive profits: Increase prices or reduce costs. Both of these are incredibly difficult to do, particularly the former, since it endangers customer loyalty. This is particularly true in the internet age, when the cost of switching to a competing retailer is effectively zero. Add to this the fact that, in the current climate of steady inflation, retailers are finding it harder than ever to continue raising prices without significant customer pushback.

This is why winning retailers today live by the adage that “data is money” — driving profits thanks to a comparatively new third strategy that doesn’t require continual price increases: creating new revenue streams by maximizing the data insights they can generate within their business.

In the retail world, data is everywhere. Businesses have incredible amounts of information about their customers, about the products they sell, and about their brick-and-mortar stores and digital storefronts. Smart businesses are already using this information to identify cross-selling opportunities and improve marketing programs to increase profitability — but we’re just at the tip of the iceberg on such endeavors.

The demand for data is enormous — including customer demographics and buying behavior, sales trends, supply chain information, and geographically based data about traffic and other localized customer behavior. “The broader opportunity that every single retailer should take advantage of is that many financial institutions want to purchase retail data, and retailers can monetize that data through data sharing,” says DeAragon.

Failure to sell this data will leave money on the table for any retailer — and is likely to lead to a shakeout in the future, as businesses that do a poor job at monetizing data are likely to be left behind.

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### In a winner-takes-all market for retail media networks, there will be a shift back to in-store media

By owning the direct customer relationship, retailers hold unique insights and can impact customers at critical moments in their buying journey. Retail media networks are where advertisers can leverage these insights or even directly advertise on retailers' physical or digital footprint. This fast-growth new market is **expected to eclipse traditional TV advertising by 2028**.

While retailers have had good success in this market, in 2023 we saw that beginning to shift. "It is now clear that large retailers' media networks will thrive, while others will struggle to gain traction with large CPG brands," says DeAragon. CPG companies don't have the time, interest or money to invest in thousands of unproven, smaller websites, apps and Instagram pages, so they are likely to continue pouring their investments into big players' networks.

However, says DeAragon, "companies do have a monopoly on their in-store experience." A captive customer — physically in the aisles or checkout line — presents a much more enticing buying opportunity than someone doom-scrolling through their social media feed at home. In-store customers bring the opportunity for face-to-face sales, impulse buys and cross-selling opportunities that digital merchants often lack. As such, says DeAragon, "small and midsize retailers have shoppers physically inside their four walls, and this is a space where they can win at selling media."

### New technology can address concerns around privacy and security

Businesses seeking new revenue growth through data monetization need to keep privacy as a top priority. Access to customer data, provided without customer permission, whether **intentionally done** or via **rogue employee action** has resulted in customer backlash and legal penalties that no brand wants to repeat or experience firsthand. The good news is, companies don't have to sell customer data directly to turn it into revenue.

Sales and category data can be aggregated, particularly when leveraging new technology to anonymize personally identifiable information (PII) from datasets being prepared for the market. Aggregated data strategies will become more prominent in 2024, and in fact many purchasers of customer data prefer aggregated data because it allows them to make it publicly available without risk of penalty or reprisal.

Technologies like Snowflake's Data Cloud make it easier to safely share data directly with buyers, allowing sellers to cut out brokers and go-betweens that reduce the profitability of data monetization. Data clean rooms provide a secure environment where organizations can review data without exposing PII. Keeping it all within the Data Cloud environment — either within the organization or with external partners — allows the information to be securely shared without risk of exposing PII. And if a business relationship changes, the system allows access to that data to be quickly and easily revoked.



# A STRONG DATA STRATEGY WILL SET INDUSTRY LEADERS APART FROM FOLLOWERS

Success for retail and consumer goods companies in this space will require savvy, top-down direction and a strong data strategy that informs all AI operations. Organizations that take the time to develop a data strategy will emerge as leaders — able to quickly adopt new technologies as they are developed and pivot to new tactics when market conditions change.

## Gen AI and LLMs will drive retail and consumer goods companies to improve data collaboration and their tech stack

As anyone knows who's experimented with ChatGPT and encountered an obvious or not-so-obvious hallucination or two, the open secret of LLMs is that they are only as good as the data they are trained on. Retailers will need to be mindful of their data quality, taking efforts to remove PII and ensure they are training AI models on accurate, relevant and timely information. "Anyone talking about AI really should also be talking about their data quality and where they are storing that data," says DeAragon.

To maximize LLMs' usefulness, companies will need to ensure they are not isolated but instead are built across all lines of business, from marketing to logistics to customer service. The fundamental reason AI is so powerful is its ability to find patterns and relationships in data that humans wouldn't normally be able to see. To do that, it needs access to information — and lots of it, including data that may seem irrelevant. Building a cross-functional LLM also gives the broader enterprise access to these powerful tools rather than siloing them in marketing or supply chain operations, which ultimately boosts the data-driven intelligence of the entire enterprise.

As DeAragon puts it, "Ultimately, the ability to build an LLM across business lines is going to be what differentiates one retailer from another."

## Over time, AI will need to leverage not just the company's own data, but also collaborative data from across the industry

Connecting the entire enterprise with a companywide LLM is a great first step, but it's only the beginning. It's safe to anticipate that the most successful retailers will also connect their AI systems with those of strategic partners, exponentially increasing the volume of available insights. The additional insights developed by a collaborative AI model that draws information from multiple sources — from the likes of shipping partners, suppliers and external marketing agencies — will allow for a greater depth of intelligence than has been possible before.

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## Gen AI will supercharge the data strategies of tomorrow's leading businesses

"The generative AI era does not call for a fundamental shift in data strategy," says Jennifer Belissent, Principal Data Strategist at Snowflake and a former Forrester analyst. "It calls for an acceleration of the trend toward breaking down silos and opening access to data sources wherever they might be in the organization."

AI-generated insights don't just need to be granular; they also need to be timely. The goal of an AI strategy should be to help understand customers and target them as specifically and individually as possible. This requires a level of insight that few organizations have even conceived of previously. Generic insights driven by macro trends and generalized news reports will be functionally useless in the gen AI era. Organizations will need to quickly learn how customers interact with their AI-enabled experiences and tools, and adapt these programs in response to that behavior. This will require a strong data strategy and future-fixed leadership to support it.

## A modern data platform will distinguish retail and CPG leaders

We're at a critical moment as the gen AI era starts kicking into gear. The choice of data platforms will have a foundational impact on a given business, affecting total cost of ownership, time to market, risk management and more. The data platform will be the foundation for all AI strategies going forward, so it's critical to build the right infrastructure from the start. Businesses need a platform that delivers fast time to value alongside a flexible future-proof foundation — one that makes it easy for everyone to access all the data they need, seamlessly, while keeping the data secure and easily governable.

It's critical to also consider both the long-term and short-term ramifications of the AI ecosystem. While it's wise to plan for the next 10 years of innovation, businesses still need a platform that can deliver value today. And that data platform must also offer applications that can scale with the company as the size of the data stores grow, both internally and externally.

Leaders in the coming year will be those that implement a cloud-based data platform that addresses the unique pain points and challenges of the retail and consumer goods industry. It will be one that allows them to more fully leverage the data they already have, develop new sources of data and collaborate with partners across the retail ecosystem — all by leveraging the powerful capabilities of generative AI and LLMs.

**Learn how the [Data Cloud](#) can elevate data competency and help you prepare for what's ahead.**





## ABOUT SNOWFLAKE

Snowflake enables every organization to mobilize their data with Snowflake's Data Cloud. Customers use the Data Cloud to unite siloed data, discover and securely share data, and execute diverse artificial intelligence (AI) / machine learning (ML) and analytic workloads. Wherever data or users live, Snowflake delivers a single data experience that spans multiple clouds and geographies. Thousands of customers across many industries, including 639 of the 2023 Forbes Global 2000 (G2K) as of July 31, 2023, use the Snowflake Data Cloud to power their businesses.

**Learn more at [snowflake.com](https://www.snowflake.com)**



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