The Ultimate Buyer's Guide to eCommerce Search & Product Discovery

Contents

1.0

Modern eCommerce

For the first time ever, the US online retail market has surpassed $1 trillion[1] – a huge achievement for the eCommerce industry. But this massive milestone comes at a cost.

In both B2B and B2C, customers have fundamentally shifted how they engage with brands. As a result, even some of the largest, most trusted brands in the world feel the pressure around their online shopping experiences.

Between high shipping fees, rising customer acquisition costs, constant sales and promotions, and declining customer loyalty, eCommerce retailers are fighting for customer dollars at the cost of profit margins and stability.

Social media has exploded, giving brands more ways to reach customers, and customers more ways to shop. This has fragmented customer journeys. What was once a relatively straightforward, linear path is now an unpredictable, choose-your-own-adventure-esque experience that customers can tailor to their individual preferences.

Technological innovations such as omnichannel shopping and hyper-personalized customer experiences are designed to capitalize on these new customer journeys. And new technologies are constantly emerging, all promising to boost sales and win customer loyalty.

But this poses a new question: **in the most prosperous and competitive eCommerce landscape ever, which technologies most help brands deliver the seamless, hyper-personalized omnichannel shopping experiences their customers have come to expect?**

And which of these technologies most contribute to what's really important – long-term growth and profitability?

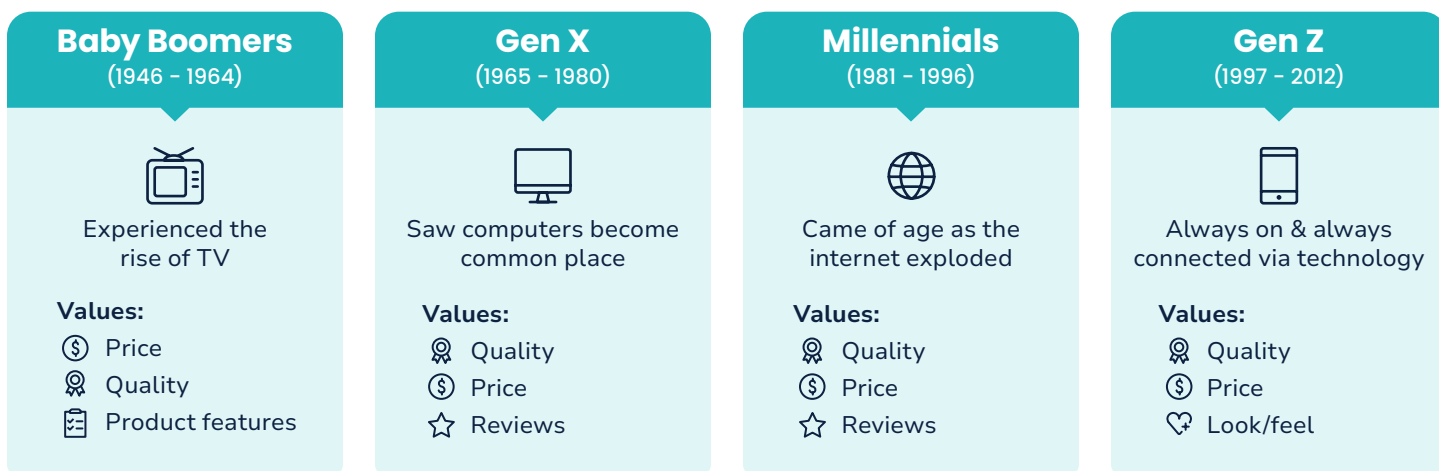To answer these questions, we first need to understand the eCommerce landscape and modern eCommerce shoppers more deeply. Because, as in any competitive space, the companies that survive are the ones who deeply understand their customers and deliver exactly what they want.

> We expect online retail sales to grow **10%** annually over the next five years to account for **30%** of the market by 2027.

FORRESTER®

1.1

The Modern Shopper and the Evolving Customer Journey

Socioeconomic status used to be the single most important factor in buyer behavior across demographics. Access to money and resources (or a lack thereof) often dictated whether or not a customer would focus on price, value, status or some other buying criteria.

The purchasing patterns of modern shoppers, however, are more closely aligned to generational lines than socioeconomic differences. This has everything to do with technology, and the resulting shifts in customer buying journeys.

Baby Boomers (1946 – 1964)	Gen X (1965 – 1980)	Millennials (1981 – 1996)	Gen Z (1997 – 2012)
Experienced the rise of TV	Saw computers become common place	Came of age as the internet exploded	Always on & always connected via technology
Values:	**Values:**	**Values:**	**Values:**
Price	Quality	Quality	Quality
Quality	Price	Price	Price
Product features	Reviews	Reviews	Look/feel

Each generation has experienced key technological shifts which shape their buying behaviors today. Baby Boomers lived through the rise of TV. Gen X saw the rise of the computer. Millennials watched the rise of the internet. And Gen Z, the latest generation to enter the marketplace, has almost always known the always-on, always-connected technology of today.

Over the years, **the progression of technology from one medium to another, from one-way communication to instantaneous two-way communication, has irrevocably shaped the customer journey.**

As customer journeys have expanded and the internet has brought new ways of buying into their lives, new companies and products have also come to light. Product findability and brand visibility have been altered forever, and it's reflected in the industry's standard practices.

Having a website is now an expected part of doing business. Omnichannel engagement and personalization is standard. Social media and apps are on the rise for discovering and purchasing products.[2]

The **technological fluency that Gen Z and Millennials possess allows them to move between these channels with ease,** shopping around not just for the best deals, but the best user experience and the brands they are most ethically aligned to.

Gen Z especially has moved toward consumption as a means of identification and self expression. They value sustainability and diversity and will spend more with companies who align with those ethics.

Since customers can purchase the exact products they want – at the right price, from companies that are aligned to their values and who provide excellent online shopping experiences – patience is at an all time low. Why stick around when a similar product with a better buying experience is just a few clicks away?

As a result, the modern shopper is discerning with how (and with who) they spend their dollars. They expect more from their eCommerce shopping experiences than previous generations, and when they encounter a sub-par website, not only do they have other options, they have the digital-savvy to find what they're looking for elsewhere.

This is why meeting customer expectations and understanding how the customer journey has changed is so critical. **Customers cannot purchase products they cannot find.** And they cannot find a product if it's not available to be found on the relevant touchpoints of their customer journey, or if they click away because of poor shopping experiences.
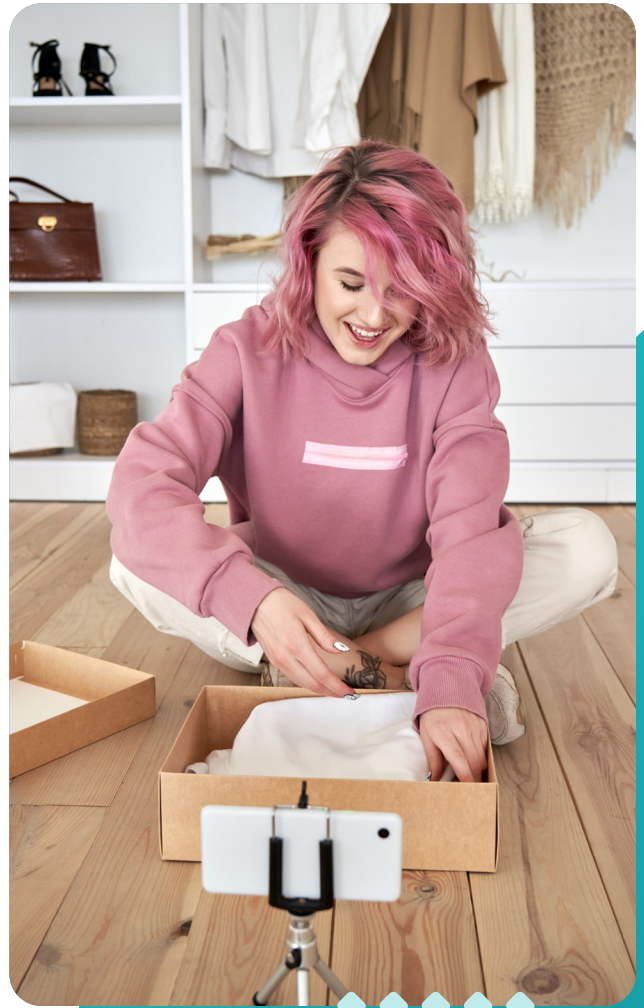
Discover the **impacts of a poor shopping experience** in section 3.3

Go now ›

1.2

Top 10 Expectations of the Modern Consumer

The expectations of the modern consumer can be summed up in a single word: **convenience.**

Regardless of age, consumers have come to expect convenient, optimized shopping experiences.

What do customers view as convenient? A usable website is a good start. Preferably one that shows them products they like – not just exact keyword matches. And, if the product is available and when it will be delivered – ideally within two days and without having to re-enter their payment information.

Essentially, shoppers of all kinds expect the online purchasing process to be as simple, fast and easy as possible. And they reward brands who deliver on these expectations with sales and loyalty.

Convenience encompasses features like:

An easy to use, intuitive user interface	**Mobile-optimized websites**	**Multiple (speedy) shipping and fulfillment options for customers to choose from**
Detailed product display pages that show all relevant information – including product availability	**Omnichannel shopping experiences that allow customers to connect with a brand on their favorite channels, devices**	**Personalized search and recommendations for easy product discovery**

Expectations of the Modern Customer

EXPECTATION #1

Online Presence and Engagement

If it's not online, it's not convenient. Having an online storefront where consumers can engage with your brand is now a **table stakes expectation** for the modern shopper. They expect to be able to engage with brands via social media, shop on mobile devices, and even browse products and reviews on third-party marketplaces like Amazon.

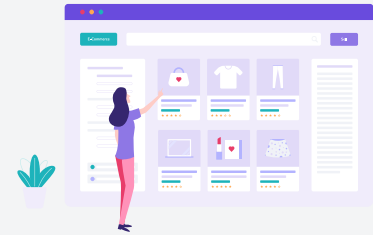**EXPECTATION #2**

A Highly Functional Website

If a page takes longer than 3 seconds to load, **57% of shoppers will abandon an eCommerce site**.[3] Combine that with the up to **74% of consumers who browse via mobile**[4], having modern, functional mobile-optimized websites with speedy page load times, is a necessity for creating a convenient customer experience.

57%

74%
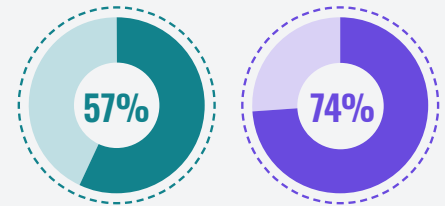
EXPECTATION #3

An Intuitive User Interface

Interface design can drastically influence customer shopping habits and conversion rates. Intuitive search navigation, easy filtering, well-organized category pages, highly-visible (and clickable) buttons and other eCommerce UX best practices dramatically impact a site's usability, and thus its convenience.

EXPECTATION #4

Personalization

Generic search results? No thank you. Today's customers expect that their shopping journeys will be **personalized** for them. This includes tailored search results and product recommendations, **curated based on their buying patterns, browsing history and other personal data**.

EXPECTATION #5

Omnichannel Shopping Experience

Omnichannel shopping experiences have gone from **futuristic tech to modern expectation**. Listed by both Forrester[5] and McKinsey[6] as "must haves" for eCommerce retailers, customers now expect brands to provide omnichannel shopping experiences. There's nothing more convenient than spotting a product you want on Instagram, and then having your cart data carried over when switching devices.

EXPECTATION #6

Detailed Product Description Pages

Even the best eCommerce experiences lack the ability to help a customer encounter a product through senses like touch, taste or smell. Which is why extensive product detail pages have become a customer expectation. According to research done by Forrester, retailers are doing a good job of providing extensive product information already. However, to really stand out, **retailers should consider including features like comparison tools or estimated delivery dates and shipping fees,** which really speak to that core expectation of convenience.[7]

EXPECTATION #7

Product Availability

There is nothing more inconvenient than going to purchase an item online and finding out it's out of stock – except maybe getting to the store and discovering a product listed as 'in-stock' online is actually sold out. This is why **customers expect to see a product's availability at a glance**. Knowing whether a product is in-stock, available online only, available in store or out of stock greatly increases the convenience of the online shopping experience.

EXPECTATION #8

Multiple Fulfillment Options

Whether they prefer in-store, online, buy-online-pick-up-in-store (BOPIS), curbside pickup, or delivery, **customers have also become accustomed to having multiple fulfillment options whenever they make a purchase** – and for whatever fulfillment method they choose to be speedy.

EXPECTATION #9

Data Privacy

Many of the above convenience factors, like personalization and displaying a product's in-store availability, rely on customer data to function properly. Most consumers expect to – and are happy to – hand over at least some of their personal data to retailers. However, they also **expect companies to handle that data responsibly**, and are less willing to share data when they deem the company untrustworthy, which impairs the online shopping experience.

EXPECTATION #10

Brand Value Alignment

More and more, consumers today push for companies to take stands on important social issues to determine if their values are aligned. And when they are, they reward them with their business. While not a direct driver of convenience, Forrester found that **77% of US customers in the Progressive Pioneers cohort** (the segment most willing to adopt new digital tools) **regularly purchase from companies that align with their personal values**, making it an important factor for brand loyalty, and for enticing customers to return. After all, what's more convenient than one-click purchasing a product recommended just for you, from a brand you believe in, only to have it show up at your house the next day?

77%

1.3
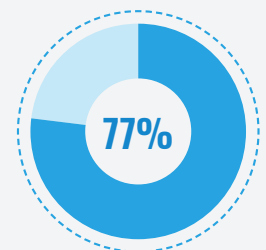
How has the eCommerce Customer Journey Changed for B2B and B2C?

The customer journey is dramatically different than it was even a few years ago – for both B2C and B2B customers.

More customer touchpoints exist than ever before, and with the rise of omnichannel commerce (now a standard expectation of the modern shopper) customers have increasingly used these touchpoints to shop. Furthermore, modern shoppers are digitally savvy and technologically competent. They will happily switch between channels and devices, looking for the right products and the best deals.

> Seven years ago at McDonald's, we had **4** consumer journeys. Today we have **28**, and we're going to keep growing.[8]

- Alycia Mason
U.S. Chief Experience Officer, McDonald's

This has simultaneously exploded the number of possible customer journeys, while also scattering them across a wide array of digital touchpoints – which makes meeting the expectations of the modern consumer even more difficult.

However, there are trends in how these journeys have changed in both segments that are more important to address than any single customer journey or shopping path.

While some of these changes may seem contradictory (B2C buyers wanting products delivered faster, while also taking extended payment plans, for example) all of them tie back into that fundamental desire all customers – B2B and B2C – have for a convenient online shopping experience.

Top **4 Ways** the **B2B** Customer Journey Has Changed

1 The Self-Service Research Model

With more information than ever before available to buyers at all stages of the customer journey, self-service sales options have become exponentially more popular. B2B representatives are now employing the same analytical approach to purchases that has become common in the consumer sphere, leveraging content and detailed product pages to sort, compare and assess products without engaging with sales representatives. And **this method is preferred by almost 100% of B2B buyers**, meaning companies *must* **provide self-service options in order to stay competitive.**[9]

100%

2 Non-Linear Buying Journeys

B2B customer journeys have not been linear for many years, as customers have to contend with problem identification, requirement gathering, solution exploration, selecting suppliers, creating consensus, and more. With so much information at their fingertips. However, the introduction of social media channels and omnichannel shopping has allowed buyers to craft their own customer journeys as they fulfill all of their buying jobs. But when allowed to navigate these non-linear, self-serve purchase paths on their own, **buyers are 147% more likely to buy more than initially planned.**[10]

147%

3 The Importance of Mobile Apps Has Increased

Many B2B buying roles are now being filled by younger generations (specifically millennials and Gen Zers) whose primary methods of product discovery are online. These buyers also expect digital first experiences, with up to 25% preferring to purchase through mobile apps.[11] **B2B mobile app ordering has increased 250% since early 2020, demonstrating how important mobile apps (and mobile optimized sites) have become to B2B customer journey.**[12]

250%

4 Increased Willingness to Make Large Purchases Online

According to Gartner, **83%** of B2B buyers prefer to order or pay through digital commerce.[13]And according to McKinsey, while **70%** of those same buyers are willing to spend in excess of $50,000, **15%** **are willing to spend in excess of $1 million**, making self-serve eCommerce options a highly lucrative option for B2B wholesalers and distributors.[14]

83%

70%

15%

Top 5 Ways the B2C Customer Journey Has Changed

1 The Lines Between In-Store and Online Continue To Blur

68% of shoppers use their devices while shopping in store[15]**,** performing activities like looking up product reviews and checking in store location and availability. A whopping **93% of all shopping journeys begin online**[16], making the divide between brick and mortar and eCommerce, blurring the lines more than ever before and making in-store vs online attribution harder than it's ever been.

2 Omnichannel Engagement is the Norm

McKinsey has found that over **50% of customers will use 3-5 channels to engage with a company during each purchase journey**[17], regularly switching between websites and mobile digital channels. Omnichannel isn't just something customers do: it's a fundamental part of how they now shop, research products and engage with brands.

3 Customers Are More Open To Switching Brands

According to HubSpot, price remains a strong purchasing factor across all age groups, but customer loyalty – as a whole – is dropping. **40% of consumers are switching brands**[18]**, with price being the main motivator.** With customers more willing to switch brands to attain the value they're seeking, companies must put extra effort into ensuring they're delivering value and engaging customers across all touchpoints to retain them.

4 Faster Timelines Have Become Standard

As multiple delivery options have become standard, so have faster delivery timelines. BOPIS options, as well as curbside pickup and same-day or next-day delivery have become essentials to keep up with consumers shifting needs. These speedy fulfillment options have helped to shift customer expectations to the point where **77% of customers have abandoned their purchases because they did not like their delivery options**[19]. This means speed is no longer a competitive advantage, but a customer expectation.

5 Flexible Payment Options Are An Expectation

Consumers made over **$100 billion** in retail purchases using Buy Now, Pay Later (BNPL) programs in 2021[20], according to a study by Forbes, and that number continues to rise. More and more, modern customers have come to expect the ability to split large purchases into smaller payments. Gen Z leads the pack for adoption, however all generations have increased their use of BNPL options, pointing to it as a key trend for the future.

1.4

10 eCommerce Landscape Trends & Predictions For The Future

The eCommerce landscape has changed dramatically in the last few years, and it's going to keep changing. The question facing eCommerce retailers is not so much about predicting the next trend, but about **which trends have endured to become fundamental pieces of the eCommerce landscape?**

For example, omnichannel shopping experiences and personalization have already shifted from cutting-edge experiences to customer expectations, and are now necessary pieces of every retailer's digital strategy.

The trends that endure are the ones that enable brands to deliver on existing customer expectations, facilitate modern customer journeys, and position brands for future success.

They can range from technological innovations such as composable commerce, to focusing on specific business objectives like customer loyalty.

All of them are, ultimately, pointed at the same goal:

Profitability	Longevity	Resilience

While no one can completely predict the future, keep reading for 10 trends we foresee that will position eCommerce retailers and wholesalers for long-term future success.

1 Hyper-Personalization Will Become Table Stakes

Personalization is already an expectation in the eCommerce space, but hyper-personalization is rapidly becoming the norm. By leveraging AI and machine learning models, **hyper-personalization goes beyond simple use cases** like adding a customer's name, segmentation and "commonly purchased together" recommendations to deliver unique (and relevant) results to each individual.

Hyper-personalization updates dynamically, in real-time, adapting to user behavior and activity such as clicks, product views, add to cart events, and previous orders, to present the most relevant and buyable products for that individual.

> People are **40% more likely** to spend more than planned when they identify the shopping experience to be highly personalized[21].

Google

Omnichannel Will Evolve Into Unified Commerce 2

While most large, modern retailers meet the original vision set out for omnichannel, it is giving way to a new practice: **unified commerce.**

Unified commerce focuses on uniting both front-end and back-end data in a single platform, creating a **single source of truth** for all customer data across every touchpoint. With omnichannel evolving, the technology required to provide the **seamless shopping experiences customers expect in a sustainable and efficient manner will become even more vitally important** – and retailers who do not update their technological capabilities will lag behind the competition.

3 User Intent Will Define Search

Legacy search engines relied primarily on keyword matching, treating queries blindly without considering a customer's context or intent. Today, semantic search has become more common, using AI and ML to truly understand customer context and intent. **Next generation search, however, provides an even higher quality search result through a combination of semantic search and additional calculations for relevance, buyability, and personalization, to deliver the most buyable product for each individual customer**[22]. This delivers the convenience and personalization customers are looking for, driving loyalty and revenue at the same time.

4 Online Shopping Experiences Will Become Even More Immersive
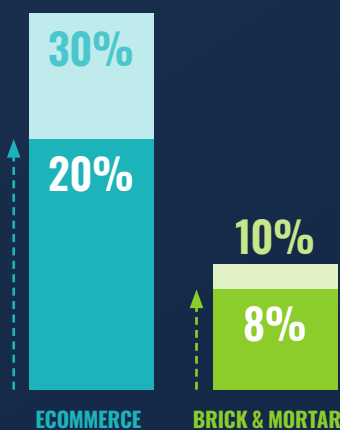
The average eCommerce return rate is 20-30%, while brick and mortar retailers hover at a much lower 8-10%[23]. This difference is at least partially attributed to the lack of sensory input in online shopping. Customers cannot touch, feel or smell products online. New augmented reality and virtual reality technologies are being targeted at this problem, allowing customers to more fully experience a product before purchasing it. The hope is that being able to virtually "try on" an outfit or pair of glasses or being able to preview a new couch in their space will greatly reduce the likelihood of returns, increasing profit margins in the long term.

30%

20%

ECOMMERCE

10%

8%

BRICK & MORTAR

5 "Click and Mortar" Strategies Will Become Common Place

Online and offline shopping experiences are already blurring together, as customers don't separate their experiences with a brand between in-store and online. They perceive a single shopping experience across all customer touchpoints, including social media. **59% of shoppers already use their mobile devices in-store – often to compare costs or research deals and coupons**[24] – creating a huge opportunity for retailers to leverage technology and create the convenience customers are looking for.

59%
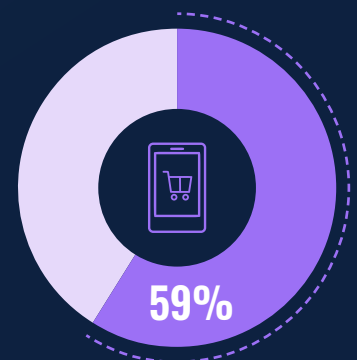
6 Customer Loyalty Will Be The Most Important Metric

It has long been known that it costs less to sell to an existing customer than to acquire a new one – and that returning customers spend more money. However, **customer loyalty is dropping**, and that customers will return can no longer be taken for granted. As such, for sustainable growth, **retailers will need to concentrate their efforts not on customer acquisition, but retention**, bringing in innovations like subscription programs, flexible payment methods, and modernized loyalty programs.

Current customers spend **67% more** on average than those who are new to your business[25].

b. - business.com

Digital Strategies Will Optimize For Revenue And Conversion 7

In the early days of search, relevance was king. The ability to cut through the noise of a competitive landscape and present customers with appropriate products and services was – initially – game changing. However, with the rise of next-generation search, which can deliver relevant results for even the broadest of queries, **relevance and other metrics will fall by the wayside in favor of revenue and conversion.** Next-generation search engines can rank their results for revenue[26], while also personalizing them to the customer's preferences, driving long term growth, profitability and customer loyalty through improved customer experience.

8 Composable Platforms Will Dominate

Due to their modular nature, composable architectures are inherently more flexible and scalable than their monolithic predecessors. These platforms are designed to allow businesses to easily add or remove components and functionality, selecting **best-in-class components specific to their business objectives**. This makes it easier for companies to adapt to changing market conditions and customer demands, while also lowering their IT costs.

By 2024, the IT costs of managing **SaaS operations will be halved** as a result of the adoption of composable application architectures.[27]

Gartner

9   Scalability Will Be a Key Focus

As eCommerce continues to grow, tech stack scalability will become a key factor in selecting and implementing new technologies. Not only must retailers consider increasing amounts of traffic and transactions, along with the typical seasonal spikes, but the customer expectations around site performance are ever increasing. Long load times and site delays are rarely tolerated today, as is. **Site performance must scale as traffic grows**, and cloud-native platforms are inherently more scalable than traditional software solutions, making them the logical (and sustainable) choice.

Marketplaces Will Present A Key Revenue Opportunity   10
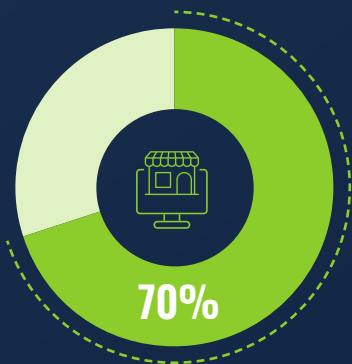
GIven that price is a key decision factor for consumers of all ages and **70% of customers will purchase items through a marketplace if they believe they're getting a deal**[28], marketplaces will boom. Marketplaces also present a more scalable method of generating sales than traditional first-party reselling. As such, to maximize revenue streams and sales, retailers will need to evaluate their participation in online marketplaces and develop a strategy that meets their business objectives.

70%

> **Online marketplaces** have been on the rise, accounting for over **one-third of global online shopping orders** in 2022[29].

statista

Future-Proof Your Product Discovery

The 10 critical building blocks of next-generation Search and Product Discovery solutions strategically address coming market trends and enable retailers and wholesalers to not just keep up, but get ahead.

Read now ›

1.5

Retailer and Wholesaler Challenges

Shifting consumer expectations, changing customer journeys, and transformations in the eCommerce landscape itself mean one thing: **new challenges for B2B and B2C eCommerce retailers and wholesalers to overcome in the pursuit of long term growth and profits.**

14 Challenges Retailers and Wholesalers Must Overcome

CHALLENGE #1

Unable to easily find products online

52% of consumers will typically **abandon their entire shopping cart** if there is a **single item they cannot find,**[30] making product findability a top challenge to improve online revenues.

CHALLENGE #2

Poor metrics cost companies revenue and sales

The average eCommerce conversion rate is **2.5-3%**[31], with a bounce rate of **45.68%**[32]. Both of which directly impact revenue and sales. Low to even average rates can **dramatically decrease a brand's eCommerce profitability.**

CHALLENGE #3

Search abandonment eroding revenue

Globally, **$2 trillion** in **revenue is lost to search abandonment each year**[33], eroding revenues through poor customer experience and contributing to declining customer loyalty.

CHALLENGE #4

eCommerce profitability

Rising customer acquisition costs, shipping costs, low margins, and higher rates of returns **all contribute to low profit margins** and struggles within eCommerce.

CHALLENGE #5

Declining brand and customer loyalty

In the United States, **46%** of consumers have switched brands or retailers in the past 3 years[34], making **retaining customers and building loyalty a top challenge.**

CHALLENGE #6

Competitive retail landscape

The most visited eCommerce websites are Walmart, eBay and AliExpress[35], **forcing almost all retailers to compete** with some of the largest businesses in the market.

CHALLENGE #7

Difficulty collecting customer data

Data collection is getting more difficult amid privacy concerns, tightening laws and regulations, and anti-tracking measures from companies like Apple, and only **10-15%** of customers have **zero reservations sharing their personal data** with companies[36].

CHALLENGE #8

Creating seamless omnichannel experiences

Connecting online and offline data is the key to creating seamless omnichannel experiences that delight customers. However, with data siloed within and across platforms, available in varying formats, creating these experiences becomes very difficult.

CHALLENGE #9

Lack of personalization and understanding of shopper intent

Despite personalization being a standard customer expectation, legacy search engines and monolithic tech stacks struggle to **deliver highly personalized shopping experiences** that understand what customers are searching for.

CHALLENGE #10

Maximizing existing traffic volumes

The **average eCommerce conversion rate** is estimated to be around **2.5-3%**[37], and in a landscape where competition for traffic is fierce and paid ads are becoming more and more expensive, **optimizing on existing traffic volumes is a must** for long-term profitability. Even a few fractions of a percentage point can result in millions of dollars in added sales.

CHALLENGE #11

Improving product data quality

There's a saying in eCommerce: garbage in, garbage out. Product data determines how easily a product can be found, and **improving product data quality is key for improving product findability and personalization initiatives.** However, with data coming in from multiple sources (and often in different formats) improving product data quality can be a struggle.

CHALLENGE #12

Increasing SEO

Google search alone receives **billions** of hits per day, which makes **SEO one of the most important traffic metrics** for eCommerce retailers. However, ranking for high volume, popular keywords has become increasingly difficult as competition has increased.

CHALLENGE #13

Increasing Customer Lifetime Value (CLTV)

A combination of never-ending promotions and sales, high shipping costs, increasing customer acquisition costs and declining customer loyalty has put customer lifetime value – **one of the most important metrics of business health** – under immense pressure.

CHALLENGE #14

Legacy tech systems are not able to meet customer's expectations

Monolithic software architectures are inflexible and difficult to scale, and can **lack modern or best-in-class features** in favor of overall functionality, **compromising a brands' ability to execute on important trends** like hyper-personalization and omnichannel strategies.

7 **B2B Focused** Challenges

In addition to the challenges we just outlined, B2B eCommerce wholesalers and distributors face additional challenges due to the unique structure of their organizations. Ranging from **legacy tech stacks to complex catalogs** and **dynamic pricing,** these challenges present additional hurdles in creating a seamless, profitable customer shopping journey.

CHALLENGE #1

Complex procurement processes

B2B buying journeys are complex, with **multiple stakeholders, sign offs & steps required to purchase**[38], making an already fragmented customer journey even more difficult.

CHALLENGE #2

Dynamic pricing

Unlike B2C pricing, which is largely static, B2B retailers often have to **display varying prices based on contracted rates** with specific clients, which makes for a more complex online shopping experience.

CHALLENGE #3

Varying user access

Based on contract agreements, B2B retailers regularly have to **restrict or remove brands from a specific user's product catalog**, necessitating advanced search functions to handle these requirements.

CHALLENGE #4

Complex faceting

Product faceting in the B2B space can be extremely complex, with many required product attributes, especially for manufacturing and parts distributors. However, **without these attributes, B2B buyers struggle to find the products they are looking for**, resulting in poor shopping experiences and higher call volumes to customer service.

CHALLENGE #5

Data quality

Data quality is a struggle most retailers face – and B2B manufacturers and distributors are no different. **Data that comes from different sources and in different formats needs be unified, cleansed and normalized** before it can be used. Product data may also need to have attributes or qualities added so that customers can readily find the products they are searching for.

CHALLENGE #6

Multiple product catalogs

Depending on the business model, some B2B eCommerce retailers may have to run entirely **different product catalogs for different regions, areas, or stores**, further complicating the technical delivery of a smooth shopping experience.

CHALLENGE #7

Fitment

Fitment is a problem for online retailers who have **vast catalogs and product databases where a given part can fit tens of thousands of products**. Customers often need to enter the exact year, make and model information to see relevant products, and they want to know that the returned products will fit exactly.

These challenges specifically are what B2B and B2C eCommerce retailers and wholesalers must overcome in order to deliver on the expectations of digitally-savvy customers, adapt to the modern customer journey, and drive long-term growth and profitability in their digital experiences.

Search: A **crucial part** of the product discovery journey

Each year, retailers lose $234 billion[39] **from bad online search experiences in the U.S. alone. Globally, this number rises to $2 trillion**[40].

These staggering revenue losses are compounded by the changing eCommerce landscape, shifting customer expectations, multi-channel customer journeys and declining customer loyalty.

All of these are impacted by search.

Search directly touches on almost all of the elements at play in today's modern eCommerce landscape. From having an easy-to-use interface to delivering personalized search results, **search plays a key role in the customer experience, which directly impacts core site KPIs like average order value, conversion rate and customer lifetime value.**

Search is an integral part of product findability and the product discovery process. It is the heart of how customers look for and discover the products they want to buy. But, like everything else, **if your search experience is not convenient or optimized, your site will struggle to meet customer expectations and perform in today's ultra-competitive landscape.**

2.1

Why is search so critical to your eCommerce business?

Great search contributes to great customer experience.

In today's ultra-competitive eCommerce landscape, the best way to win customer loyalty while promoting sustainable growth and long-term profitability is a fantastic customer experience.

Customers Automatically Turn to Search for Information & to Find Products

And they trust **Google** above everyone else.

44%   **44%** of U.S. online adults **seek information about product availability** online before purchasing offline.[41]

People shop across Google more than a **billion** times a day.[42]

Customers Cannot Purchase Products They Cannot Find

When your search experience makes locating products difficult, customers click away.

98%	**85%**	**3 in 4**	**53%**
of consumers' favorite retail websites are ones where they can quickly find what they are looking for[43]	of global online consumers view a brand differently after experiencing search difficulties[44]	consumers report that an unsuccessful search resulted in a lost sale for the retail website[45]	of consumers say they typically abandon their entire cart and go elsewhere if there's at least one item they can't find[46]

Great Search is a Great Customer Experience

Great customer experiences drive both customer loyalty and sales, boosting key KPIs like AOV, conversion rate and revenue.

Over **three quarters** of consumers say that a successful search experience often leads to the purchase of additional items[47]	**69%** of consumers typically use the search function on retail websites, making it the most common way to find products[48]	**96%** of consumers are at least somewhat likely to return to a website if it has a good search function[49]

Poor Search Experiences Look Like:

B2C

- [x] Lack of **autocorrect** or ability to **detect and compensate** for misspelled words and typos
- [x] Inability to process **broad search queries**
- [x] Poor or absent understanding of user context and intent
- [x] Lack of **personalization in search results**
- [x] Lack of filters and facets (customers cannot refine search results)
- [x] Lack of **omnichannel support**
- [x] No visibility into product availability
- [x] **Irrelevant or unrelated** search results (especially for broad queries)

B2B

- [x] Lack of **unit conversion** (e.g., searching in centimeters vs inches)
- [x] Head terms that return far **too many results**
- [x] Search that only works when searching by product number
- [x] Unable to **locate products by location**
- [x] Unable to display dynamic pricing (forcing customers to reach out to reps for help)
- [x] Struggles to **display only the products a user has access to** (custom catalogs)
- [x] Returning **irrelevant or bad-fit parts** in use cases with year-make-model requirements

The 5 Characteristics of Great Search Experiences

Forrester[50] has identified **14 principles** for designing a great site search experience that will improve customer experience and revenue. Of these principles, 5 stand out as the **most important for B2B and B2C** eCommerce retailers and wholesalers:

Understand the User's Needs & Intent

Great search experiences have a **detailed understanding of user intent**, and understand how customers talk about and look for their products. This allows them to provide **relevant, personalized search results** that lead to improved customer experiences.

Provide Relevant Results

The bare minimum for good search is providing relevant results to customers. Regardless of query type – broad, head, or long-tail – **great search must deliver**, at a minimum, **results that the customer wants to see**, not just results that match select keywords within the query.

Personalize Results

Personalization goes a step beyond relevance, providing results specific to a given shopper. This is especially important for eCommerce, as **three quarters of shoppers will notice when retailers or brands personalize their experiences**.

Prevent "no results" Scenarios

A "no results" page acts like a dead end when a customer is searching for products. Features such as **autocorrect** and **type ahead** can help prevent "no results" pages and having options to recover from a "no results" search such as a **recommendations carousel** are ideal.

Help Users Refine Results

Probably the most important element of a great search experience is understanding user intent. Next-generation search technology can **deliver relevant results** for even the broadest of search terms, while simultaneously **personalizing results** based on the user's historical shopping data.

3.0

Product Discovery – The most significant element of the eCommerce experience

To create a truly extraordinary online shopping experience, companies must go beyond providing excellent search. While search is still vital, it is one element of what is now being called Product Discovery.

Product Discovery refers to the various ways online shoppers discover products and services they wish to purchase. The focus of product discovery is to make products findable at every customer touchpoint – with the same degree of relevance and personalization you can expect from the highest quality search experiences.

Of course, product discovery includes search. In fact, search is the heart of product discovery. However, product discovery extends beyond search to include browse, recommendations, social media, and more. Any customer touchpoint is an opportunity for product discovery.

(True product discovery facilitates and creates excellent omnichannel customer shopping experiences.)

A Product Discovery Platform helps you...

1 Understand your customers

The most vital step in delivering hyper-personalized shopping experiences is understanding your customers. Who are they? What are they looking for? What kinds of products do they like? What are their shopping preferences?

A product discovery platform will help you **merge online and offline shopping experiences**, so you can gain a **360-degree** view of your customers' shopping behaviors and create experiences that are relevant and personalized to each individual.

2 Transform your data

Good data is **essential to great search**, and thus to great product discovery experiences. Your product catalog data is especially important as that is what a customer searches when they enter a query into the search bar.

A good product discovery platform will help you transform your data so that it's **rich, robust,** and **accurate.** By enriching your data and creating categories and attributes aligned with customer search intent, you can ensure **top-quality search and product discovery experiences.**

3 Leverage the power of AI

Legacy search engines relied on keyword matching and required manual search tuning to ensure that the proper results would be displayed for synonyms, misspelled searches and more. This required many hours of labor from merchandising teams, and even then, they could only optimize the top 5-10% of searches.

Modern product discovery platforms **enable your team to leverage the power of AI.** By relying on sophisticated artificial intelligence and machine learning models that **understand user intent**, it becomes possible to deliver **Google-quality** search and recommendations experiences across your entire site with a fraction of the manual labor. These models can also be optimized for specific eCommerce use cases and key business metrics, delivering further value.

4 Curate highly personalized customer experiences

Product discovery platforms enable your merchandising team to **manage the entire digital customer experience**. Everything from search rules to product display pages can and should be customized through your product discovery platform to meet specific business needs such as monetization.

When combined with solid analytics, a product discovery platform enables you to analyze, optimize and personalize every single point in the customer journey for **truly extraordinary customer experiences.**

3.1

What makes up Product Discovery?

Product discovery is not just about search – it's about the whole package

Product findability is impacted by more than just search. By combining search and recommendations with data enrichment, merchandising and analytics capabilities, product discovery platforms **enable eCommerce retailers to optimize every step of the customer shopping journey** and display the most relevant products for each individual user.

The 7 Essential Components of a Product Discovery Platform

Product discovery is not confined to on-site search – it spans across every channel and customer touchpoint. To effectively **reach customers with hyper-personalized shopping experiences across this wide array of touchpoints**, there are 7 essential pieces to product discovery that each platform must have: a data pipeline, data enrichment, search, product recommendations, merchandising, analytics and reporting, and technology integrations. Each one builds on the others to deliver an incredible customer experience.

Data Pipeline

Data Enrichment

Search

Analytics & Reporting

Merchandising

Recommendations

Technology Integrations
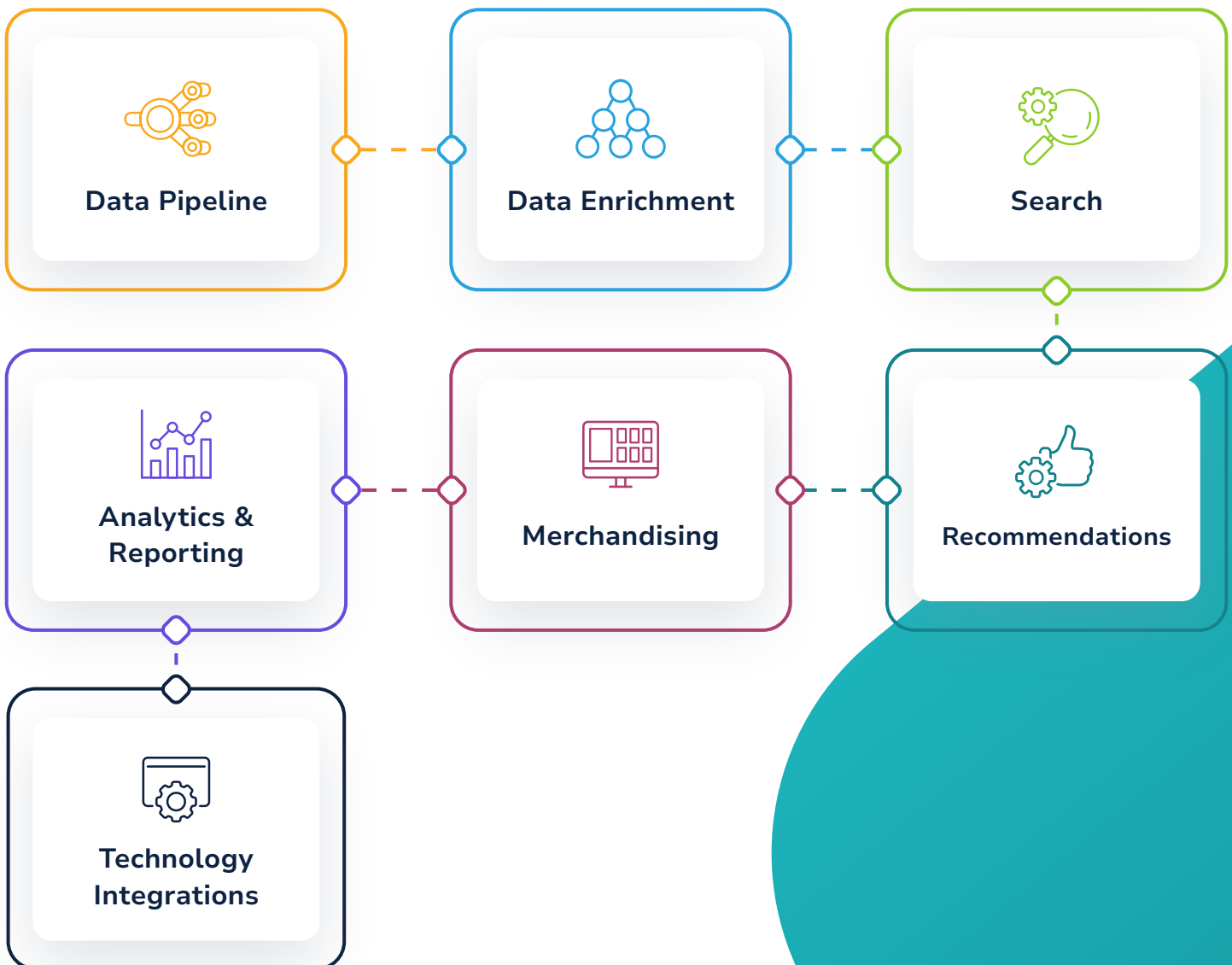
1 Data Pipeline

Data Extraction & Data Transformation

Given the enormous amounts of data eCommerce retailers generate every day, a data pipeline is essential for a product discovery platform. **Data must first be extracted from each source** and then **transformed and standardized** so that it can be distributed to the other parts of the platform to power the on-site experience in the best possible way.

The minimum data required is a product catalog, but highly personalized, omnichannel experiences require more data sources, such as site and product interactions, past purchase history and loyalty information, as well as more obvious things like inventory and margin, ratings and reviews data.

A data pipeline solution takes all of these data sources - whether they are in 20 different files or 20 different formats - and **organizes, groups and transforms them for use in your product discovery platform**.

A good Data Pipeline manages:

- Online User Data
- In-store / Point of Sale User Data
- Product Catalog Data (such as margin)
- Data Conversion
- Data Format Correction
- Data Joining
- Data Modeling
- Data Calculations
- Online Inventory
- Store Inventory
- Loyalty Data
- And more

2 Data Enrichment

Extracting and transforming data isn't enough; for optimal results, product data quality must also be improved. Data enrichment matters because the quality of a retailer's product catalog and the data associated with it has a **direct impact on the performance of their website**. Low quality product data results in irrelevant search matches and poor product findability.

Rich, robust, accurate product data leads to **increased relevance and vast improvements in search, filtering and navigation**. It can also help enhance product findability, uncover hidden inventory, increase CVR, AOV, and RPV and improve the overall shopping experience.

A product discovery platform that includes data enrichment can rapidly assign product attributes at scale, normalizing your product catalog without the manual labor.

3

Search

Search is the heart of product discovery and how customers find products. As such, a **next-generation search engine that is optimized for revenue and creates hyper-personalized shopping experiences** is a **must have** for any product discovery platform.

Legacy search solutions largely rely on keyword matching to deliver results, and struggle with head queries (very short, broad queries, that have multiple possible meanings and/or return many results). Next-generation search relies on **artificial intelligence (AI) and machine learning (ML) models that actually understand user intent**. True AI leverages Natural Language Processing (NLP) to understand real user intent and deliver accurate, relevant results for even the broadest of queries. And these ML models can be **tailored to your specific business outcomes and optimized for omnichannel strategies.**

It can also provide high quality-search results at scale thanks to real-time personalization, leveraging the user's shopping history to enhance the customer experience and increase conversion.

4

Recommendations

Generating the most relevant and personalized recommendations across all touchpoints throughout the customer journey is extremely important for product discovery. Suggesting other products a customer might like – especially when those recommendations are curated to the shopper's preferences – creates opportunities for customers to discover new products for consideration. It also **enhances cross-selling and upselling, driving more revenue through higher AOV.**

By employing advanced machine learning models (ML), recommendations can **increase both revenue and productivity**. ML models have the capacity to learn on their own, retraining themselves on a daily basis to account for user data. Those same models can also be optimized for specific business objectives such as click-through rate (CTR), revenue per order, and conversion rate (CVR). This **greatly reduces the manual labor** required from merchandisers, while simultaneously optimizing for key business goals.

5

Merchandising

Merchandising features in product discovery allow teams to build impactful customer campaigns that drive key business metrics. Highlighting products you want to display, **strategically boosting or burying search results** based on brands, promotions and inventory can all **improve a site's conversion rate**. And by leveraging AI & ML functionality, merchandisers can reduce the time they spend on repetitive manual tasks like search tuning and instead focus on strategic business objectives.

6

Analytics & Reporting

Of course, without insight into how any of the above features are performing, there is little your team can do. This is why **analytics and reporting capabilities are essential** for product discovery. Actionable insights help you **understand customer behavior** and make informed decisions about which configurations most impact site performance and how best to achieve your business goals. Additionally, **the ability to measure omnichannel performance is especially important given how vital omnichannel is to the future of eCommerce.**

7

Technology Integrations

Like any other technology, a product discovery platform must integrate with the rest of your retail tech stack. **For minimal disruption, composable platforms are preferred**. Their modular architecture allows for a plug-and-play approach and seamless integration with major eCommerce platforms.

Search is the heart of product discovery.

Read more about how next-generation search is revolutionizing eCommerce!

Go now ›

3.2

A closer look at product discovery's function within an organization

As the eCommerce industry has grown and evolved, so too has its approach to technology. Where the space used to be dominated by monolithic eCommerce platforms, it has now moved toward a composable architecture.

Composable commerce allows retailers to select best-in-class products and connect them together, like Lego blocks, to build a truly custom solution that fits their exact business requirements. You can weave together the best search and product discovery platform with the top omnichannel marketing platform and your favorite cart and checkout service, without disrupting your existing PIM or ERP solutions.

A composable product discovery solution, specifically, plays a very important role in the tech stack. The inherent role of a product discovery platform is to generate leads and boost sales by improving customer experience on your eCommerce website.

This means **product discovery plays a unique role in an eCommerce retailer's tech stack.**

Thanks to its core functions of Search and Recommendations (which are displayed on your eCommerce website) Product Discovery directly influences the front-end customer experience.

However, to meet the expectations of the modern customer, your platform must also connect to:

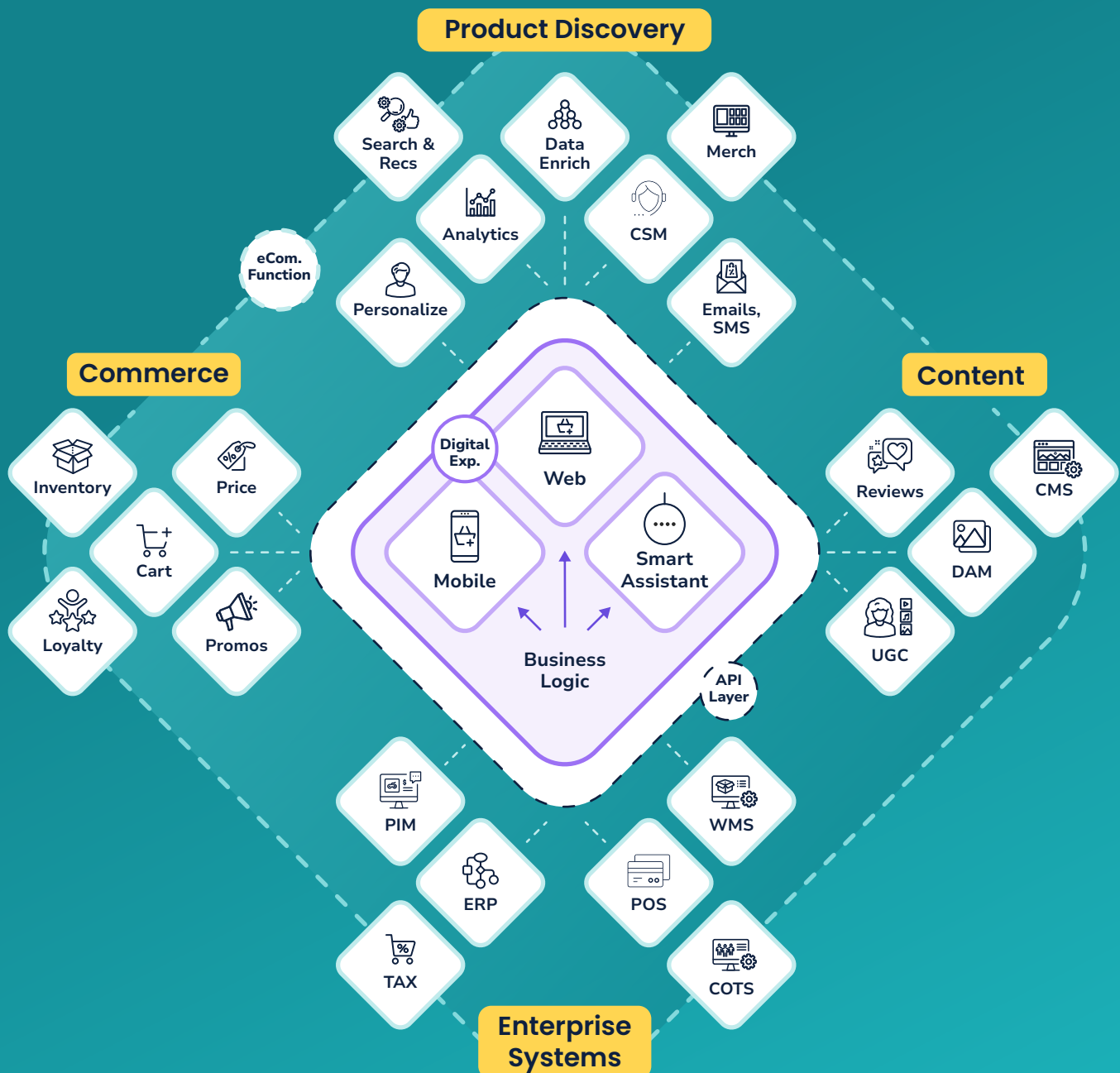| **Inventory Systems** to display product availability & location information	**Shipping** to support different delivery & fulfillment methods	**POS & in-store** applications for a complete picture of customer data	**Customer Loyalty** programs & purchasing history (to assist with personalization)	**Content Management Systems** to help merchandisers easily craft optimized campaigns

Thus, stationed firmly between customer-facing elements and back-end applications, product discovery is an essential tool to unify data, simplify internal workflows, assist merchandisers and improve the customer experience.

Composable Commerce

Composable architectures make it easy for B2B and B2C eCommerce retailers to implement best-in-class, next-generation search and product discovery solutions into their eCommerce tech stack, seamlessly **bridging content and commerce** and connecting to all essential front-end and back-end systems.

Product Discovery

- Search & Recs
- Data Enrich
- Merch
- Analytics
- CSM
- eCom. Function
- Personalize
- Emails, SMS

Commerce

- Inventory
- Price
- Cart
- Loyalty
- Promos

Digital Exp.
- Web
- Mobile
- Smart Assistant
- Business Logic
- API Layer

Content

- Reviews
- CMS
- DAM
- UGC

Enterprise Systems

- PIM
- WMS
- ERP
- POS
- TAX
- COTS

3.3

Impacts of Product Discovery on eCommerce businesses and their customers

The impacts of product discovery on eCommerce businesses go far beyond just improving sales and increasing revenue. Product discovery is also inextricably linked to a great shopping experience, which in turn has been proven to boost customer loyalty and promote repeat visits.

And the right product discovery platform – especially one that leverages true AI and next-generation search technologies – has **backend impacts such as lowering total cost of ownership and freeing up your merchandising team** to work on more revenue-driving business activities.

We've compiled the most profound impacts product discovery has on customers, retailers and B2B wholesalers.

EXPECTATIONS

Fulfills customer expectations, like omnichannel shopping, product availability, multiple fulfillment options, and personalization

PRODUCT FINDABILITY

Increases the ease of product findability, making it easier for customers to find what they're looking for

PERSONALIZATION

Uses on-site user data and events to deliver highly relevant and personalized search results, tailored to the customer's preferences

PRODUCT DISCOVERY

Customer Impacts

SEARCH RESULTS

Delivers relevant search results, which **69%** of consumers say often leads to the purchase of additional items[51]

PRODUCT AVAILABILITY

44% of U.S. online adults seek information about product availability online before purchasing offline[52], moving between online and offline channels during their customer journey. Product discovery helps create seamless shopping experiences between in-store and online

CROSS-SELL/UP-SELL OPPORTUNITIES

Drives cross-sell and up-sell opportunities through recommendation carousels

CUSTOMER LOYALTY

Makes customers more likely to return: **99%** of consumers are at least somewhat likely to return to a website if it has a good search function

CONTENT & COMMERCE

Seamlessly blends content and commerce to create incredible customer experiences, which are a key element of increasing brand loyalty. **72%** of customers admit they are less loyal to a brand when it's hard to find what they want on a website[53]

PRODUCT DISCOVERY
Retailer Impacts

CUSTOMER EXPECTATIONS
Easily meet customer expectations for search & personalization, as well as expectations around fulfillment and visibility into product availability

REVENUE GAINS
Averaging **10%** or **more** – which translates into millions of dollars per year for enterprise-level eCommerce retailers

CUSTOMER LOYALTY
Boost customer loyalty with seamless, convenient omnichannel shopping experiences

MONETIZATION
Allows business to focus on monetization strategies instead of manual search tuning, where thousands of rules typically only cover the top 5% of searches on a site

PERSONALIZATION
Improves search relevance to deliver convenient, personalized search experiences

SCALABLILITY
Cloud-native platforms scale with business growth, allowing you to scale up & down as needed

LOWER TCO
Lower total cost of ownership thanks to efficiency gains in your tech stack

CUSTOMER LIFETIME VALUE
Improves Customer Lifetime Value & customer retention, which produce the most profitable sales

SITEWIDE METRICS
Improve key sitewide metrics such as conversion %, click-through rate, AOV and revenue per search

MARKET POSITION
Maintain or increase market position thanks to best-in-class customer experiences (a proven driver of business growth)

PRODUCTIVITY
Improve productivity by leveraging AI to free up your merchandising team so they can focus on more strategic business goals

OMNICHANNEL
Supports omnichannel strategies, delivering relevant and personalized product suggestions across all customer touchpoints

ACTIONABLE ANALYTICS
Identify gaps and opportunities with actionable analytics & easily craft impactful campaigns to fill those gaps

B2B Focused Impacts

FITMENT
Delivers relevant results even for complex use cases like fitment, which require searching by year, make and model

COMPLEX CATALOGS
Easily manages complex catalogs and dynamic pricing, customizing results based on user access and company agreements

BROAD QUERIES
Returns relevant search results for all searches, including broad queries and head terms

BETTER EXPERIENCES
Better search experience as customers are no longer restricted to searching by part number to receive the most relevant results

Build vs. Buy

Which should you choose?

There is some debate about whether or not companies should build or buy their own Product Discovery Platform.

Building is the more customizable option, and some organizations view custom built software as a competitive advantage. However, building out a Product Discovery Platform requires a large, internal team of AI experts, developers and data scientists, working together over a span of 6-18 months to build the platform, which may not even include implementation.

Working with an established [Product Discovery Platform provider](), however, can have you **up and running in as little as 7 to 12 weeks**. These existing platforms already provide many of the features and exact use cases brands are looking for (including complex B2B use cases like dynamic pricing, catalog access and fitment), while delivering on a faster time to market, a faster time to ROI, and additional features outside of pure product discovery that enhance both the customer journey and the merchandiser user experience.

For companies with smaller development teams, or who simply want the fastest time to ROI, **buying is the most effective path.**

> At the end of the day, **Product Discovery Platforms improve eCommerce profitability** through optimizing the user experience, boosting key website metrics and revenue, and creating back-end gains that can be seen in the bottom line. This is why the right Product Discovery Platform is so essential: it has the power not just to boost sales, but transform how your team works and what they can focus on.

3.4

Next-Generation Product Discovery Solutions Run On Next-Gen Search Engines

To gain the full benefits of product discovery, there is one key feature that must be present: a next-generation search engine.

Search is the heart of product discovery, and the engine that drives the entire product discovery platform.

Legacy search engines relied primarily on text-based matching techniques, and required lots of manual rules to "learn" what products customers wanted to see. They have no ability to intelligently comprehend the properties or attributes of the underlying product, and treat all queries blindly, matching product to request word for word.

> For example, a search for "*date night dress*" might return a dress with date palm leaves on it (because date is read as a fruit instead of an event) instead of a little black dress for a night out.

In order to optimize these search engines, **merchandisers had to spend hours adding, adjusting and manually optimizing search rules** to generate more relevant results than the engine would produce on its own. However, especially on enterprise-level sites with thousands of SKUs, merchandising teams were often only able to optimize results for the top **5-10%** of searches, **leaving the vast majority of the website unoptimized**.

These generation one technologies were not initially built to solve eCommerce specific problems, and as such were and are limiting for retailers today, but next-generation search is different.

FASHION23 Search `date night dress`

showing **6** results

Filter
- ☐ Size
- ☐ Color
- ☐ Brand
- ☐ Fabric
- ☑ Reviews ★★★★★
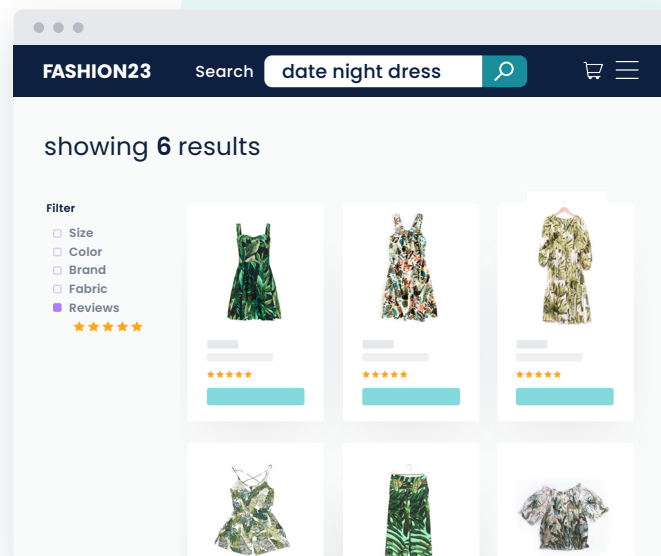
Next-generation search is AI-first

Most eCommerce search solutions on the market are still keyword-based. Some have layered additional AI functionality on top of their existing solutions. This allows for a greater degree of relevancy and personalization, but does not solve the inherent limitations of legacy technology. Legacy search engines were not built for eCommerce applications, and require large amounts of manual intervention (in the form of search tuning and search rules) to deliver results that barely meet the expectations of today's modern consumers.

Google's next-generation retail search engine is completely AI-powered. The very heart of the search engine is AI and there is no keyword matching. Additionally, these algorithms are trained on significantly more data than traditional legacy systems, leveraging Google's years of experience delivering content across their flagship properties such as Google Search, Google Shopping and YouTube. By training their algorithms on this vast amount of data, Google has developed a superior understanding of intent and user context. It provides much higher quality search results, delivering the right product to the right customer at the right time, while considering other factors like personalization and buyability.

AI learns and grows through data.

The AI algorithms that power next-generation search, specifically Google's Retail Search engine, are known as Large Language Models (LLMs). These models are trained on vast arrays of untagged data, where they learn to make associations and spot patterns. They are exceptionally good at interpreting human language, and is how the algorithm can decipher user intent and deliver relevant search results. It also learns over time as new patterns emerge from the data, allowing it to dynamically respond to input – such as changing trends or seasonal sales.

For example, in the "date night dress" scenario, a next-generation search engine understands associations between "date night" and "little black dress", and has historical purchasing data to understand which types of dresses get bought after a customer searches for "date night dress". Which means, for the exact same search, a next-generation search engine would return results that look more like this:
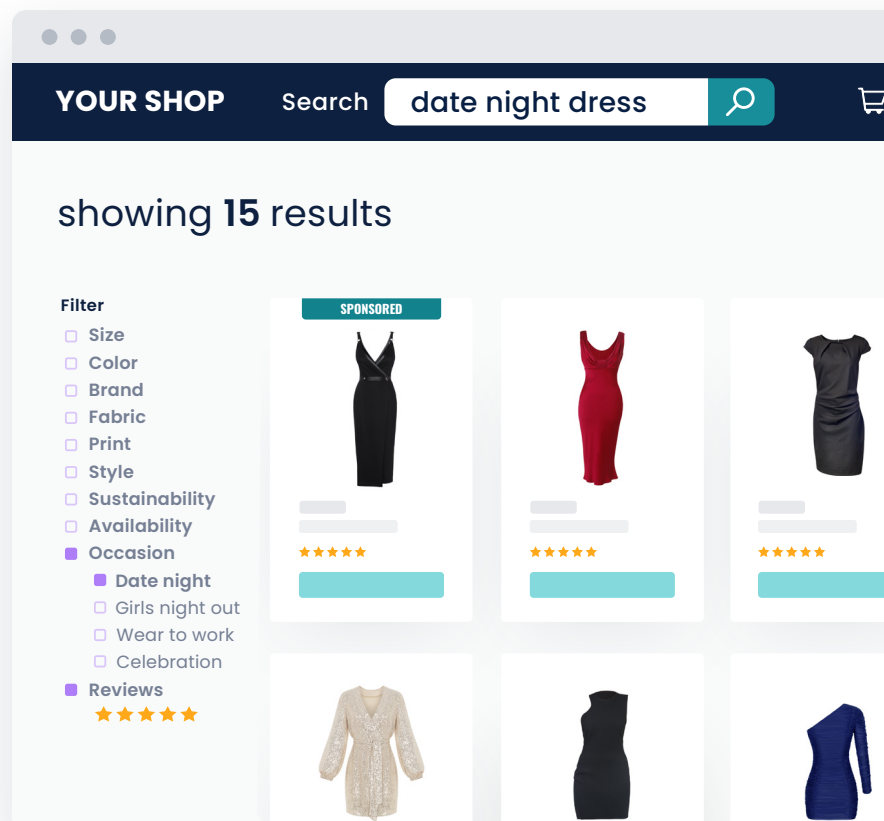
Next-generation search does not stop there. Its understanding of user intent also enables features like type-ahead search and auto-correct, as well as understanding broad queries and long tail queries (which contain three search terms or more). All of these are needed to create a best-in-class search experience.

Next-generation search goes beyond relevance
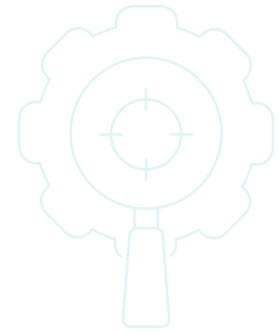
While legacy search sometimes struggled to generate even relevant search results, next-generation search can go beyond relevance and optimize directly for revenue.

For example, this is what happens when our "date night dress" query from the previous page gets entered into both a legacy and a next-generation search engine:
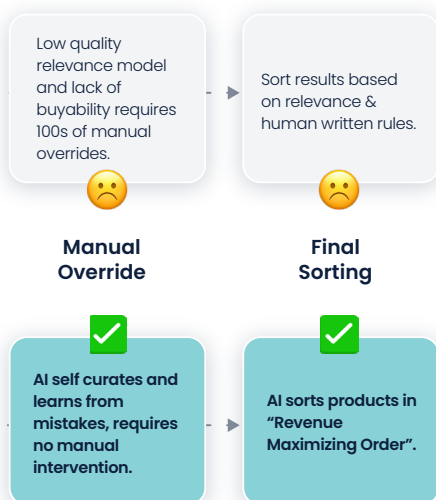
Legacy Search

Looks for words "date" and "dress" words in catalog. Returns dresses with "date patterns".	✕	✕	Low quality relevance model and lack of buyability requires 100s of manual overrides.	Sort results based on relevance & human written rules.

🔎 date night dress

Relevance Calculation	Buyability Calculation	Personalization Calculation	Manual Override	Final Sorting

Next-Gen Search

GroupBy's Product Discovery Platform powered by Google Cloud Discovery AI

AI looks at Google data–"What do people click after searching 'date night dress'"? **AI learns what a "Date Night Dress" truly is** (no date patterns). Returns correct "Date Night Dresses".	AI learns retailer specific patterns of how designers, brands, colors, and prices impact purchases. **AI grades each dress on "Likelihood of being purchased"** on this website.	AI looks at **Molly's past on-site history, and learns her preferences. AI grades each dress on "Quality of Match to Molly's Tastes".**	AI self curates and learns from mistakes, requires no manual intervention.	AI sorts products in "Revenue Maximizing Order".

First, the customer enters a query.

Then, **both the legacy and next generation search engines scan their product catalogs for results that match the search and determine the total number of items shown**. In the search world, this is called **relevance**, because it is an unsorted match of all the results that are relevant to the initial product query.

After that, **next-generation search uses AI to scan through for which products are the most buyable**. Essentially, based on site and historical shopping data gathered from massive properties like Google Search, Google Shopping, and YouTube, the **AI can predict which products are most likely to be purchased for the query**, and will prioritize them in the search results. It also accounts for metrics like profitability and revenue, boosting relevant products with higher margins over lower margin products.

Once the buyability calculations are complete, **next-generation search performs yet another calculation for personalization**. By leveraging a user's on-site and in-store data, the AI can determine a customer's preferences regarding product attributes like brand, color and style. This allows the AI to deliver not just buyable results, but ones that are highly personalized to the individual and which exceed customer expectations.

Manual Override

Low quality relevance model and lack of buyability requires 100s of manual overrides. ☹️

AI self curates and learns from mistakes, requires no manual intervention. ✅

Final Sorting

Sort results based on relevance & human written rules. ☹️

AI sorts products in "Revenue Maximizing Order". ✅

The second-to-last step is **manual override**, where the **search engine compares all of the returned results against its search rules**. For legacy search, there can be thousands of search rules. (And if any of those search rules are not optimized or are outdated or were from last season, they will impact the displayed search results).

For **next-generation search**, however, **merchandisers do not need to add search rules simply to generate relevant, buyable results**. That doesn't mean that merchandisers cannot influence or control the system – they still can. Instead, these controls enable business use cases (such as promotional deals or to move overstocked items) instead of simply creating relevance.

Finally, based on all of the filters and calculations above, the **search results are given a final sort and presented to the customer in a personalized display**.

Cold Start Issues

New products being buried due to a lack of data has long been a problem in eCommerce. However, next-generation search nearly eliminates these problems, because of its understanding of historical shopping data. With this context, cold start products become visible in search results and are more likely to sell.

Discover **8 more ways** GroupBy's Product Discovery Platform can help you **increase profitability** and **boost sales!**

Go now ›

Next-generation search considers retailer's needs, too
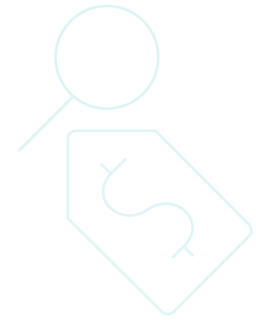
Next generation search:

Does not need development to get functional instance for initial phase

Lowers total cost of ownership and faster time to ROI

Includes built-in security and privacy protocols. Your data is yours alone

Uses ML models which allow implementation of omnichannel search and recommendations for true omnichannel shopping experiences

Leverages advanced query understanding that automatically adapts to ensure customer intent is evaluated

Allows the upload of historical clickstream data through UI or programmatically, calibrating the AI to your customers' specific shopping habits

Has proven effective at increasing conversion rate and per-visit revenue

"Speaks" English and can adapt to other languages as needed

How to **select the right Search & Product Discovery Platform** for your organization?

Selecting the right search and product discovery platform for your organization is critical. While features and controls are an important part of any product discovery platform, it is important to note that next-generation search engines are AI-first and run entirely on AI. There is no underlying keyword-matching technology for merchandisers to tune and maintain, as the engine is 100% AI-powered.

As such, some next-generation search and product discovery platforms may offer fewer merchandising controls than customers expect. However, since AI-first technologies learn and self-adjust, they do not require the same kind of controls as legacy technology to achieve superior results.

This means that it is important to evaluate any search and product discovery solution on more than just the features offered. For the most accurate evaluation – and to find the best solution for your company – look at more than just the number of controls or features. ROI is especially important when evaluating any technology investment, and AI-first solutions offer more ROI than legacy solutions when you take into account both front-end improvements and back-end productivity increases. This is why it's important to evaluate the underlying technology, its capabilities, and the potential ROI alongside features and controls.

Use our Product Discovery Platform Key Features Checklist ›

3.5

Key Features of a Product Discovery Platform: ☑ Checklist

Use this checklist to keep track of the most important, high-level features offered by any product discovery platform you assess.

Key Capabilities (Overview):

☐ Data Pipeline   ☐ Search and Browse   ☐ Merchandising

☐ Data Enrichment   ☐ Recommendations   ☐ Analytics & Reporting

Integrates with key platforms in your tech stack:

☐   ☐

☐   ☐

☐   ☐

Data Pipeline:

Data Ingestion	☐ Can data be sent in your preferred formats and incorporated into your product catalog? ☐ Does your pipeline collect online user data, in-store user data, product data, and quantitative data?
Business Logic	☐ Can you apply business rules to your product catalog to optimize search and browse relevancy?
Data Optimization	☐ Are your data pipelines optimized for eCommerce system integration?
Minimized IT Intervention	☐ Can your team incorporate new data or configurations without going through IT?
Catalog Updates	☐ Can you easily update partial and complete product records and full product catalogs?
Operational Excellence	☐ Is there built-in error handling to ensure your data is always current?

Data Enrichment:

Catalog Classification & Global Taxonomy	☐ Does the platform provide catalog classification and a global taxonomy that quickly produces optimized product attribute sets at scale?
Product Attribution at Scale	☐ Can you implement product attribute terms that align directly with your shoppers search intent and your business / domain expertise?
	☐ Does the platform use machine learning models and algorithms to ensure highly accurate yet cost effective curation?
Curation	☐ Does the platform leverage machine learning to continuously refine attribution strategies without manual intervention?
Business Interface	☐ Does the user interface allow your team to easily review data and product information for accuracy, relevance and context?
Boost SEO	☐ Do the data enrichment capabilities also work with SEO strategies to boost product findability and site traffic?

Search

Google-Quality Search Results	☐ Are you using a modern, Google-quality search engine?
Next-Generation Search Engine	☐ Is your search engine fully powered by AI?
Advanced Query Understanding	☐ Can the search engine understand user intent and deliver relevant results even for ambiguous queries and keywords with multiple meanings?
	☐ Can the search engine deliver relevant results for long tail queries containing 3+ words?
Broad Queries & Query Expansion	☐ Does the search engine automatically add related words to the query to deliver more contextually relevant results?
Natural Language Processing (NLP)	☐ Can the search engine understand search queries phrased in conversational language?
Machine Learning & AI Powered Search Engine	☐ Is the eCommerce search powered by machine learning and artificial intelligence?
Personalized Search Ranking	☐ Does the search engine use in-store and online consumer historical data to build user personas based on preferences such as brand affinity, color, size and more to curate results that are individually personalized?
	☐ Can the search engine personalize and reorder results based on their likelihood to be purchased even **WITHOUT** a query term?
	☐ Can the search engine deliver location-based or inventory-based results for customers?
Scalable Search	☐ Does the search engine have flexibility and scalability embedded in it to scale with your digital channel growth?

Search *(Continued)*

Browse	☐ Can you personalize and reorder results based on likelihood to be purchased even WITHOUT a query term?
	☐ Are you able to build curated landing pages for specific business objectives or events (eg. clearance items)?
Multiple Search Languages	☐ Can the search engine support queries in multiple languages?
Omnichannel Support	☐ Does the search engine integrate with and support inventory, availability and store/zip code level search across all platforms and devices?
	☐ Do the search features support all fulfillment types (online delivery, BOPIS, curbside pick-up, same-day delivery)?
Support for B2B Business Use Cases	☐ Does your search engine support B2B use cases like custom catalogs and custom pricing?
	☐ Can your search engine handle multiple SKUs?
	☐ Can your search engine handle dimensional conversion?
	☐ Can product pricing and availability be tailored by user based on their contracts or account/user role?
Predictive Autocomplete	☐ Do search capabilities include features like predictive autocomplete and synonym detection?
Optimized for Revenue & Other Business Cases	☐ Can your search results be optimized for revenue or other key business use cases?

Recommendations

Google-Quality Recommendations Results	☐ Does the search engine have flexibility and scalability embedded in it to scale with your digital channel growth?
ML & AI Powered Recommendations	☐ Are recommendations powered by machine learning and artificial intelligence?
Curated Recommendation Models	☐ Are merchandising teams able to refine out-of-the-box recommendations above and beyond built-in machine learning to meet the specific outcomes of the business?
Automatic Retraining	☐ Are recommendations automatically retrained on a daily basis to consider user behavior on your site?
	☐ Do recommendations leverage semantic and contextual understanding of user intent to deliver highly personalized recommendations?
Omnichannel Recommendations	☐ Can recommendations be delivered at every touchpoint and across every channel for true omnichannel shopping experiences?
Real-time Recommendation Predictions	☐ Do recommendations function in real-time, adapting to user input to optimize product findability and create cross-sell and up-sell opportunities throughout the customer journey?
Recommendations Models / Business Cases Covered	☐ Are curated recommendations models included and optimized for specific eCommerce business objectives (such as click-through rate, revenue per order and conversion rate)?

Merchandising

Optimized & Targeted Campaigns	☐ Can you build and launch innovative campaigns and promotions based on consumer behavior, channel and location?
	☐ Are you able to build curated landing pages for specific business objectives or events (eg. clearance items)?
	☐ Does the platform facilitate one-to-one individualized personalization based on customer data?
Ability to Optimize for Business Goals	☐ Can you customize search and recommendations strategies for desired business objectives such as click-through rate, conversion rate, or revenue per order?
Ability to Override the Platform	☐ Can the platform be overridden when needed for specific use cases such as promotional agreements?
Rule Configuration	☐ Can rules be configured manually when needed while also automatically adjusting for search intent and product profitability?
Faceting & Filtering	☐ Can facets and filters be applied to enhance customer control of the search results pages and the overall shopping experience?
Boost & Bury	☐ Can you define biasing profiles to boost or bury specific products or brands and define when these rules apply, without requiring technical support?
A/B Testing	☐ Can campaigns be split tested for efficacy?
AI Rooted Ranking & Relevance Models	☐ Are ranking and relevance models powered by artificial intelligence and machine learning?

Analytics & Reporting

Actionable Insights	☐ Does the platform provide actionable insights, identifying missed opportunities and areas for improvement?
Omnichannel Performance	☐ Does the platform support omnichannel performance by measuring and reporting data across all channels?
Self-serve Dashboards	☐ Does the platform provide self-serve dashboards that enable your teams to check the performance of your site at a glance?
	☐ Does the platform provide self-serve dashboards that enable your teams to view search analytics at a glance?
User Events/User Event Capture (tags)	☐ Can the platform capture and tag user events for easy analysis of your customers' behaviors?
Site Performance Tracking	☐ Can the platform track and report on overall site performance allowing you to drill deeper into various aspects of your site?

3.6

10 Critical Building Blocks of a Product Discovery Platform

Demand for product discovery solutions is rising. As such it is extremely important that product discovery platforms fulfill **three key use cases**:

USE CASE #1	USE CASE #2	USE CASE #3
Enhance the customer experience	**Provide technological advantages**	**Seamless integration**
To drive increases in revenue, sales and customer loyalty	that allow eCommerce retailers and wholesalers to meet the expectations of today's customers	Seamlessly integrate with their existing tech stack, creating efficiencies and productivity gains with minimal technological disruption

When selecting a Product Discovery Platform, keep these 10 building blocks in mind as they **deliver the customer experience your buyers are seeking**, while setting you up for long term success and profitability.

10 Critical Building Blocks of a Product Discovery Platform

1 Next-Generation AI

Semantic search, which analyzes not just the words used in a query, but also the relationships between those words, has become the standard in search and product discovery. However, semantic search requires either a rules-based approach, or a math-based approach to successfully deliver relevant results, both of which can be restrictive and labor intensive for eCommerce retailers. Next-generation search, on the other hand, is **fully powered by AI** and does not have the same limitations. It learns on its own and **greatly reduces the amount of manual intervention required** – while simultaneously returning results that are more relevant, hyper-personalized, and optimized for revenue. Only search powered by AI built on top of a Large Language Model (LLM) and a next-generation search engine can deliver the **Google-quality results** on your eCommerce site that your customers have come to expect.

2 Omnichannel Support

Customers already expect omnichannel shopping experiences, and having the technological capability to deliver on omnichannel strategies is essential. This doesn't just mean the ability to deliver products across multiple touchpoints – it also refers to **integrating with inventory systems and being able to update in real time** to show product availability as a customer is searching. True omnichannel supports **multiple fulfillment types**, and is an **essential expectation** eCommerce retailers must **meet** in order to drive sales, revenue and long-term profits from loyal customers.

3 Hyper-personalization

Hyper-personalization, the step beyond personalization, is set to take over the eCommerce market, with many large companies already implementing it. Differentiated by its ability to **update and respond to user data in real time for even more relevant results**, hyper-personalization capabilities are an **critical feature** of any product discovery platform.

4 Optimized for eCommerce Use Cases

A Product Discovery platform should be **optimized specifically for eCommerce business use cases**, such as revenue, average order value and click-through rate. These key metrics are how eCommerce retailers measure success and they **directly correlate to business health**. Without the ability to optimize for these use cases and more, you will lose out on valuable business opportunities.

5 Merchandising Controls

Even with next-generation search engines, and AI and ML that can learn, there are still use cases that require merchandisers to step in and take over. A great product discovery platform provides **top-quality merchandising control features**, even if they do not need to be used that often, thanks to **sophisticated AI delivering relevant, revenue optimized results.**

6 Good Quality Data

There's an old eCommerce saying that goes "garbage in, garbage out." **Even the most cutting-edge search engines will deliver poor results if they are trained on or searching through poor quality data.** Lack of product attributes and information can result in products not being found even for searches they clearly match, creating product findability problems and loss of revenue. This is why it is essential that a product discovery platform enables you to **augment and enrich your product data**, as improving its quality also improves search performance.

7 Connects Online and Offline Data

Key to delivering excellent personalization features and omnichannel experiences is the ability to **connect online and offline data**, such as in-store or POS data. Brick-and-mortar and online experiences are already blending, as evidenced by the rise of omnichannel and "click-and-mortar" strategies such as buy-online-pick-up-in-store (BOPIS). These experiences are only possible if a **customer's online data is connected to their in-store data for one, single, connected seamless experience.**

8 Composable Platform

Modular, composable software architecture is dominating the tech space – and for good reason. It's **efficient, flexible, scalable, and allows retailers to weave together the best-in-class solutions** that most suit their business needs. A composable product discovery platform will integrate with top eCommerce solutions, fit seamlessly into your tech stack, and **improve performance** with minimal work or disruption.

9 Supports Complex Use Cases

In addition to being optimized for eCommerce use cases, best-in-class product discovery solutions also support complex use cases for large-scale enterprises like B2B wholesalers, distributors and manufacturers. **B2B** eCommerce retailers should look for a provider who offers support for a wide range of products with **complex faceting, dynamic pricing, multiple catalogs and advanced search solutions like fitment**.

10 Centralized Analytics

If search is the heart of product discovery, analytics are the brain. They reveal actionable insights, **identifying gaps and places for improvement**. The ability to view all key site stats at a glance – preferably on the home page when you log in – is essential for eCommerce retailers and wholesalers to understand the health of their business. Having all **analytics in one place** is also essential for campaign and product optimization, driving revenue, sales and creating efficiencies for your merchandising team.

Discover 8 ways GroupBy can help **Increase eCommerce Profitability** & Grow Sustainably

Go now >

4.0

GroupBy **Product Discovery Platform** powered by Google Cloud Discovery AI

GroupBy's vision is to create a fundamentally better eCommerce user experience.

We do that by democratizing AI and helping retailers provide the world's most relevant and personalized B2B and B2C shopping experiences.

Our all-in-one composable Product Discovery Platform provides all the vital functions necessary for omnichannel product discovery: from search and recommendations to data enrichment, merchandising capabilities, and analytics and reporting.

GroupBy's Search, Browse, Autocomplete and Recommendations are powered by **Google state-of-the-art Cloud Discovery AI**. Built specifically for retail use cases, and with an unparalleled understanding of user intent, Discovery AI leverages Google's years of expertise delivering personalized content across flagship properties, like Google Search and YouTube brands, to **create hyper-personalized, omnichannel search and recommendations experiences across every customer touchpoint.**

4.1

What we do and how we do it

Thriving in today's eCommerce landscape requires more than just great customer experience.

At GroupBy, we help eCommerce retailers deliver the **world's most relevant** and **highly converting** site experiences, maximizing revenue through eCommerce channels, all while requiring less effort and cost to build and run.

In short, we give you:

The next-generation technology that creates cutting-edge customer experiences, which boost revenue and loyalty	**The ability to optimize for your specific revenue goals, prioritizing long term growth and profitability in an especially competitive landscape**	**The capability to meet your customers at any touchpoint on their hugely-varied, omnichannel customer journey**

How do we do it?

1 We Understand Your Customers

We start by connecting how your customers shop in-store to their online profile, so you gain a **360-degree** view of their shopping behavior to create experiences that are relevant to each individual.

2 We Transform Your Data

Your product catalog is the backbone of your eCommerce platform – ensure your product data is rich, robust and accurate by utilizing our 3-step Data Enrichment process: **Classify-Attribute-Curate**

3 We Unleash the Power of AI

We use the power of **Google-quality** Search and Recommendations to your eCommerce platform with state-of-the-art trained ML and AI algorithms which are optimized for business use cases and user intent.

4 We Curate Your Experience

GroupBy enables your merchandising team to **take control over the entire digital customer experience** with our scalable and easy-to-use merchandising platform and actionable search analytics.

Our one-stop shop for omnichannel eCommerce Product Discovery:

Delivers personalized search results that are optimized for revenue while supporting all fulfillment types

Runs on a flexible, modular architecture that supports agile delivery and fits into your existing technology stack with minimal disruption

Lowers TCO through optimization and efficiency gains in your tech stack

Increases productivity by freeing up team members to work on more valuable business initiatives

Generates maximum ROI with faster time to market (7-12 weeks) than other solutions

Our best-in-class Product Discovery Platform, powered by Google Cloud Discovery AI makes **next-generation search and product recommendations accessible to all**, delivering outstanding eCommerce experiences for retailers and their customers alike.

4.2

GroupBy Products

GroupBy's all-in-one Product Discovery Platform contains a full suite of products specifically designed to help B2B and B2C eCommerce retailers **deliver outstanding, hyper-personalized, omnichannel shopping experiences** tailored to the modern consumer.

DATA PIPELINE

- Standardized data ingestion
- Feeds into all GroupBy products

PRODUCT DISCOVERY

- Next Generation Search and Recommendations powered by Google Cloud Discovery AI

MERCHANDISING

- Build and optimize targeted campaigns
- Configure for business objectives

DATA ENRICHMENT

- Rapid product attribution at scale
- Augment and normalize your product catalog data without the manual labor

ANALYTICS & REPORTING

- Gain actionable insights and make informed decisions
- Understand your customer behavior

Data Pipeline

The process starts with our Data Pipeline. GroupBy creates an optimized data pipeline for eCommerce without internal expertise or effort required on the customer's part. Which, in turn, speaks to a **lower cost of ownership and faster time to market**. We are able to ingest all of a retailer's valuable data, quickly and easily to help them power their on-site experiences in the best possible way.

The data that GroupBy requires is your product catalog. We need the items that you'll sell on your website so that when somebody searches for them, we have the ability to surface those products to a customer.

But we can do so much more! We can start to take additional data sources such as **past purchase history, loyalty information, more obvious things like inventory, margin and ratings and reviews data**.

We then use this data to personalize the shopping experience, account for product availability, support omnichannel fulfillment and optimize for key business objectives.

The data pipeline solution is about taking all of these data sources - whether they are in **20 different files or 20 different formats** - **organizing, grouping and transforming them for ingestion into the GroupBy engine.**

Data Enrichment

Data enrichment matters because the quality of a retailer's product catalog and the data associated with it has a direct impact on the performance of their website.

No other product discovery platform has a built-in Data Enrichment process. Thanks to Enrich, **GroupBy is able to take customer data, specifically the product catalog, and make that data bigger, faster, better, and stronger.**

Once the data pipeline has been set up, Data Enrichment **completes, normalizes, cleanses and augments** eCommerce product data for the purpose of improving shopper experiences and product findability. This leads to **increased relevance and accuracy in search, filtering and navigation, increasing CVR, AOV and RPV.**

Our 3-step Enrich process – **Classify, Attribute, Curate** – delivers complete, normalized product data rapidly, at scale, without the manual labor.

Classify

Classify your product data by running it through our Global Taxonomy and gain access to a best-in-class category hierarchy based on GroupBy's domain expertise across a range of retail industries.

Attribute

Add useful contextual product attributes from GroupBy's library to build your custom strategy, aligned with your business objectives. Identify opportunities for normalization, gap filling and augmentation based on your own domain expertise.

Curate

Attributes are assigned values through our pre-existing rules, machine learning algorithms, and team of curators to ensure highly accurate yet cost effective curation.

This greatly enhances the quality of your search results, delivering exceptional customer experiences and facilitating the hyper-personalization that customers have come to expect.

Search AI

Next comes the exciting part! Search AI. Powered by Google's Cloud Discovery AI, GroupBy's Search AI is capable of **understanding true user intent and optimizes your search results for revenue.**

Once we have ingested all of a retailer's customer interaction data – whether that be online or in-store – and their catalog data, including both qualitative and quantitative attributes, this information is passed back into the AI. On-page beacons track customer interactions on your website, sending user behavior data back to **help train and power the AI** to return optimized results for your specific site.

> **All customer interactions and data tracking is done without capturing any PII**. This means our solution is completely compliant with requirements like GDPR, as well as the California privacy legislation. This ensures that we are also compliant with any future legislation updates as we are aware of the fact that this is becoming increasingly important in today's day and age.

Driven by user behavior data, **Search AI leverages Google's spell correction**, and matches both text strings and relevant brand and category attributes to the search term. In addition, it has a product preview feature that will match the search results once the search is executed. This can be very **customizable to each specific retailer's needs.**

Many other offerings struggle with this, as they leverage different indexes with different relevance leading to a jarring experience.

Because Google has such a large history and database of what people have searched for previously, we're able to better understand user intent due to historical data analysis, which facilitates pattern matching and behavior prediction.

GroupBy leverages Machine Learning to **automatically identify synonyms, spell corrections, long-tail searches and user intent**, based on user activity on the site and insights from Google.com, Google Shopping and YouTube.

This allows the engine to **return results that are relevant and optimized for revenue, out of the box,** with **no configuration or intervention** from merchandisers.

The GroupBy Serach AI leverages both online and in-store data to deliver personalized search results while supporting all fulfillment needs. And further improve your site performance with the ability to **optimize search results for specific eCommerce use cases**, including click-through rate, conversion rate, and revenue.

Powered by Google's next-generation search engine, our Search AI delivers a truly exceptional customer experience – but it doesn't stop there!

Recommendations AI

Recommendations engage shoppers at every touchpoint.

Retailers and wholesalers can implement Google-quality recommendations that are based on **Google's semantic and contextual understanding of user intent on any page of the user journey**, from the home page to the checkout page and across multiple channels such as their website, mobile, email, contact center, and more.

Additionally, recommendations help retailers **cross-sell products** throughout the user journey - search or browse, product pages, add to cart, and checkout - to increase basket size and average order value. They can also **personalize the customer experience with upsell strategies** that influence buyers to purchase more expensive items, upgrades or add-ons to increase the order value.
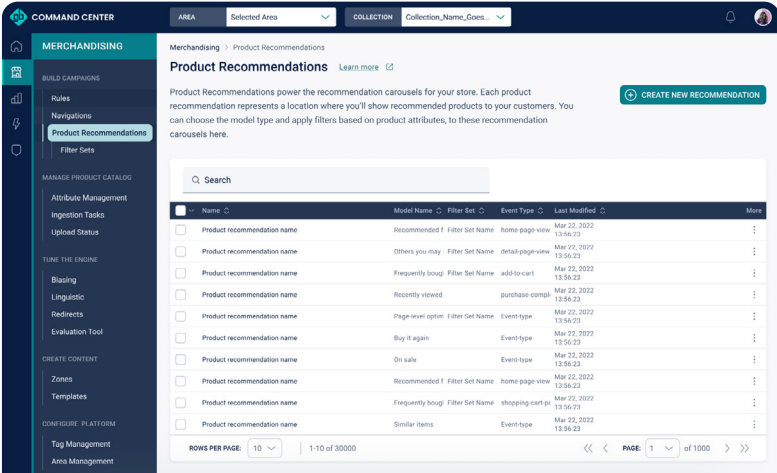
GroupBy's recommendations are state-of-the-art and leverage Google ML models for intelligent personalization. It incorporates **customer site data, blended with insights from Google**, which dramatically **improves meaningful metrics** like CTR, CR, RPS, AOV and revenue. It can also be leveraged for email marketing and supports a wide range of recommendation types.

Supported models include:

- **Recommended For You**
- **Others You May Like**
- **Frequently Bought Together**
- **Recently Viewed**
- **Similar Items**
- **Buy It Again**
- **Products On Sale**

Recommendations AI **works throughout the entire buying process** - from initial product discovery on a laptop, to consideration on a mobile device, to purchasing follow-through via email channels — and supports omnichannel functionality.

And that's just one example of delivering recommendations in the customer journey. **Customers can use recommendations across different device types** (mobile or computer), in **email campaigns**, in **physical retail settings** (kiosks), or even indirectly (call center representative, sales representative).
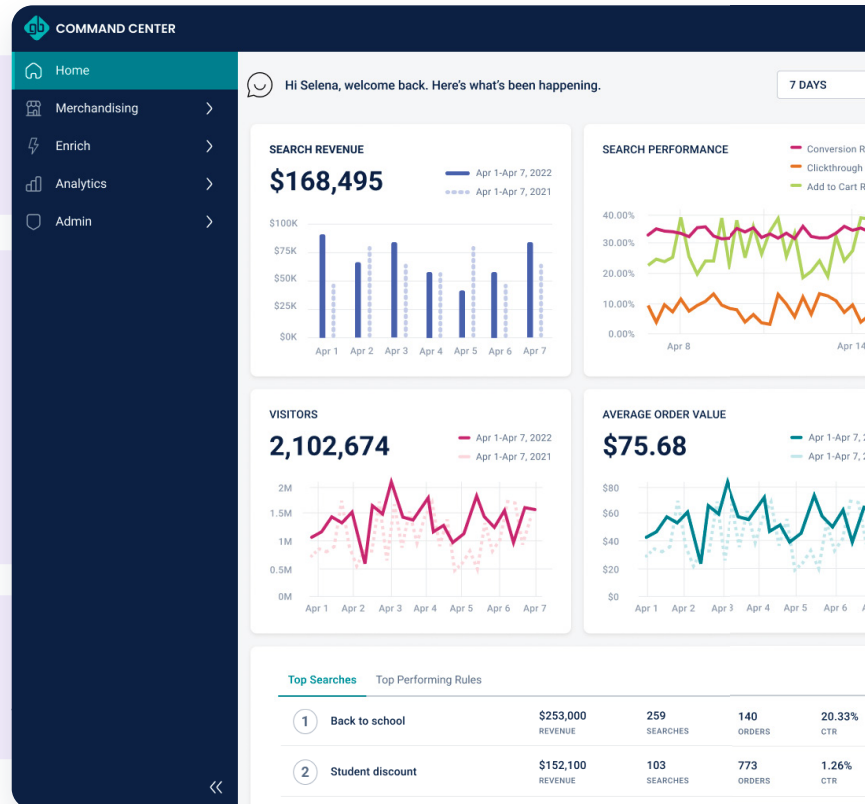
Analytics & Reporting

Understand site performance at a glance, and take action to address any opportunities or issues.

For example:

See how customers are interacting with your site and **discover what leads to higher conversions and revenue.**

Make quick decisions based on **real-time analytics** to improve the digital customer experience. Connect how customers shop in-store to their customer profile and **track how browse, search, and recommendations are performing against KPIs**.

Easily identify underperforming search terms, browse paths, navigation and refinements, or recommendations.

Our analytics & reporting features, built into our **Merchandising Command Center**, **reveal areas of improvement and missed opportunities**, so you can take action on them and optimize the entire product discovery experience — all the way down to the product level.
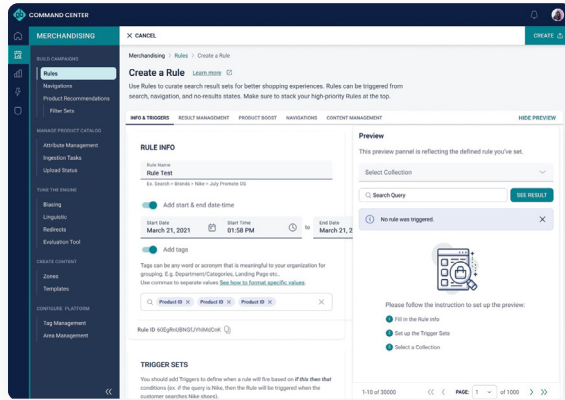
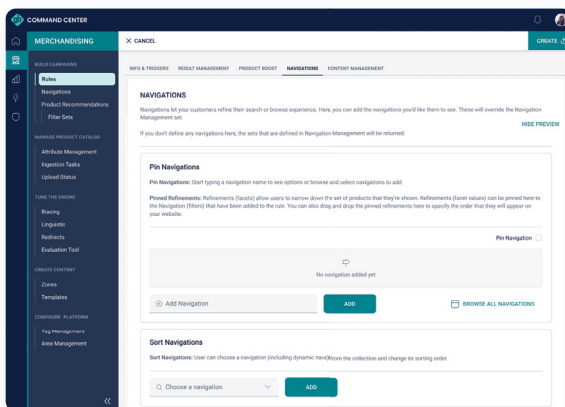**What to see the results?** View the case study of a **multi-billion dollar retailer.**

Go now ›

Merchandising

Finally, take control over the entire digital customer experience with GroupBy's easy-to-use Merchandising Command Center. Our sophisticated merchandising platform **empowers your merchandising teams to build the most impactful customer campaigns** that drive desired outcomes for key business objectives.

- Optimize campaigns for your specific business goals, including key eCommerce metrics like **click-through rate, conversion rate and revenue.**

- Use ranking and relevance models that are powered by **state-of-the-art AI & ML** for the best customer experience with minimal manual effort.
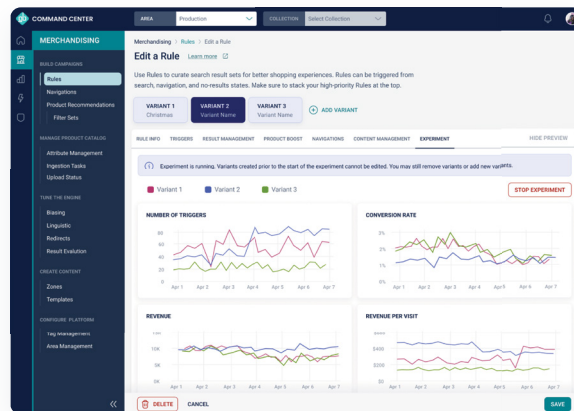
- Leverage your team's domain expertise and **override the platform's rules when necessary**, or for key instances such as brand partnerships and promotional deals.

- Easily validate merchandising campaigns/configurations through **A/B testing.**

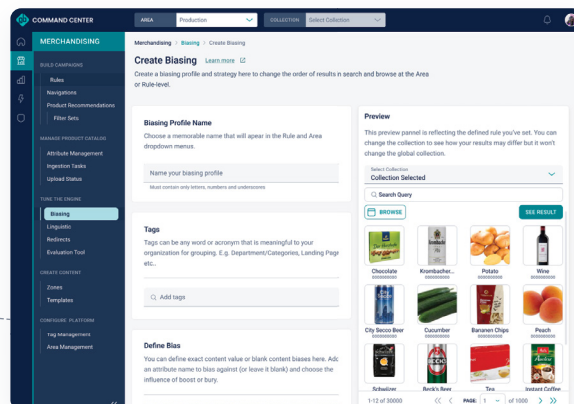- **Manage facets at scale** and provide shoppers with intelligent dynamic faceting capabilities that take your product attributes into consideration.

- Automatically **boost and bury products** to a target audience or personalized for individual shoppers.

See and evaluate the impact of your search rules with our **Evaluation Tool**. The Evaluation Tool provides merchandisers with a way to **better understand how their eCommerce site is working and which factors most impact the performance of their search, browse and recommendations.**

Within rules, merchandisers already had the ability to perform modifications such as applying **boosting and biasing**, selecting which navigations appear for users, employing **linguistic controls** and more. The Evaluation Tool provides **insight into which modifications are being applied and how those modifications impact search results and ranking.** This transparency into overall site performance allows users to better evaluate the impact of specific changes and then make adjustments to rules or configurations to tackle any issues or inconsistencies within their site.
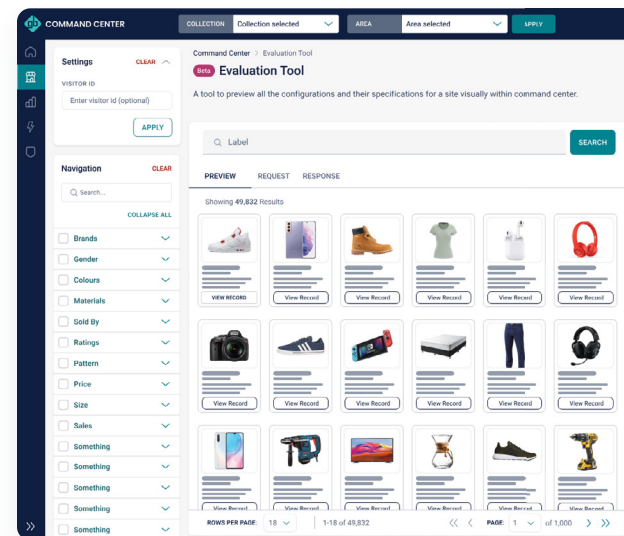
GroupBy's Command Center with its strong merchandising capabilities empowers **merchandising teams to focus on important and strategic business objectives** instead of manual search turning and implementing business rules. When paired with Google's enhanced AI capabilities, merchandising teams can trust the **AI to work as a strategic partner, optimizing and displaying results based on hard data and selected business objectives**. This tool allows merchandising teams to spend more time and focus on strategic merchandising initiatives that truly add value to the business.

By providing all features necessary for enterprise-level product discovery in a single platform, GroupBy empowers retailers to deliver outstanding customer experiences – which directly translates into more revenue, sales, and customers.

4.3

Composable Architecture

GroupBy's Product Discovery Platform is built using a composable approach. Our modular, API-first, cloud-native architecture allows it to seamlessly integrate into your existing tech stack.

Composable commerce is an approach that **leverages best-in-class, headless, cloud-native applications** that fit into brands' existing technology stack to satisfy their exact business requirements. By choosing a **modular approach over a one-size-fits-all approach, retailers can build or buy optimal solutions** for their company and customers' needs, from analytics and product discovery to the checkout experience.

This can **lower the total cost of ownership** for the tech stack, as well as increase operational efficiency by allowing retailers to quickly adapt to shifts and trends in consumer behavior.

The GroupBy Architecture

| Data Extraction | Data Transformation | Advanced Google AI Technology | GroupBy Product Discovery Platform | Integration into Client eCommerce Stack |

Online User Data

In-Store User Data

Product Data

Quantitative Data

ETL (Data Pipeline)

Data Enrichment & Syndication

Google Insights

Google Cloud Discovery AI

GroupBy API

GroupBy Command Center
Merchandising, Analytics & Reporting

eCommerce Apps

eCommerce Websites

We start by **extracting data** from all relevant sources and channels. We **ingest both your online and in-store user behavior data, including point-of-sale (POS) data, through our API.** We then ingest your product catalog, including quantitative data like profit margin, sales rankings, customer ratings, and more.

Once the data is extracted, it's passed through our data transformation layer and data pipeline, where we assemble the data in the most optimal way for search and recommendations. This can include **standardizing, cleansing and enriching data** through our [data enrichment process](#) to further optimize it for search and recommendations.

After the data has been extracted and transformed, your product catalog is indexed into the GroupBy platform which is then consumed by your omnichannel applications, whether that is desktop or mobile.

One of the biggest differentiators for GroupBy is **our search and recommendations engine technology, powered by Google Cloud Discovery AI.**

For so many years the eCommerce space has been dominated by two open source technologies, one of them being Solr, and one of them being Elasticsearch.

These are typically the foundation for almost every single eCommerce search engine vendor out there. The challenge with these solutions is that they are 20-year-old antiquated technologies specifically built for keyword searching in documents. In the past, keyword search was sufficient because eCommerce was very early in its adoption, and the technology was less advanced than today. Consumers at that time were not as sophisticated as modern shoppers.

But times have changed. The use of mobile commerce and the way that people are texting on their phones has now translated to how customers are searching on online shopping channels. **Shopper searching behavior has become more descriptive, broad and long-tail focused.** So retailers need to have technology that isn't primarily based on keyword search but truly understands the intent behind the search query to deliver relevant results that are optimized for revenue.

And that's what we're bringing to the table with our Google Cloud Discovery AI integration. A **truly next-generation search engine,** built for AI, that can deliver everything today's customers expect and more.

4.4

8 Ways

GroupBy's Product Discovery Platform Helps Brands Increase eCommerce Profitability and Grow Sustainably

Today's modern eCommerce landscape is highly competitive. Retailers compete for market share, and profitability is eroded by high customer acquisition costs, the never-ending sales and promotions needed to stay competitive, soaring shipping costs and increased rates of return for online purchases.

GroupBy's Product Discovery Platform **helps brands attain consistent eCommerce profitability** by increasing revenue, improving search relevance and customer experience, improving productivity, and more. Here are 8 key ways GroupBy's Product Discovery Platform, powered by Google Cloud Discovery AI, helps brands increase eCommerce profitability and **grow sustainably** in the long term.

1 Improves Revenue

When switching from legacy search and product discovery solutions to GroupBy's next-generation engine, customers regularly see **10-15%** increases in revenue, above and beyond their current baseline. For a company with online revenues of $100million, that increase represents, at minimum, an additional $10 million added to their bottom line in a single year. **What would an extra $10+ million a year mean for your company?**

Multi-Billion Dollar Retailer

GroupBy Legacy Solution vs GroupBy Product Discovery Platform powered by Google Cloud Discovery AI

Product Search

→ **12%** increase in add to cart
→ **15%** increase in conversion rate
→ **13%** increase in revenue per search

Product Recommendations

→ **17%** increase in add to cart
→ **25%** increase in conversion rate
→ **30%** increase in revenue per visit

Resulted in a 10% increase to online revenues!

2 Improves Search Relevance

Producing relevant – and, more importantly, buyable – search results requires data. However, collecting and deciphering all relevant customer data is becoming increasingly difficult. GroupBy's all-in-one Product Discovery Platform improves search relevance in two key ways:

- Our **data pipeline and transformation services** enable us to incorporate and evaluate all user data, using it to personalize the customer experience

- Our platform runs on a **next-generation search engine** – Google's Retail Search engine. Specifically developed for eCommerce use cases. This engine understands true user intent, **delivers accurate results for even the broadest of queries**, and calculates not just relevance but the buyability of products as well for the most relevant and optimized search results

By improving search relevance, we also improve the customer experience, which has been linked to higher AOV, click-through rates, conversions and increased customer loyalty.

3 Bridges the Gap Between Customer Experience, Product Findability and UX

Customer experience, product findability and UX are all major stumbling blocks of eCommerce retailers, as well as being major customer pain points. However, each one is traditionally approached as a separate problem or field entirely, resulting in disconnected solutions and a lack of integrated, back-end technology that supports all three.
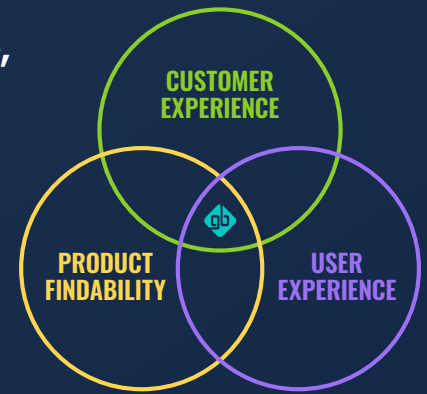
GroupBy's Product Discovery Platform powered by Google Cloud Discovery AI, bridges the gap between all three. By delivering **best-in-class search** with autocorrect and preview functions, displaying the most buyable and relevant products for each individual customer, and making it easy for merchandisers to **create beautiful, optimized campaigns**, our solution brings together all three elements. By improving UX and product findability, we also **improve customer experience**, treating the eCommerce website experience as the ecosystem it truly is.

4 Captures Customer Attention

In todays' competitive retail landscape, it is more important than ever to not just grab consumers' attention, but to retain it throughout the sales process. Product discovery is inherently a front-end process, tied to sales and lead generation. By intervening at the exact right moment on the exact right channel with the exact right product, you can far more easily and efficiently capture and retain a customer's attention, **shortening the time from intent to action, and maximizing customer lifetime value.**

5 Actionable Insights & Constant Optimization

Reactive monitoring of competitive and market data inevitably leads to brands struggling to keep up. **Real-time AI-driven analytics** have the capability to reveal insights and opportunities as they appear, allowing merchandisers to constantly adjust, updating and correcting issues as they happen.

By applying ML models designed for eCommerce use cases, merchandisers can further **optimize their sites to meet specific business goals.**

4.0 / GroupBy Product Discovery Platform...

4.4 / 8 Ways GroupBy's Product Discovery Platform Helps Brands...

6 Improved Productivity

Legacy search engines required manual intervention and hundreds if not thousands of manual search rules to run, and which only covered a fraction of all site searches. GroupBy's Product Discovery Platform powered by Google Cloud Discovery AI, **leverages true AI to automatically optimize searches across the entire site**. Since the AI both understands user intent and is constantly learning from new data, this **greatly reduces the need for manual interventions**, freeing up your merchandising team to focus on more strategic monetization opportunities.

7 Holistically Tackle the Full Suite of Omnichannel Challenges

Providing a seamless customer experience across all customer touchpoints is the purpose of omnichannel retail strategies. However, providing a consistent customer experience requires approaching omnichannel from a holistic perspective – one that views the entire customer journey as a whole and shares data across the customer experience for better relevance, understanding and personalization, instead of letting data remain siloed inside various channels.

Smooth search, especially, is key to creating that seamless customer experience. When all customer data is shared and available, eCommerce **search solutions can provide highly relevant, personalized, and buyable search results**. With increasing data about search abandonment and how poor search experiences cost retailers loyal customers, search and product discovery is the #1 area of investment for eCommerce businesses today.

Our platform can help you establish the right processes and infrastructure to support omnichannel strategies, build a single customer data structure, and excel at omnichannel shopping experiences across customer touchpoints.

Discover the impacts of **next-generation search and product discovery** on your customers and your business!

Read more ›

8 Improve SEO

A good XML sitemap acts as a roadmap for a website that leads Google to all of the most important and essential pages quickly. It also helps search engines understand a website's structure, and retailers want Google to crawl every important page of their website. This is how products show up organically in SEO.

At GroupBy, **we are able to generate or assist in sitemap creation**, and in the process canonicalize a retailer's data, establishing a standard format that is ordered in the way humans think, and beautifying them so they are human readable.

This **leads to more pages crawled and indexed and improves their page ranking on Google**, leading to more traffic and revenue without having to pay Google — a huge win in a retail landscape where customer acquisition costs are continually rising.
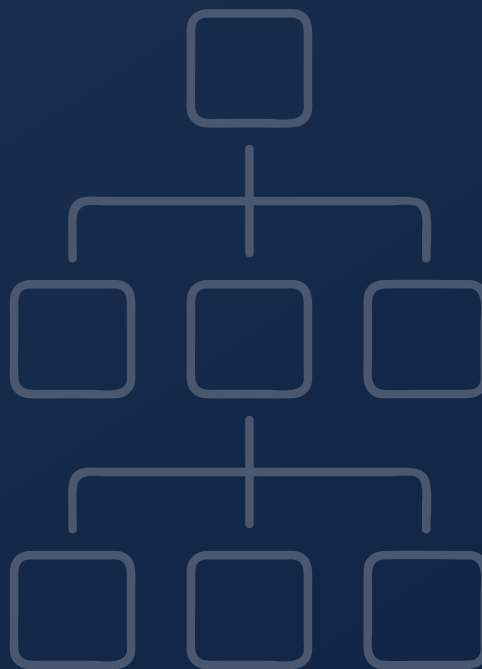
Each one of these 8 elements directly contributes to long-term growth and profitability of an eCommerce retailer. Without the features outlined above, retailers struggle to deliver on the expectations of today's shoppers. Constant sales and declining customer loyalty has been eroding profit margins and immediate revenue, as well as long-term profitability as they sink time and resources into winning those customers back.

By optimizing for both back-end functionality and front-end user experience, **GroupBy's Product Discovery Platform powered by Google Cloud Discovery AI, helps** B2B and B2C eCommerce retailers and wholesalers overcome all of the challenges **currently associated with product discovery**, as well as the largest issues facing the eCommerce industry today. Our next-generation composable platform is specifically designed to drive revenue while increasing customer experience, setting your brand up for long-term profitability and success.

5.0

Summary

Modern consumers are digitally savvy and want convenient experiences. To the point where $2 trillion[54] is lost globally each year to search abandonment

Modern customers expect **CONVENIENCE** above all else. This means easy to find products, on easy to use websites, speedy shipping and fulfillment options, and personalized search and recommendations that help them find the exact products they're looking for.

Search is a huge driver of both convenience and customer loyalty
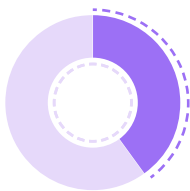
40%
of consumers are **switching brands**[55], with **price** being the main motivator

98%
of consumers' **favorite retail websites** are ones where they **can quickly find what they are looking for**[56]

Product Discovery is the key to improved eCommerce profitability

A Product Discovery Platform helps you understand your customers, transform your data, and leverage the power of AI to curate highly personalized customer experiences that turn into long-term revenue.

- ☑ **Improves search relevance**
- ☑ **Supports omnichannel & personalization**
- ☑ **Lowers total cost of ownership**
- ☑ **Frees up your merchandising team to focus on more strategic business objectives**

Powered by Next-Gen Search, the best Product Discovery platforms can optimize for <mark>REVENUE</mark> *(not just relevance)*

Legacy Platforms

Keyword based, required manual search rules, could not understand user intent or broad queries and could only optimize for relevance

Next-generation Search

Leverages true AI to understand user intent, delivers accurate results for the broadest of keywords, almost completely eliminates the need for manual intervention, and automatically accounts for product buyability

Gen 1 Search Engines		GroupBy + Google Search
Outdated & complex ☹	Relevance Calculation ✅	AI learns contextual information
NOT SUPPORTED ❌	Buyability Calculation ✅	AI learns retail-specific patterns
NOT SUPPORTED ❌	Personalization Calculation ✅	AI learns from previous website user behavior
100s of overrides ☹	Manual Overrides ✅	AI self-curates & learns from mistakes
Based on relevance & human written rules ☹	Final Sorting ✅	AI orders products to maximize revenue

Deliver search results that are buyable, personalized & optimized for revenue!

Speak to our experts ›

Leverage **the power of True AI** in your product discovery solution and create customer experiences that boost the bottom line

GroupBy's Product Discovery Platform powered by Google Cloud Discovery AI, is a **one-stop-shop** for all your product discovery needs. GroupBy's platform includes everything from Data Enrichment to Search and Browse, Recommendations, Merchandising, and Analytics and Reporting, allowing retailers to easily craft highly personalized campaigns, reduce manual interventions such as search tuning and **access all of their vital product discovery functions in a single place while lowering their overall technology costs.**

DATA PIPELINE

DATA ENRICHMENT

SEARCH AI
powered by
Google Cloud Discovery AI

RECOMMENDATIONS AI
powered by
Google Cloud Discovery AI

gb PRODUCT DISCOVERY PLATFORM
powered by
Google Cloud Discovery AI

ANALYTICS & REPORTING
via Command Center

MERCHANDISING
via Command Center

Platform benefits include:

- ☑ Optimized to YOUR eCommerce goals: revenue, click-through rate, AOV & more
- ☑ Lower total cost of ownership
- ☑ Faster time to market
- ☑ Improved efficiency

- ☑ Reduced manual search tuning
- ☑ Increased AOV, CTR, & RPS
- ☑ Supports all omnichannel initiatives
- ☑ Wide variety of recommendations models

- ☑ Designed for eCommerce use cases
- ☑ Supports B2B use cases like complex catalogs, dynamic pricing, fitment, & more

On average, our customers see:

10-15%
Increase in Online Revenue*

8%
Increase in Average Order Value

17%
Increase in Add to Cart

25%
Increase in Conversion Rate

when switching from a legacy platform

Get the **best-in-class** product discovery solution that is revolutionizing eCommerce now!

Learn more ›

Want to learn more about GroupBy's Search & Product Discovery?

www.groupbyinc.com

Speak to one of our eCommerce experts today!

Contact Us ›

Citations

1   https://www.census.gov/retail/ecommerce.html
2   https://blog.hubspot.com/marketing/how-each-generation-shops-differently
3   https://www.thinkwithgoogle.com/consumer-insights/consumer-trends/mobile-site-load-time-statistics/
4   https://blog.hubspot.com/marketing/how-each-generation-shops-differently
5   Must-Have E-Commerce Features, Forrester Research, Inc, February 2022
6   Omnichannel: The path to value, McKinsey, April 2021
7   Five Findings From Forrester's Digital Experience Review™ Of Retail Mobile Sites, Forrester Research, Inc, October 2022
8   https://www.thinkwithgoogle.com/intl/en-ca/consumer-insights/consumer-journey/improving-the-customer-journey
9   https://www.trustradius.com/vendor-blog/2022-b2b-buying-disconnect-the-age-of-the-self-serve-buyer
10 https://www.gartner.com/en/newsroom/press-releases/2022-06-22-gartner-sales-survey-finbds-b2b-buyers-prefer-ordering-paying-through--
     digital-commerce
11 https://blog.hubspot.com/marketing/how-each-generation-shops-differently
12 https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/how-b2b-sales-have-changed-during-covid-19
13 https://www.gartner.com/en/newsroom/press-releases/2022-06-22-gartner-sales-survey-finbds-b2b-buyers-prefer-ordering-paying-through--
     digital-commerce
14 https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/these-eight-charts-show-how-covid-19-has-changed-b2b-sales-forever
15 https://www.retailcustomerexperience.com/news/mobile-devices-changing-consumer-shopping-behavior/
16 https://www.incisiv.com/2023-omnichannel-customer-service-index
17 https://www.mckinsey.com/capabilities/operations/our-insights/redefine-the-omnichannel-approach-focus-on-what-truly-matters
18 https://www.mckinsey.com/capabilities/growth-marketing-and-sales/solutions/periscope/our-insights/surveys/reinventing-retail
19 https://www.mytotalretail.com/article/what-consumers-expect-from-their-delivery-experiences/
20 https://www.forbes.com/sites/ronshevlin/2021/09/07/buy-now-pay-later-the-new-payments-trend-generating-100-billion-in-sales/?sh=609af87f2ffe
21 https://www.thinkwithgoogle.com/consumer-insights/consumer-trends/personalized-shopping-spending-statistics/
22 https://www.youtube.com/watch?v=CjN4EDfyNwA
23 https://nrf.com/media-center/press-releases/2022-retail-returns-rate-remains-flat-816-billion#:~:text=For%20the%20first%20time%20since,U.S.%20retail%20sales%20in%202022
24 https://www.thinkwithgoogle.com/consumer-insights/consumer-trends/in-store-smartphone-research-statistics/
25 https://www.business.com/articles/returning-customers-spend-67-more-than-new-customers-keep-your-customers-coming-back-with-a-recurring-revenue-sales-model/
26 https://www.groupbyinc.com/resources/webinars/next-gen-ecommerce-search-product-discovery-solutions
27 Critical Capabilities for Digital Commerce, Gartner Research, August 2022
28 https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/four-ways-to-achieve-pricing-excellence-in-retail-marketplaces
29 https://statista.com/statistics/861336/share-online-shopping-customers-vs-sales-by-platform/
30 https://cloud.google.com/blog/topics/retail/search-abandonment-impacts-retail-sales-brand-loyalty

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31   https://www.bigcommerce.com/articles/ecommerce/conversion-rate-optimization/
32   https://www.bigcommerce.com/blog/bounce-rates/
33   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
34   https://www.mckinsey.com/capabilities/growth-marketing-and-sales/solutions/periscope/our-insights/surveys/reinventing-retail
35   https://www.forbes.com/advisor/business/ecommerce-statistics/
36   https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gen-generation-z-and-its-implications-for-companies
37   https://www.shopify.com/ca/blog/ecommerce-conversion-rate
38   https://www.gartner.com/en/sales/insights/cso-update
39   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
40   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
41   https://www.cio.com/article/258818/internet-google-added-to-merriam-webster-dictionary.html
42   Must-Have E-Commerce Features, Forrester Research Inc., February 2022
43   https://trends.google.com/trends/story/US_cu_zIUiXGABAACOWM_en_en-US
44   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
45   https://cloud.google.com/blog/topics/retail/search-abandonment-impacts-retail-sales-brand-loyalty
46   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
47   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
48   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
49   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
50   Design Better Search, Forrester Research, Inc., March 2023
51   https://cloud.google.com/blog/topics/retail/search-abandonment-impacts-retail-sales-brand-loyalty
52   Must-Have E-Commerce Features, Forrester Research, Inc., February 2022
53   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
54   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail
55   https://www.mckinsey.com/capabilities/growth-marketing-and-sales/solutions/periscope/our-insights/surveys/reinventing-retail
56   https://cloud.google.com/blog/topics/retail/new-research-on-search-abandonment-in-retail

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