



2023 Retail Technology Report:
An Analysis of Market Trends,
Buying Behaviors, and Future
Opportunities



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2023 Retail Technology Report:

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EXECUTIVE SUMMARY

For retailers to compete in today's hypercompetitive landscape, they need to embrace innovation across their organizations. Doing so is required to meet and even exceed consumers' rising expectations for the customer experience (CX). However, the constraints of budget, talent and other resources necessitate that retailers invest wisely in technology systems that truly move the needle for their businesses, whether it be improved CX, revenue generation, cost savings, increased efficiency, etc. Chasing the shiny object is not a sustainable tech road map.

Total Retail has once again surveyed its audience of retail executives — and technology decision makers — in an effort to better understand the impact technology is having not only on their internal operations, but also on the shopping experiences of their customers. We asked them about their companies' current usage of technology, including identifying specific solutions within their tech stacks; future technology plans, including allocation of budget and how that may be adjusted; and the processes within their organizations for vetting and purchasing technology from third-party solution providers.

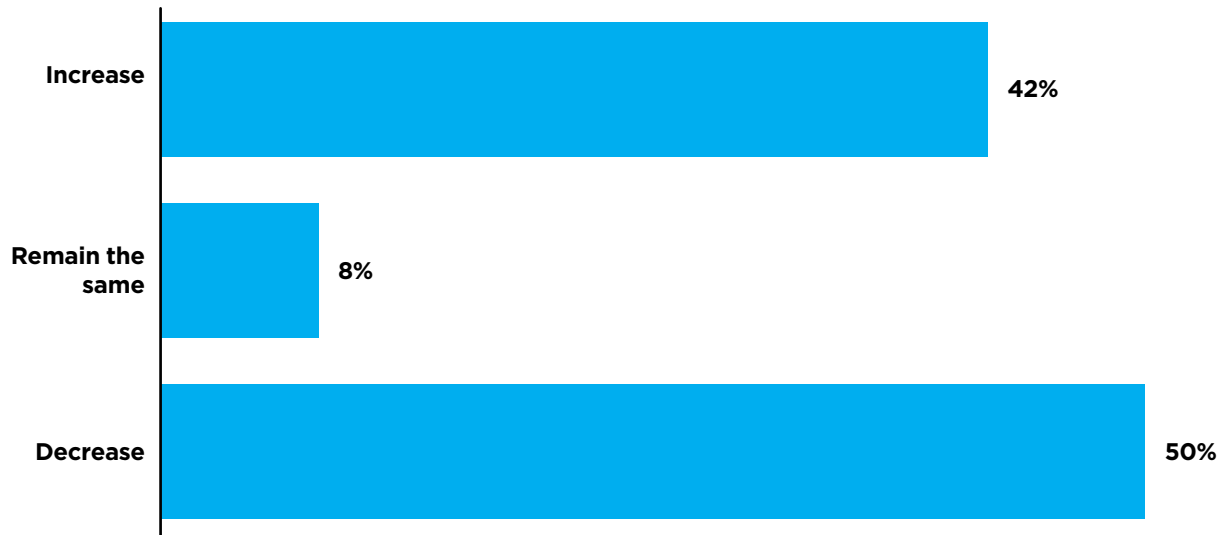
A total of 150 respondents took the online survey, which was conducted in May 2023 and June 2023. The respondents represented a mix of retail organizations (omnichannel, brick-and-mortar-only, online-only), as well as CPG and wholesale brands. The sizes of those companies ranged in annual revenue from enterprise (\$1 billion or greater) to small (less than \$1 million).

Here's a look at some of the key findings to emerge from the survey:

- Inventory management and order management systems once again top the list of technologies that retailers are currently investing in (53 percent each). Retailers are prioritizing tools that can help them manage their most valuable asset, their inventory, as well as distribute that inventory efficiently and cost effectively across multiple sales and distribution points. Increasing consumer demand for omnichannel shopping experiences, including the fulfillment of orders, makes these tech systems critical for retailers' operations going forward.
- Technology spending by retailers plateaus. Unlike the 2022 survey, when nearly three-quarters (74 percent) of respondents said they planned to increase their tech spending in the next 12 months, half of respondents this year will keep their tech spending flat. This pullback could be the result of a number of factors, including the threat of a recession, persistent inflationary pressure on goods and raw materials, rising transportation costs, among other factors.



Will your company's overall technology budget increase, decrease, or remain the same in the next 12 months?



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- For those retailers that are planning to increase their technology budget over the next 12 months, more than half (54 percent) will up spending by 6 percent to 10 percent. Similarly, for retailers that are planning to cut their technology budget in the next year, 40 percent said they will decrease spending by 6 percent to 10 percent, the most of any of the answer options.
- Artificial intelligence (AI), and more specifically generative AI, is the technology that retailers are most intrigued by and willing to increase their spending on. The multiple applications of AI across a retail organization as well as its proven benefits have led to many retail executives figuring out how they can incorporate the technology into their businesses. Therefore, it's likely that we've just scratched the surface when assessing the impact that AI, and particularly generative AI, will have on the retail industry.
- Retailers are primarily making tech investment decisions based on cost of ownership as well as ease of integration with existing systems. Regarding the latter, it aligns with respondents' answers to the following question: What are the top challenges when implementing a new technology into your business? The No. 1 response, cited by 75 percent of respondents, was "integrating with existing technology."

Total Retail's 2023 Retail Technology Report, which was produced in conjunction with [KWI](#), a retail point-of-sale and omnichannel platform, features the data collected from our survey as well as analysis into what it means for the industry. Retailers can use this report as a benchmarking tool to measure how their technology stack compares to the rest of the industry, as well as get inspiration and ideas for how they might want to make budget adjustments based on future growth opportunities.

Furthermore, the data on retail organizations' tech buying processes offers third-party technology service providers valuable insight into how businesses are making budget decisions. This information can be used to hone product offerings and sales pitches in an effort to better serve and retain existing clients as well as acquire new ones.

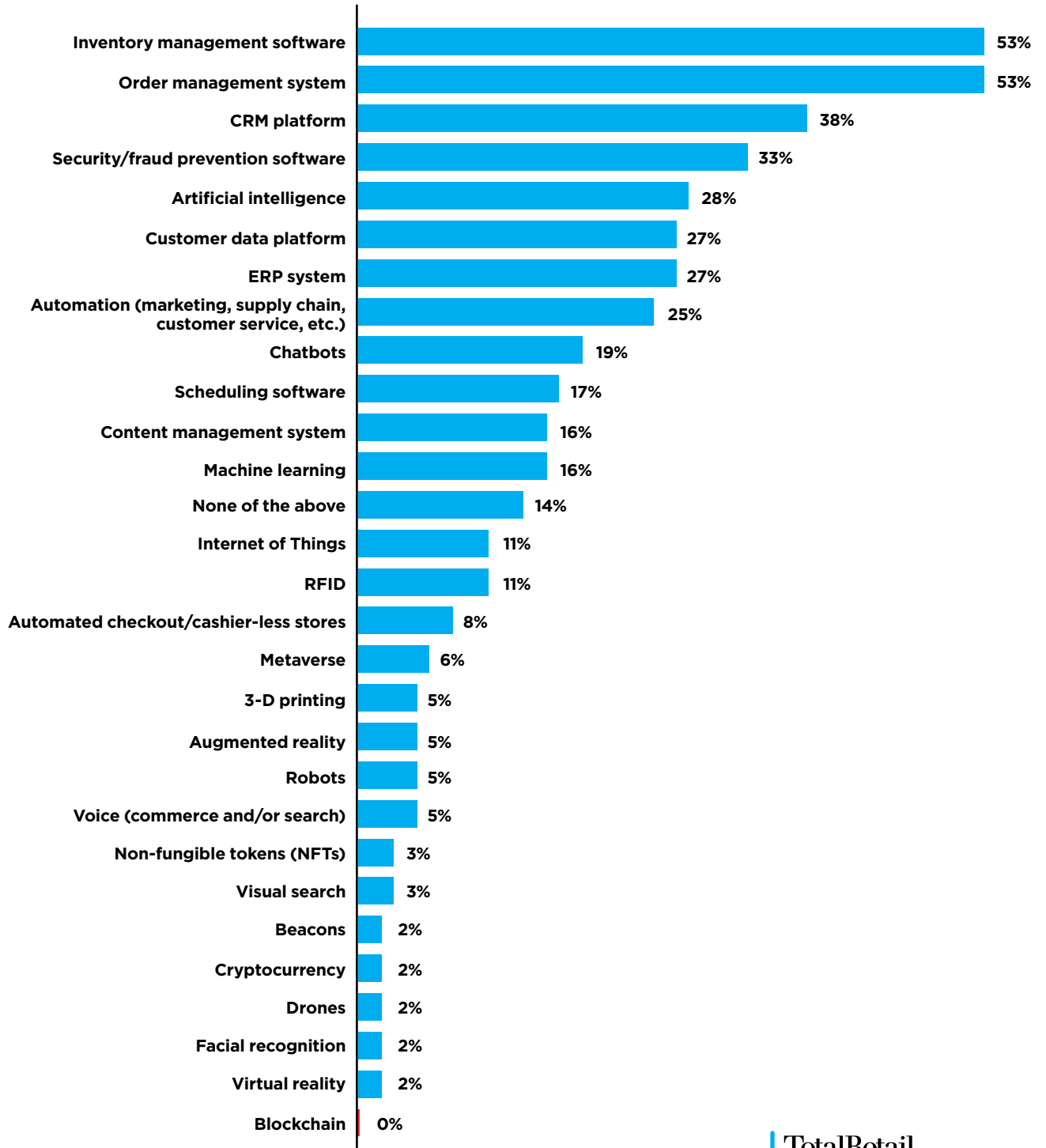


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SURVEY DATA AND ANALYSIS

Inventory and Order Management Take Priority for Retailers



Q: Which of the following technologies is your company currently using? (Check all that apply.)

This chart identifies the technology systems that retailers are currently using. There's a wide delta between the top two selections — inventory management system, order management system — and the other technologies listed. This is indicative of the growing importance of omnichannel operations, including the fulfillment of orders. Retailers need complete visibility into their inventory at all times to quickly and cost effectively fulfill orders, no matter the transaction channel. This can't be done at scale without an IMS and/or an OMS.

Retailers are also placing value in technology systems that can help them better manage the customer relationship, including CRM systems and customer data platforms. Personalizing the customer experience across each touchpoint yields more profitable, long-term relationships. And given rising customer acquisition costs (CACs), it's become even more critical that retailers retain their customers beyond their first purchase. The best way to do that is by creating personalized experiences fueled by customer data.



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AI, Automation, Security Are Areas Slated for Increased Tech Investment

	INCREASE	DECREASE	REMAIN THE SAME	I DON'T KNOW	WEIGHTED AVG
Cryptocurrency	100%	0%	0%	0%	1%
Facial recognition	100%	0%	0%	0%	1%
Machine learning	75%	13%	0%	13%	1.5%
Artificial intelligence	69%	0%	19%	13%	1.75%
Augmented reality	67%	33%	0%	0%	1.33%
Automation (marketing, supply chain, customer service, etc.)	56%	6%	25%	13%	1.94%
Security/fraud prevention software	47%	5%	42%	5%	2.05%
Internet of Things	43%	0%	29%	29%	2.43%
Customer data platform	38%	13%	44%	6%	2.19%
ERP system	38%	19%	44%	0%	2.06%
Robots	33%	0%	33%	33%	2.67%
Voice (commerce and/or search)	33%	0%	33%	33%	2.67%
Content management system	33%	44%	22%	0%	1.89%
Chatbots	27%	9%	45%	18%	2.55%
Metaverse	25%	0%	75%	0%	2.5%
Inventory management software	23%	10%	65%	3%	2.48%
Automated checkout/cashier-less stores	20%	20%	40%	20%	2.6%
Order management system	19%	13%	65%	3%	2.52%
CRM platform	18%	14%	64%	5%	2.55%
RFID	14%	14%	57%	14%	2.71%
3-D printing	0%	0%	67%	33%	3.33%
Beacons	0%	0%	100%	0%	3%
Drones	0%	0%	100%	0%	3%
Non-fungible tokens (NFTs)	0%	50%	0%	50%	3%
Scheduling software	0%	9%	82%	9%	3%
Virtual reality	0%	0%	100%	0%	3%
Visual search	0%	0%	100%	0%	3%
Blockchain	0%	0%	0%	0%	0%

For each of the technologies listed below, indicate whether your spending will increase, decrease or remain the same in the next 12 months.

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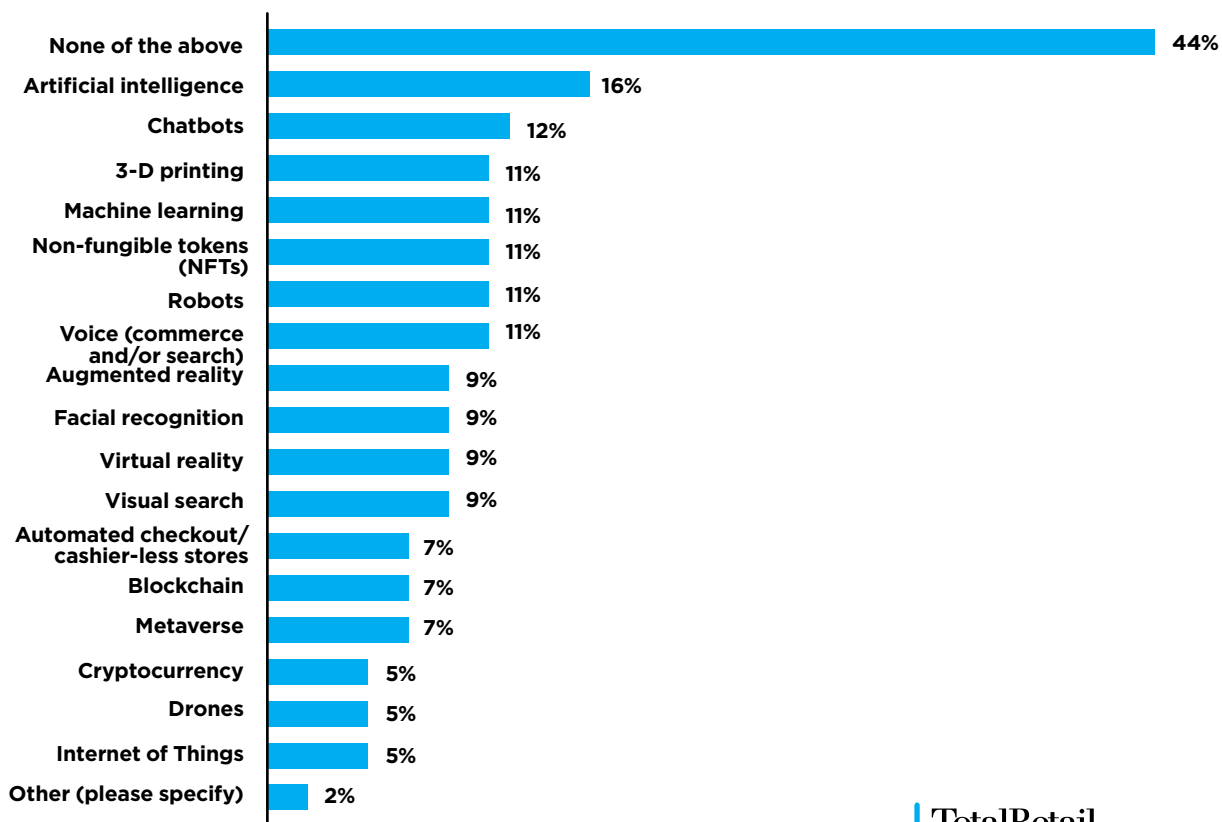


Retailers plan to continue to up their usage of — and spending on — AI in the next year. This aligns with the 2022 survey, which found that 71 percent of retailers planned to increase spending on AI in the next 12 months. This aligns closely with the No. 2 choice for the largest percentage of respondents, automation. In order for retailers to be able automate marketing, customer service, supply chain, operations, merchandising, among other functions, they need tools such as AI and machine learning to quickly and accurately analyze massive data sets and determine the next best action.

The third area in which retailers are planning to increase budget allocation is for security/fraud prevention software. Given the rise we've seen in retail theft — the National Retail Federation reported total annual shrink reached \$94.5 billion in 2021, up from \$90.8 billion from 2020 — and the toll it's having on retailers' bottom lines, it's wise for brands to seek solutions that can help protect their businesses and customers, particularly their data, from theft.

Conversely, retailers are bearish at the moment on content management systems (CMS), with it being the technology most frequently cited as being targeted for a decrease in spending in the next 12 months. This could speak more to the overall cautious approach that retailers are taking when it comes to tech spending, and less of an indictment on the efficacy or value of a CMS. With economic challenges and a more budget-conscious consumer, retailers are being forced to make difficult decisions on where to allocate tech funds.

Adoption of Emerging Technology Slows



Which of the following technologies are you NOT currently investing in but planning to invest in within the next 12 months.

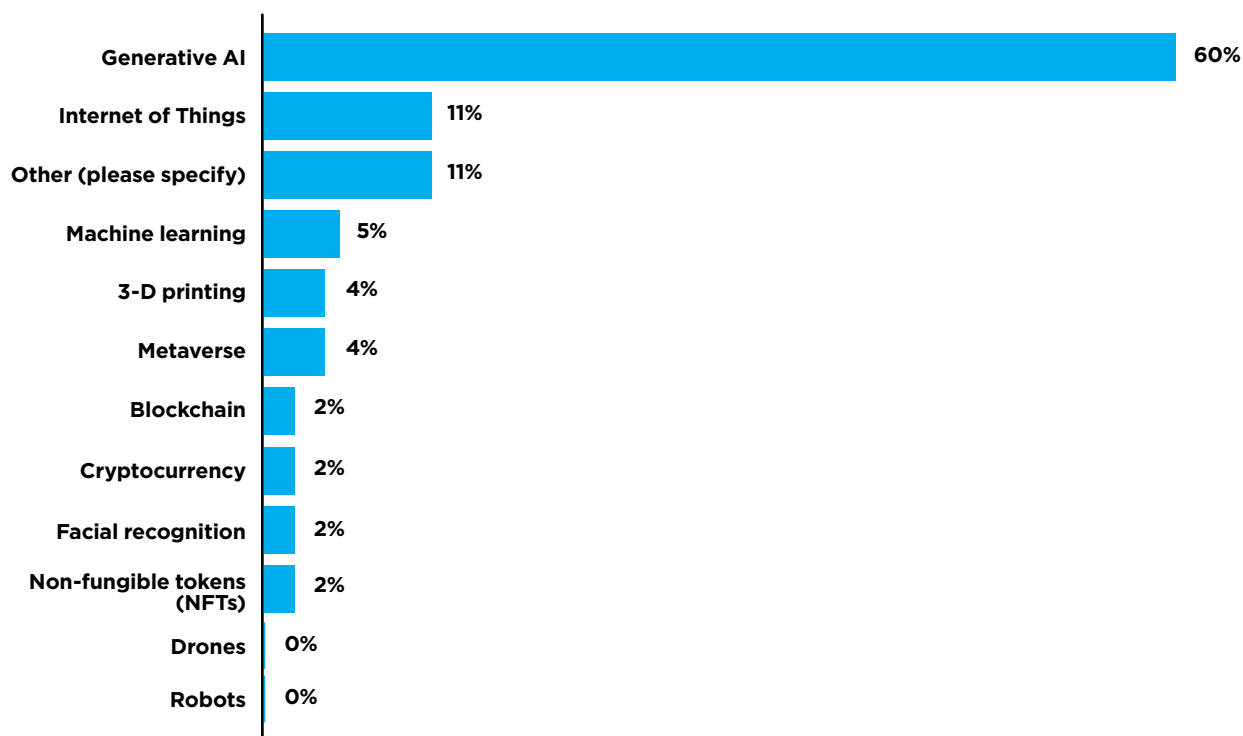
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When asked to identify the emerging technologies that they're not currently investing in but plan to do so in the next 12 months, the respondents' top choice was telling. Forty-four percent of respondents won't be allocating budget to any of the emerging technologies listed in the chart above. As noted previously, companies are taking a more cautious approach to their tech spending due to the uncertainty in the retail market. With tech spending remaining flat or even decreasing in some cases, the newer, less proven systems and tools are prime targets to be cut from budgets. That likely is a primary reason why "None of the above" was the top answer choice for respondents.

Even AI, for all its hype, is expected to attract new investments from just 16 percent of respondents. However, retailers may be missing an opportunity here, as those that are already using AI within their business are overwhelmingly planning to increase spending on the technology. They're doing so because it works.

Yet the paradigm shifts when the subject of generative AI comes up, as you can see in the below chart.

Generative AI the Next Big Thing? Retailers Think So



Thinking about the retail industry as a whole, which emerging technology do you believe will have the biggest impact within the next 12 months?

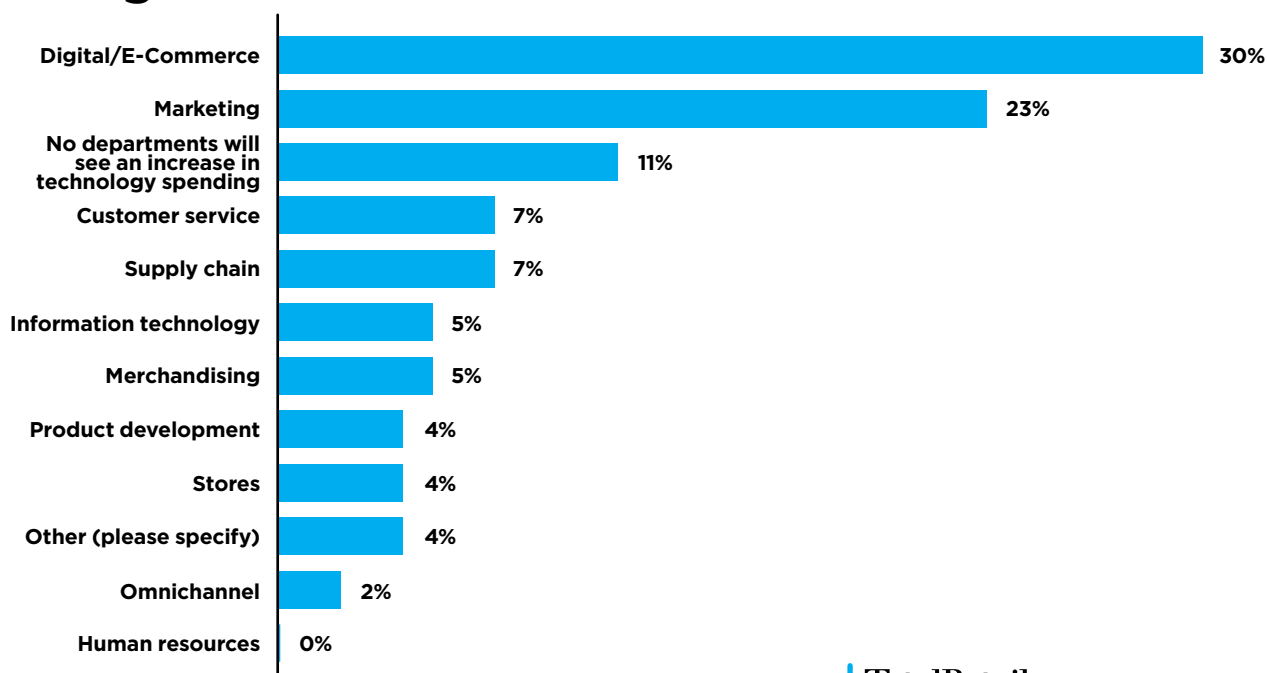
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Here are some comments from respondents on why they believe generative AI will be the emerging technology to have the biggest impact on the retail industry in the next 12 months:

- When set up and deployed properly, generative AI works very well as a sales tool for customer conversions.
- Equivalent potential for customer value with the potential for personalization/learning for the business. Two-way street with the ability to quickly adjust.
- Content creation at a fraction of the time.
- Dramatic productivity time improvements. Better info analysis.
- Generative AI has brought back the game-changing mechanisms to automate and remove certain mundane tasks in an organization. Investing in those things can improve productivity by 60 percent.
- AI has the ability to impact all facets of retail from customer service to content creation to website development and more.

Retailers recognize the potential value that AI can generate for their businesses. It's therefore not surprising that it has been chosen as the emerging tech most likely to have the biggest impact on the industry for four years running. At this point it's debatable whether AI is an emerging technology; it's more likely to be a must-have tool for any successful retail business.

Shift to Digital Extends to Departmental Tech Budgets



Within the next 12 months, which department within your organization will see the biggest percentage INCREASE in technology budget?

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The pandemic further accelerated the growth of e-commerce, and that boom, while having since slowed from its peak, is impacting retailers' technology planning. More resources (as measured by percentage increase) are being funneled to digital/e-commerce teams than any other department within retail organizations. Optimizing the experiences of online shoppers is paramount to winning their loyalty, and technology such as OMS, IMS, CRM and AI is being leveraged in this pursuit.

The department slated to see the second biggest percentage increase in technology spending is marketing. Given rising CACs, especially online, it's not surprising that retailers would want to support their marketing departments with increased funds to not only attract new buyers, but to retain existing ones as well. Creating the personalized marketing messages that consumers engage with and respond to most frequently requires data tools. Spending on those tools, especially AI, is becoming necessary for retailers to build relationships with their customers and prevent them from going to a competitor.

Human resources is at the bottom of the list, indicating that at least for the time being retailers are prioritizing customer-facing departments vs. internal departments. However, that shouldn't diminish the importance that talent plays in a successful retail organization. A well-balanced commitment to excellence in people, process and technology is a blueprint for success.

The Factors Influencing Retailers' Technology Purchasing Decisions

	1	2	3	4	5	Score
Cost	52%	19%	19%	6%	6%	4.06%
Integration with existing systems	31%	31%	20%	9%	7%	3.7%
Time to implement	4%	24%	22%	31%	19%	2.63%
Vendor support	2%	19%	33%	30%	17%	2.59%
Amount of employee training required	11%	7%	6%	24%	52%	2.02

Rank the following factors on level of importance when making a technology investment decision (1 being most important, 5 being least important).

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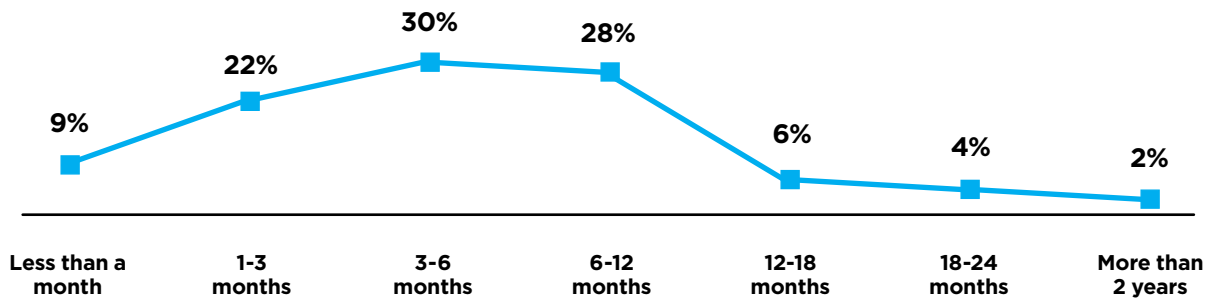
Retailers are analyzing two key factors when making technology purchase decisions: cost and integration with existing systems. Regarding the former, retailers are seeking out value as they operate in many cases with less capital to spend. They're targeting technology solutions that have proven to yield positive ROI, whether through increased revenues, decreased costs, or some combination of the two.

For the latter, it makes sense that retailers would be prioritizing how well a new tech solution would integrate with existing systems, as that is the No. 1 challenge identified by respondents when purchasing new technology (more on that to come). Integrated systems that provide frictionless experiences for users, both customers and employees, are more effective at driving desired results.

Seamless integration between tech systems is also required to execute the omnichannel experiences customers have to come to expect and rely upon. For example, inventory and order management systems working together to enable cross-channel fulfillment. Or CRM and marketing automation platforms, with customer data powering personalized messaging delivered via automated email, SMS, and social media campaigns.



Retailers Spending More Time Contemplating Tech Purchases



Thinking about a moderate to major technology purchase at your company, how long on average does the vendor selection process take?

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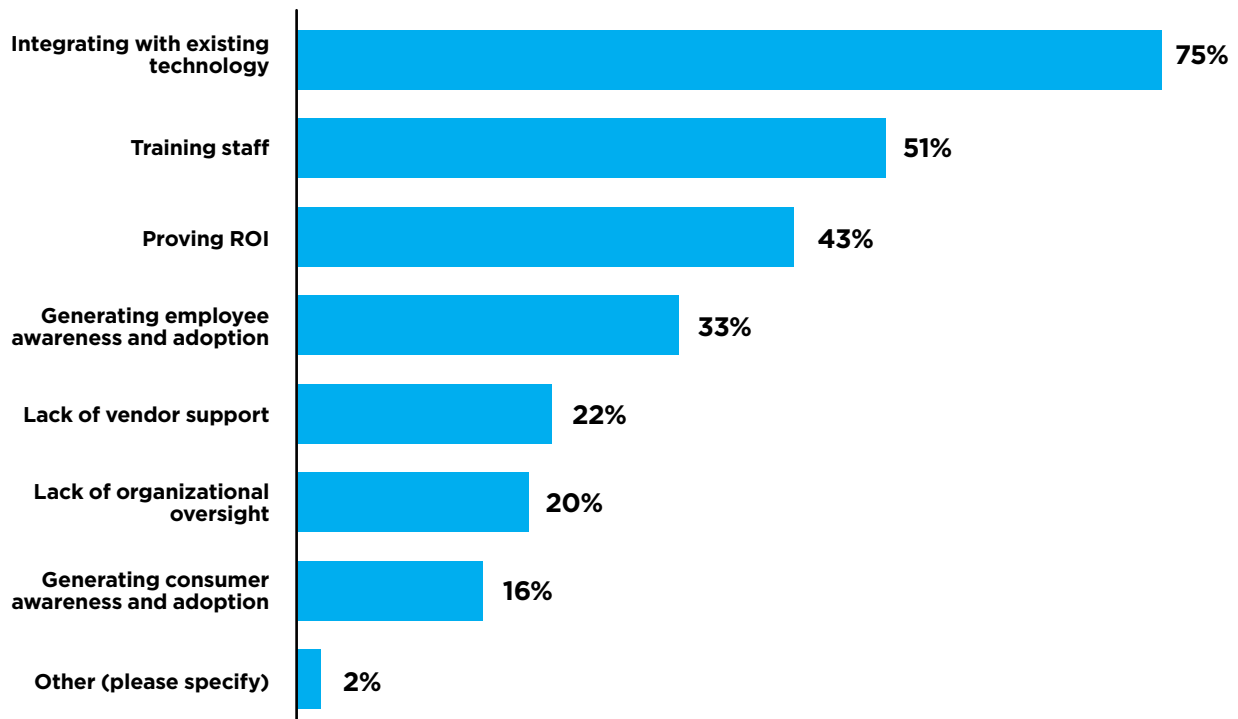
Coinciding with retailers' overall pullback on tech spending is that, on average, they're taking longer to make final vendor decisions for moderate to major technology purchases. Twenty-eight percent of respondents in our 2023 survey said they're taking six months to a year to make such decisions; this is compared to 14 percent that said the same in our 2022 survey. With so many service providers in the marketplace and retailers wanting to ensure they're getting the best return on investment, vetting processes are being extended.

The sweet spot is three months to six months for the majority of respondents (30 percent) to make moderate to major technology purchase decisions. While down from the 35 percent that said the same in the 2022 survey, the time frame was once again the No. 1 choice for respondents. While being thorough in the vetting process to ensure that they're choosing the right partner and solution for their business is prudent, retailers must be cognizant of the speed at which the industry landscape is evolving. Those that wait too long risk being passed by.

For most respondents, the vetting process includes a limited number of service providers in the consideration mix. Nearly two-thirds of respondents (63 percent) said they assess three service providers when considering a moderate to major technology purchase, easily outpacing the next most popular answer choice of four service providers (19 percent).

“While being thorough in the vetting process to ensure that they’re choosing the right partner and solution for their business is prudent, retailers must be cognizant of the speed at which the industry landscape is evolving. Those that wait too long risk being passed by.”

Integration Poses Top Challenge for Retailers When Implementing New Tech



What are the top challenges when implementing a new technology into your business? (Choose up to three.)

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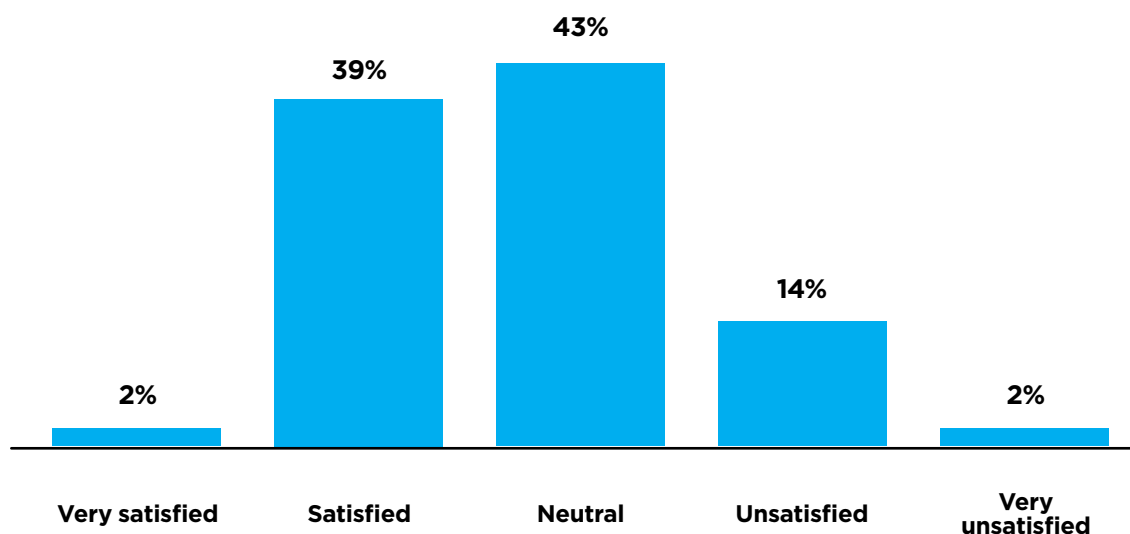
As noted previously, when retailers are evaluating technology solutions, they must carefully examine how such a solution would complement its existing tech stack, including how easily it integrates with existing systems. According to our data, too many retailers are struggling with this. For the second consecutive year, “integrating with existing technology” was the most frequently cited challenge for retailers when implementing a new technology into their business. Perhaps more troubling is that the percentage of respondents choosing this jumped from 61 percent in 2022 to 75 percent in this year’s survey.

Next on the list of challenges is training staff on new tech solutions. With the volatility we’ve seen in the labor market, including many retailers reporting challenges filling open roles within their IT teams, it’s both new technologies and a lack of people that are hamstringing retailers’ implementation efforts. A potential solution to this challenge is finding a true vendor partner, one that’s there to provide support both during the onboarding and implementation process as well as throughout the lifetime of your contract.

The respondents elaborated on their biggest challenge when implementing a new technology into their business in an open-ended follow-up question. Here are some of their responses:

- Because things rapidly change it can be difficult integrating newer things with our older software. But the older software is paid for, so we don't want to upgrade unless we absolutely have to.
- Since COVID-19 vendor support is limited to online chat, community forums and email responses. Sometimes talking to an actual person is a lot quicker.
- Staff training will be at some form of cost. Not in the budget.
- Important facets of present technology are not “up-to-date” and cost factor(s) to implement with new technology are causing challenges to do the same.
- Ripple effect. ROI and even vendor support are a challenge but still a challenge in a vacuum; understanding and strategizing the rest of the ecosystem impact is a struggle in any org to have the right people/departments at the table and putting aside personal stakes.
- Integration. Cost would perhaps be the more logical concern, but software integration is huge. If it doesn't work well and as close to seamless as possible, then nothing else matters.
- Seamless integration into our existing tech stack is always tricky. Solutions are never as plug and play as they promise.

Room for Improvement When it Comes to Vendor Support



Rate your satisfaction level for the support your organization receives from its current technology vendor partners.

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This chart should be concerning to technology service providers — while also encouraging as it presents an opportunity for vendors to differentiate themselves from others in the marketplace. Less than half of respondents reported they were either satisfied or very satisfied with the level of support they are receiving from its current technology vendor partners. Conversely, 59 percent are either neutral, unsatisfied or very unsatisfied.

To gain retail clients' trust — and loyalty — vendors need to offer comprehensive support solutions throughout their partnership. This is especially important at the time of implementation, when teams are still learning all the features and functionalities of solutions and how they can best be optimized for their specific businesses. Given the data above, if proper support is provided it can give your business a leg-up on the competition.

CONCLUSION

It's an interesting time for retailers as they think about their individual company's tech stack as well as the role technology has had and will continue to have on the industry going forward. On the one hand consumer behavior is disrupting the traditional retail model, transitioning to more digital- and omnichannel-centric interactions with retailers. This shift has forced retailers to evolve and invest in technological innovation to keep pace with not only consumers, but their industry competitors as well.

Conversely, an uncertain economic environment has resulted in many retailers stepping back and taking stock of the technology that's truly integral to the success of their businesses vs. what's a "nice-to-have" (and thus not a "must-have"). In tougher times, the focus on ROI from technology systems ratchets up. Budgets are tighter and spending is more closely monitored by C-suites and company decision makers. We've begun to see this dynamic take shape in the retail industry. In fact, our survey data confirms it.

The survey data featured in the 2023 Retail Technology Report reveals that retailers are reassessing the role of technology within their organizations. A few key themes emerged from the data:

- technology spending has slowed as retailers take a more cautious approach to new investments;
- retailers have prioritized systems such as order management and inventory management to help them better manage and protect their merchandise across multiple distribution channels, including stores;
- artificial intelligence is the technology that retailers hold the most promise for going forward; and
- service providers have room for improvement to better support their retail clients.

The impact technology can have on the customer experience — the primary influencer in consumers' purchase decisions — is ever-growing. Customer expectations for frictionless purchase journeys are rising. It's the responsibility of retailers to meet those expectations. The reward for getting it right is customer loyalty, improved operations, and a healthier bottom line.



METHODOLOGY

This online survey was conducted in May 2023 and June 2023. A total of 150 respondents completed the survey. Those respondents comprised a portion of the Total Retail audience, including omnichannel retailers, brick-and-mortar-only retailers, online-only retailers, CPG brands, and wholesalers. The sizes of those companies ranged in annual revenue from \$1 billion or greater to less than \$1 million.



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WHO WE ARE



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Designed to neatly integrate with retail tech stacks, our platform helps retailers flawlessly execute omnichannel strategies like endless aisle, BORIS, and BOPIS — and be ready for whatever comes next.

Our solutions are supported by a team of retail experts who, for decades, have helped retailers like Pandora, Oscar de la Renta, Bluemercury, Coca-Cola, and David Yurman navigate change and stay one step ahead. Learn more at [KWI.com](https://www.kwi.com).



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