

TCS Global cloud study for retail

How Cloud Drives
Business Innovation



From fluctuating customer behavior to supply chain backlogs, retailers have faced non-stop dynamic change over the past few years. For the majority, cloud has played an essential role every step of the way.

Once viewed primarily as a one-dimensional IT infrastructure, cloud has become both a strategy for business transformation and a catalyst for innovation. It provides the unifying digital fabric that forms the foundation for integrated, seamless operations and the ability to generate powerful, data-driven insights.

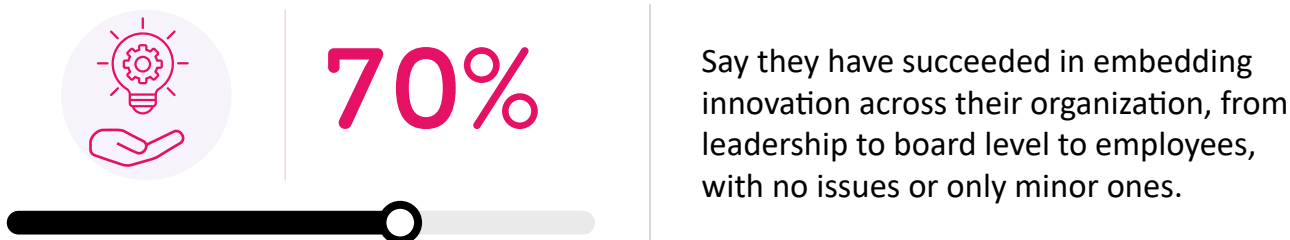
The global cloud study from TCS reveals that while retailers recognize the role cloud-enabled innovation can play toward new ways of connecting data, people, and knowledge, they have further to go. In fact, they stand at a crossroads.

With no end in sight to macroeconomic pressures, cost optimization holds significant appeal. But for long-term advantage, innovation is necessary to meet the rising tide of consumer expectations and expanding ecosystems. As the study findings reveal, retailers are struggling to balance these conflicting priorities.



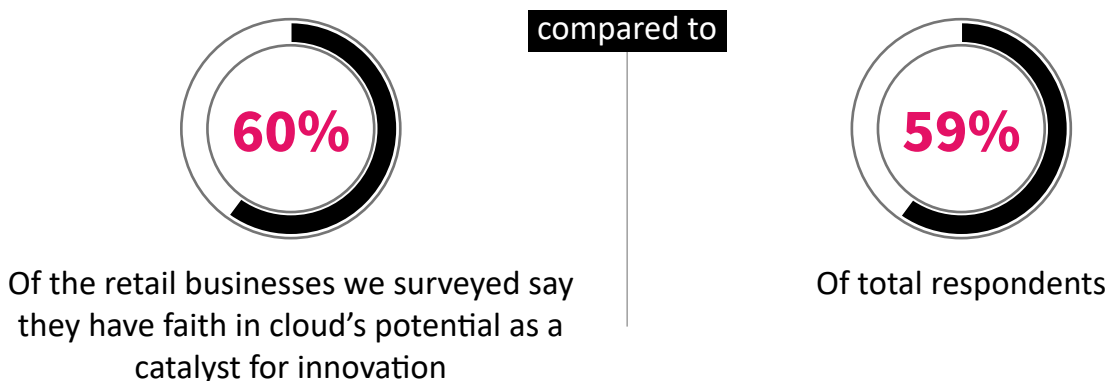
Putting innovation front and center

The majority of retailers surveyed in the study – like their counterparts in other industries – can point to an established culture for innovation at their companies.

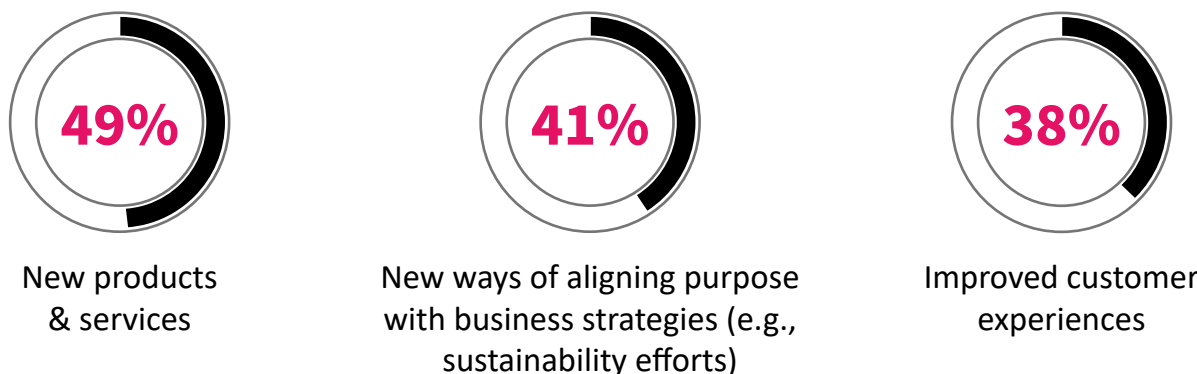


Percentage of respondents who say that they have established a culture of digital innovation, from leadership to board level to employees

Respondents also acknowledge cloud's role in innovation strategies, with retailers indicating a slightly greater level of confidence in its potential compared to total respondents across all industries.



Where do they want to see innovation? Top wish-list items include new products and services and improved customer experiences. Further, retail respondents ranked “new ways of aligning purpose with business strategies (e.g., sustainability efforts)” as one of the top goals for cloud-enabled innovation.



Q. “Pick the top 3 most desired outcomes for cloud-enabled innovation at your enterprise.”

Retailers and the journey to cloud maturity

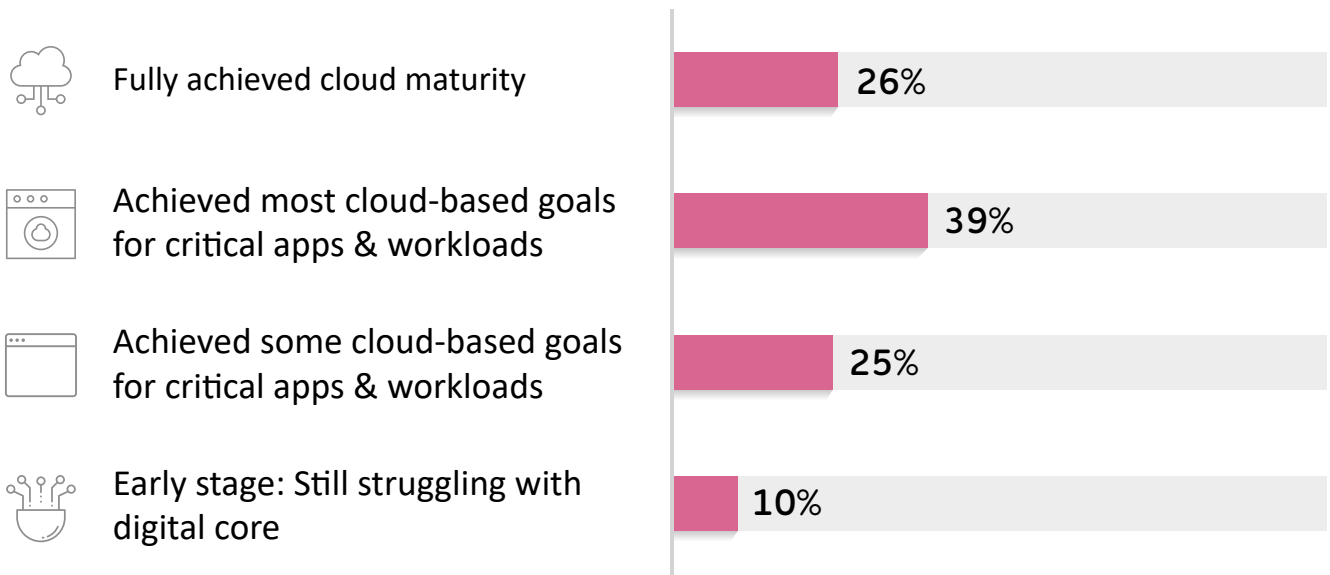
Retailers are well within reach of achieving their goals for cloud-enabled innovation. Many have already achieved initial success using cloud to establish a unified commerce strategy to enable seamless operations across multiple channels.

With early modernization efforts underway, organizations can begin unlocking innovation with business processes and models for greater insights and customer experiences. Retailers can create linkages across channels and data sources to gather digital intelligence through data analytics and AI-further enabling hyper-personalized customer interactions and insights into new products and services. Eventually, retailers begin maturing into a cloud-native environment and participating in transformative partner ecosystems that can spark product innovations and deliver frictionless experiences.

As retailers progress along the cloud journey, they maximize the exponential value of cloud as they achieve each of these horizons.



However, despite the accelerated pace of investment and adoption throughout the past few years, only 26% of retail respondents say they are fully cloud mature. Interestingly, the numbers were similar for both retail categories surveyed: ecommerce and brick-and-mortar.



Q. How would you describe your company's cloud maturity as it relates to your critical apps and workloads? N=80

Like the other industries, retail is largely in the initial stages of the full ecosystem participation indicative of later-stage cloud maturity. However, retail is farther along in the implementation phases compared to industry peers (48% vs 38%).

	Total respondents	Retail
No plans to participate in ecosystems	15%	15%
Initial stage: Assessing requirements and planning participation in ecosystems	47%	38%
Early stage: Implementing industry, customer or partner ecosystems	19%	31%
Middle stage: Initial participation in industry, customer or partner ecosystems	10%	13%
Late stage: Firmly entrenched and participating in industry, customer and partner ecosystems	9%	4%

Q. Please rank your digital ecosystem maturity level. In this survey, a digital ecosystem is defined as a complex network of stakeholders that connect online and interacts digitally in ways that create value for all.

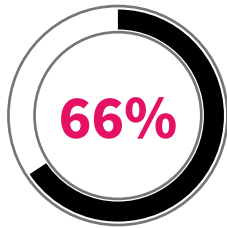
From belief to action:

Building sustainable ecosystems

Another top wish-list item for cloud-enabled innovation – ‘new ways of aligning purpose with business strategies (e.g., sustainability efforts)’ – reflects larger shifts toward a collective imperative to build sustainable, inclusive futures. This imperative is particularly urgent for retailers, who face customer demands for eco-friendly solutions aligned to a circular economy.

As the [TCS Consumer Retail Survey](#) noted, all age groups surveyed cited the importance of items being sustainably made and responsibly sourced for purchasing decisions. They also signaled a willingness to pay more for them: 69% of all consumers surveyed reported paying more for sustainably made and responsibly sourced items in the past six months.

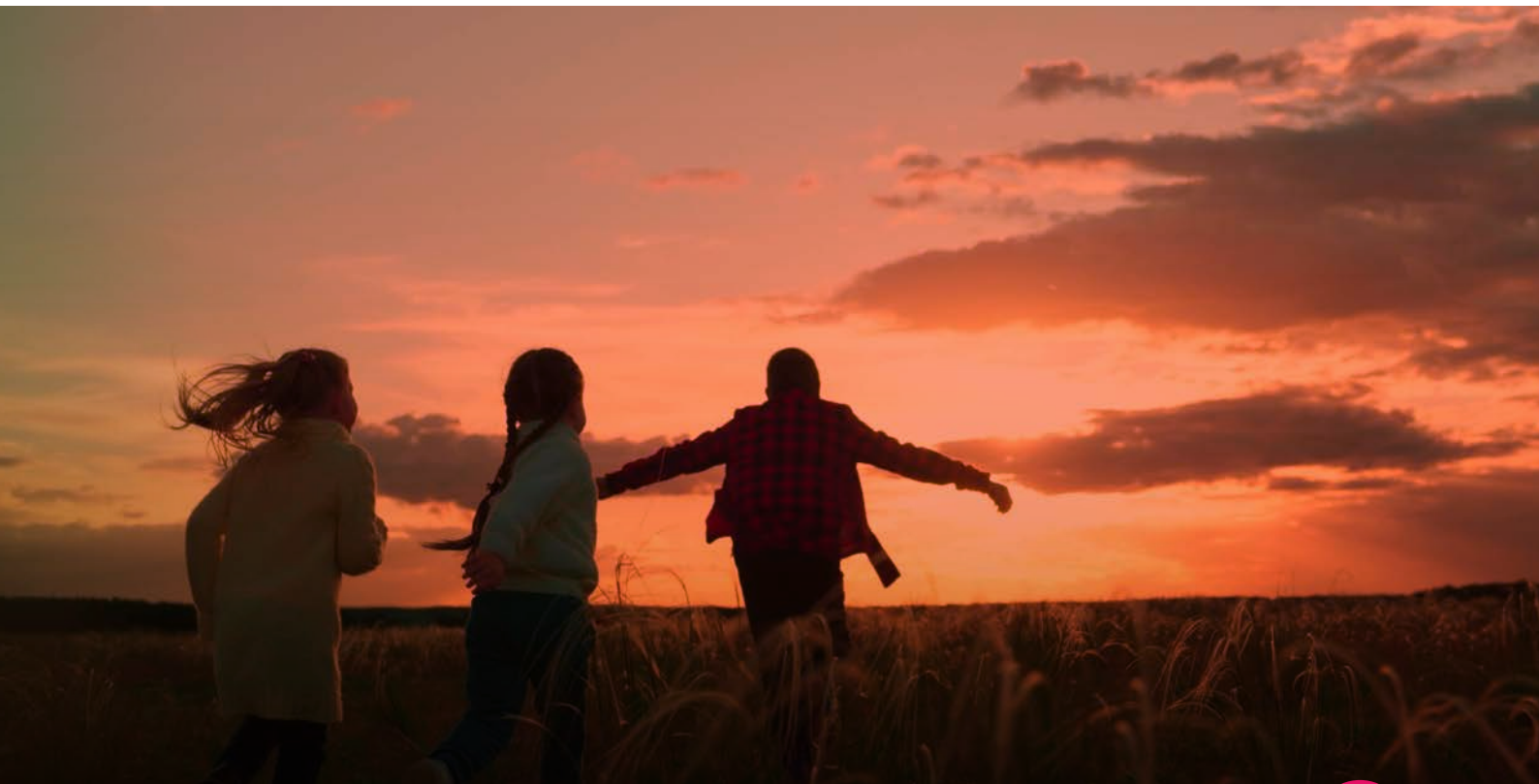
When it comes to their own sustainability goals, two-thirds of retailers credit cloud as a factor in helping to achieve them.



Of respondents say cloud technologies have helped their organizations achieve sustainability goals



Say they are using cloud to track air and water quality management



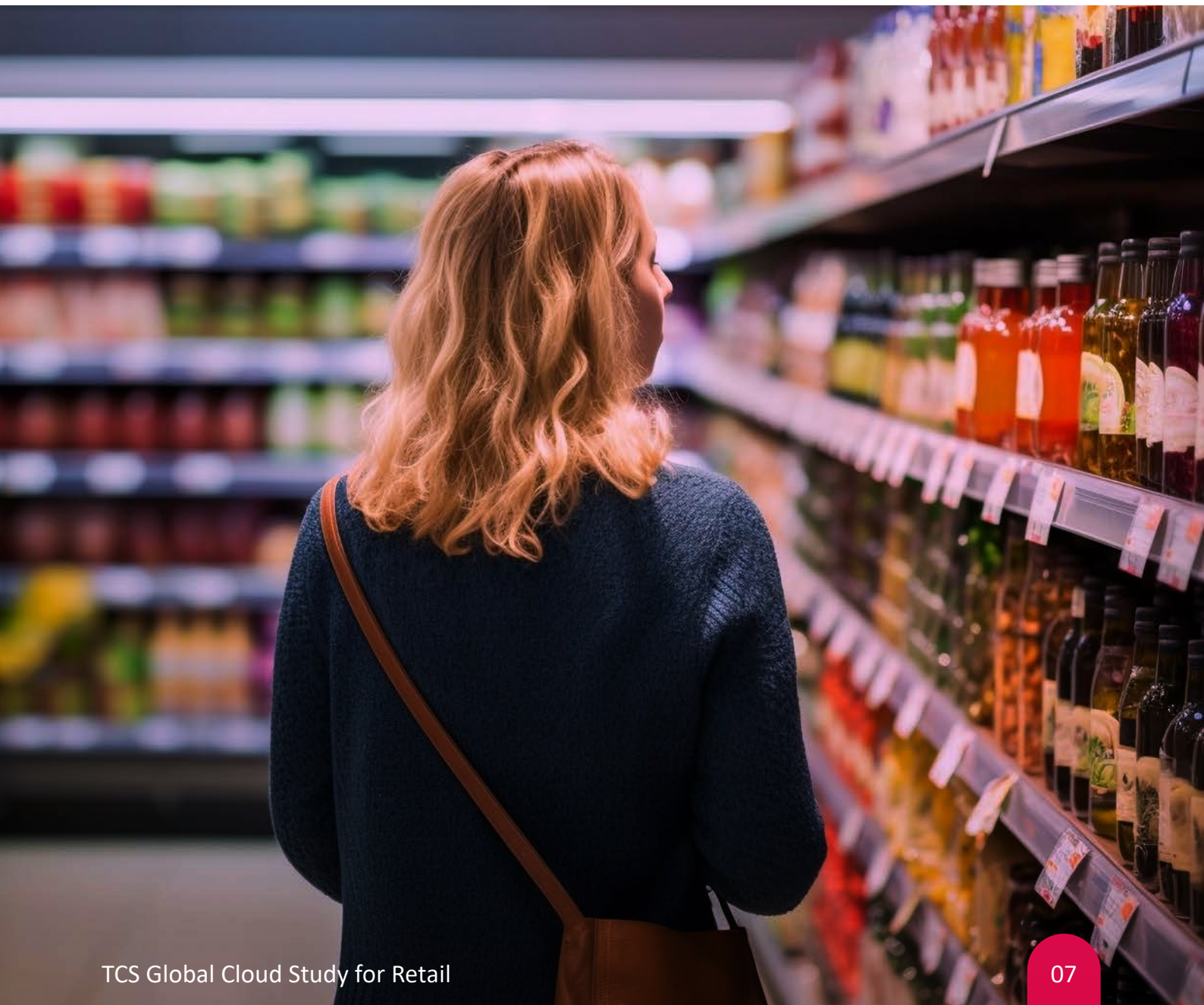
Overcoming barriers to accelerate innovation

Early discussions of cloud and innovation in the retail industry revolved around the shift to pay-per-use OpEx models that allowed for greater experimentation and innovation. Cloud further revolutionized the industry by providing access to a flexible IT infrastructure that let retailers scale up and down based on demand.

Today, retailers continue to use cloud to experiment with powerful new AI capabilities for new ways to compete, along with marketplaces that act as building blocks for faster development.

In short, retailers are making good progress toward innovation outcomes.

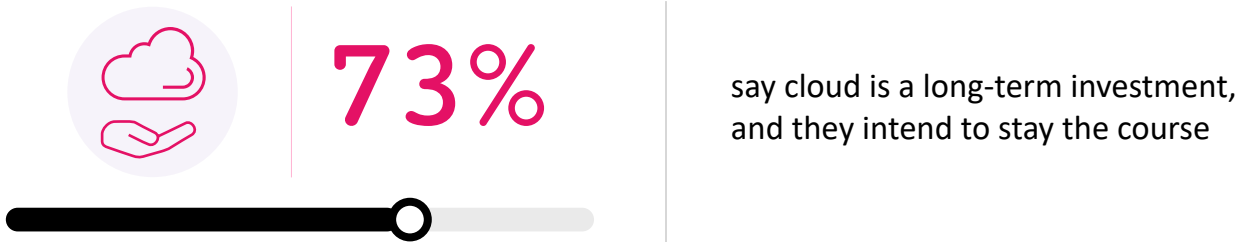
Yet the path there is not without challenges. Respondents indicate that cost pressures, questions of cloud ownership and difficulties around complex, fragmented operations are areas of particular concern.



Implementation and ROI obstacles

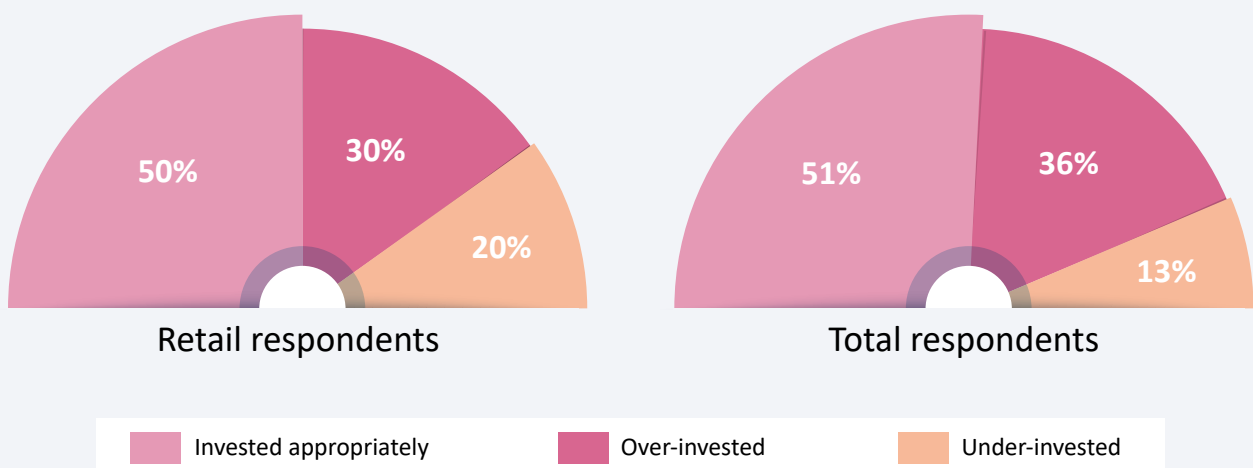
Inflationary concerns and the ever-present threat of recession have kept spending in check for consumers. This in turn has generated considerable uncertainty with those in the retail industry. Where and how should they invest for the future?

Overall, retailers remain steadfast in their conviction that the path forward includes cloud: Nearly three-fourths of respondents say their commitment to cloud remains strong and take the long view of cloud investments.



Percentage of respondents selecting “agree” or “significantly agree” that “our leadership recognizes that cloud is a long-term investment and intends to stay the course”

Yet a sizable number of respondents see room for improvement when it comes to aligning their cloud investments with their requirements. Just half say they have invested appropriately in cloud in the past three years, while nearly a third (30%) say they over-invested. On the other hand, 20% say they under-invested, compared to just 13% of the total respondents.



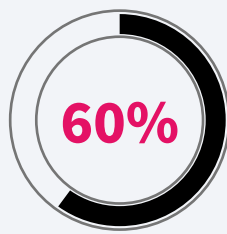
Q. “Thinking back on the past 3 years, how would you describe your company's cloud investments?”

Nearly a quarter (20%) of retail respondents also say they face increasing pressure and scrutiny to justify cloud investments. Given how important it will be to invest in the right technologies, many survey respondents are prioritizing specific areas.

Betting on AI, cautiously

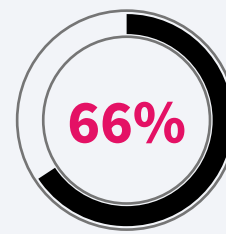
Respondents across all industries recognize the importance of harnessing artificial intelligence, including the retail industry, which is highly dependent on the data-fueled insights that underpin customer experiences. For instance, providing real-time personalized offers to shoppers as they are browsing – checking their history, checking promotions, checking inventory – requires data-driven innovation.

Yet when asked about plans to increase investments in the next one to two years, retailers tended to take a more conservative approach compared to their peers in other industries.



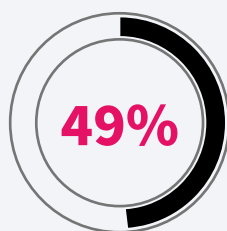
Of retail respondents say they increased investments in Artificial Intelligence/Machine Learning in the past 1 – 2 years

and



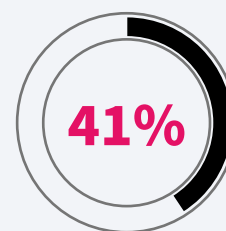
Say they plan to invest in AI/ML in the next 1 – 2 years

In addition,



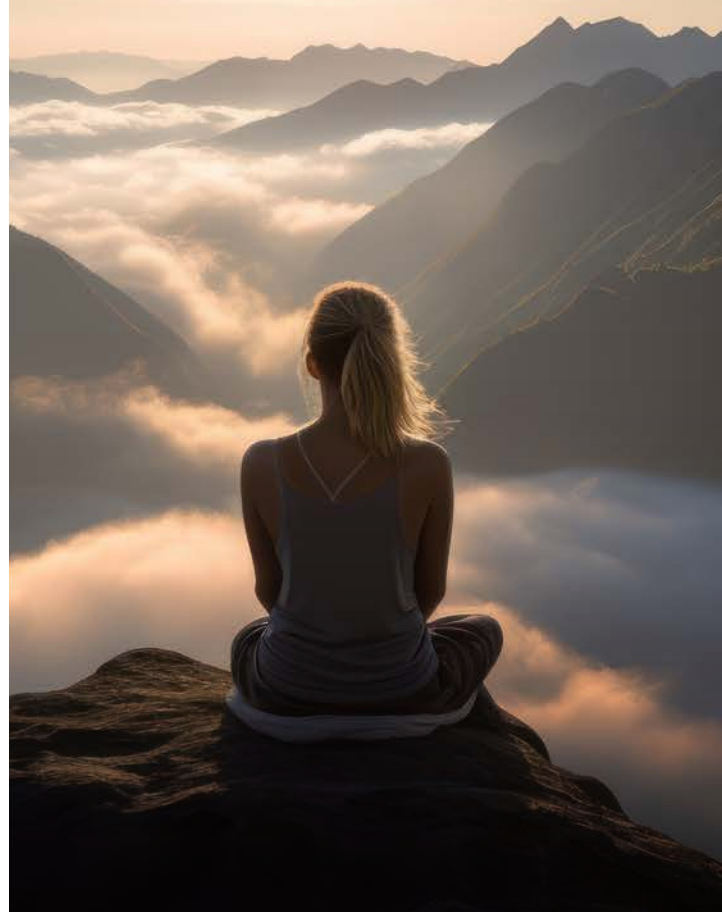
Nearly half say they plan to invest in 5G networks

and



Plan to invest in physical autonomous systems (e.g., drones) in the next 12-24 months

In partnership with TCS, a large health and beauty retailer launched a new INNOVATE workspace to help uncover opportunities to leverage emerging technology. Dedicated teams of “intrapreneurs” use this space to pursue ideas for greater short-term efficiencies while accelerating and scaling innovation programs.



Business and IT alignment: Who are the decision-makers?

As cloud adoptions have matured, stakeholders outside of the IT department have steadily acquired a deeper role. While there are many technology entry points to cloud, business priorities largely determine which technology to adopt, whether it’s automation, edge computing or others. Yet retailers say they are struggling to connect business and IT requirements for cloud – and the stakeholders of those.



Reported skills gaps with clearly defined cloud ownership (C-level, business, IT depts)

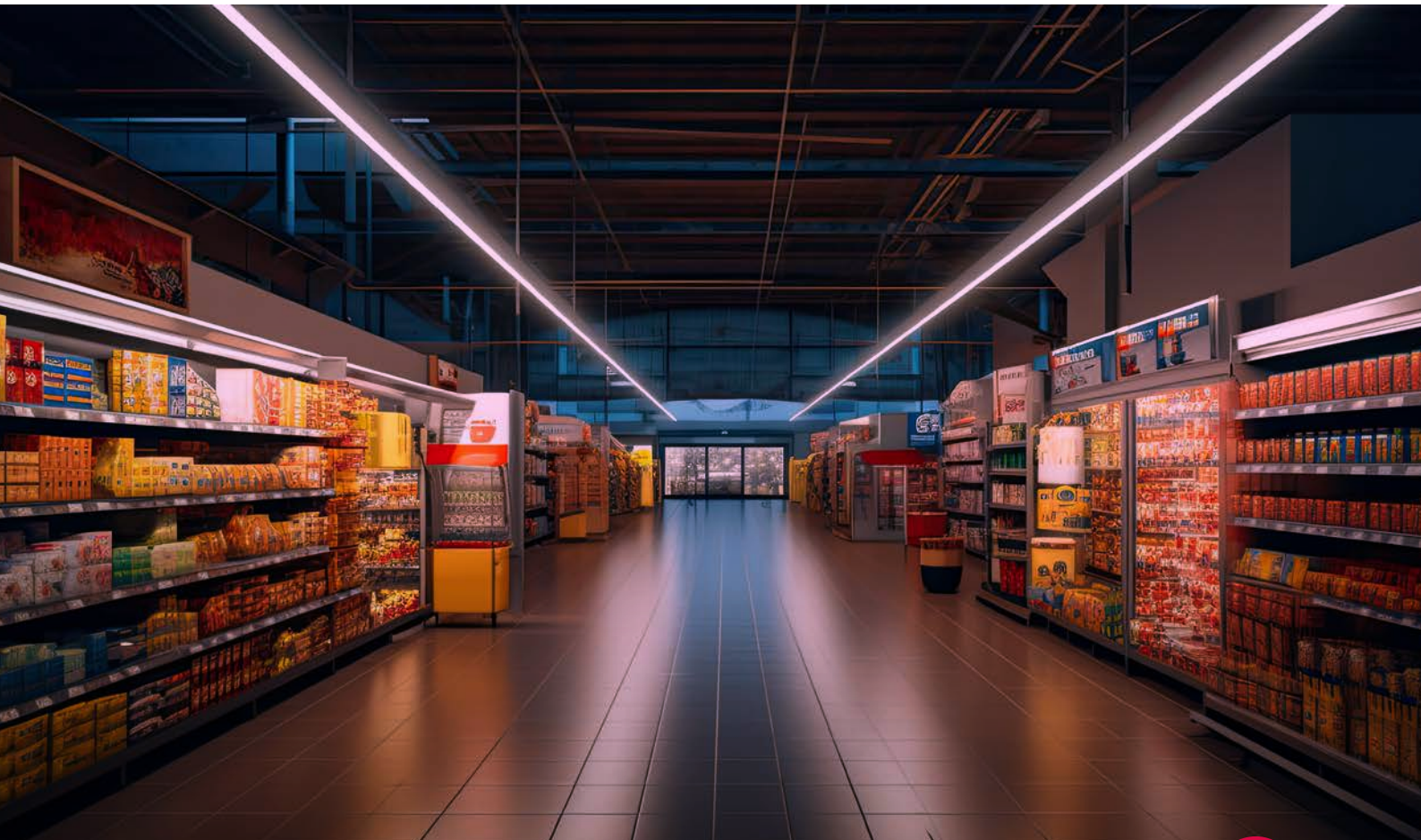


Report skills gaps with an enterprise-wide cloud strategy based on business objectives

What would retailers like to see for their cloud initiatives? Greater business involvement. Nearly three-fourths of respondents (74%) reported that cloud transformations at their organizations are currently led by IT only or mostly IT roles. In fact, compared to other industries, retail has the highest percentage of IT-only led cloud transformation.

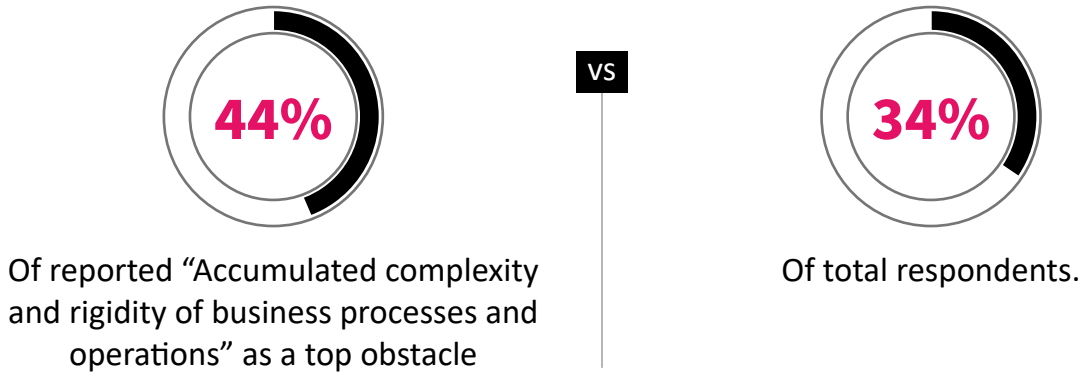
Yet most respondents revealed uneasiness with this structure, opting for more business input. (See Table 2.) When asked about who does and who should have the responsibility for cloud transformations, “evenly split between business and IT” nearly tripled from the status quo.

	Percentage of Retail respondents that say the following roles currently have the majority of the decision-making and ownership of cloud transformation	Percentage of Retail respondents that say the following roles should have the majority of the decision-making and ownership of cloud transformation
IT only (including CIO, senior IT leaders)	38%	21%
Mostly IT, some business	36%	38%
50%-50% even split between business & IT leaders	11%	31%



The search for simplicity and flexibility

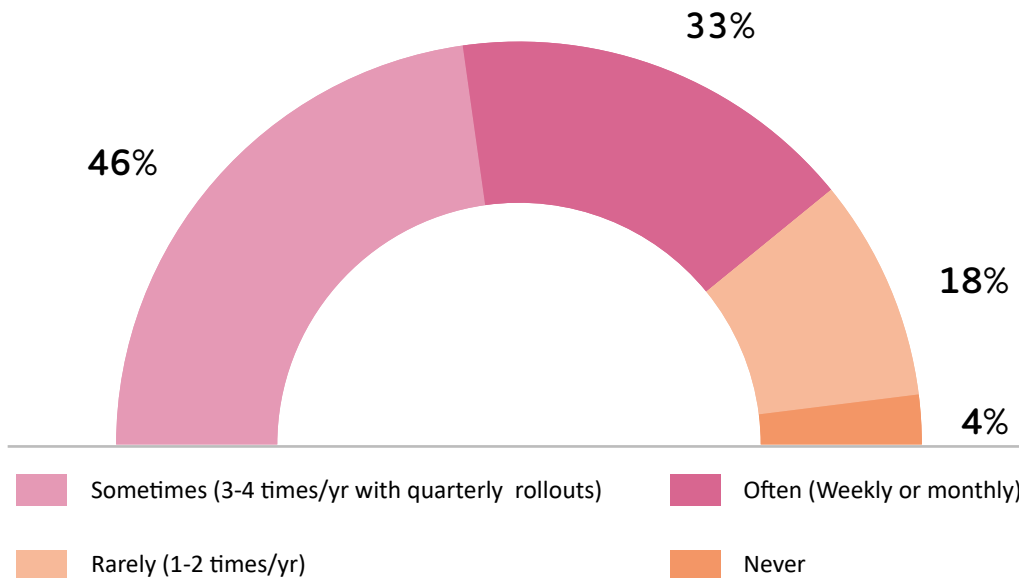
In addition to a lack of stakeholder alignment, retailers also point to concerns around complexity and lack of flexibility.



Q. What do you see as the biggest obstacles holding back cloud-enabled innovation?: “accumulated complexity and rigidity of business processes and operations”

For many retailers, entrenched systems are impacting their ability to innovate and meet new business requirements. More than half (55%) reported difficulty integrating legacy ERP apps with modern apps, with only CPG reporting greater gaps in this area of proficiency.

Because of new functionality or requirements, half of all retailer respondents reported the need to customize their ERP systems quarterly; a third must do so monthly or even weekly.



Q. How often do you need to customize your ERP system to accommodate new functionality or business requirements?

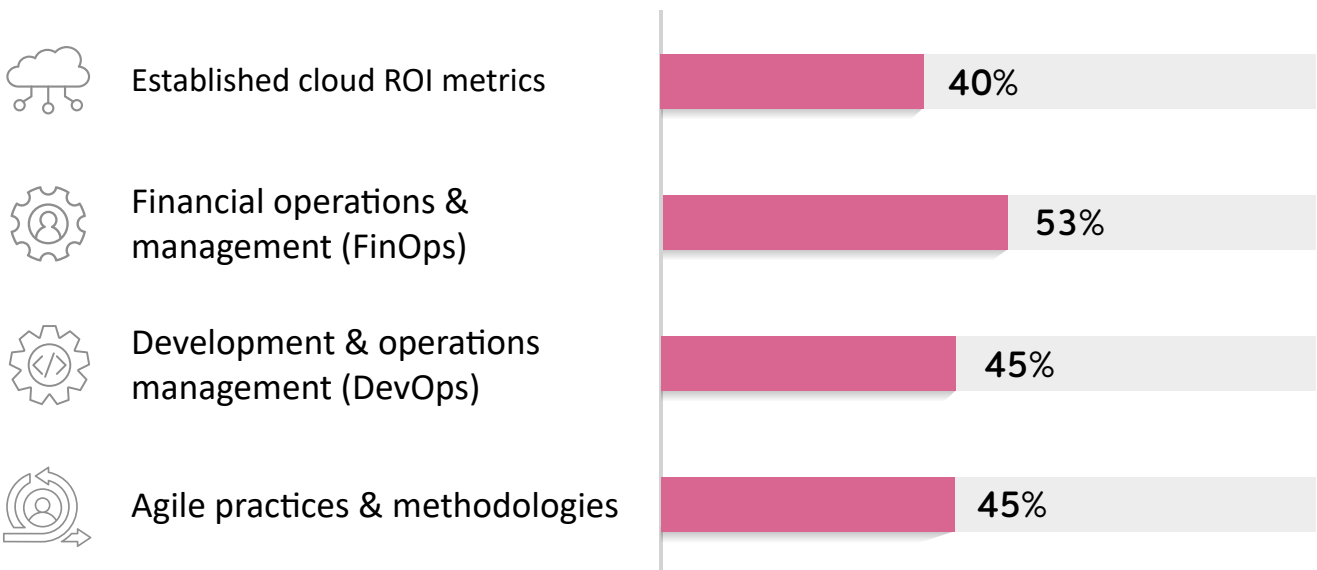
Despite the frequent customizations, just over a third (34%) of retail organizations reported plans to increase investments in cloud-native ERP in the next 1-2 years, trailing all other industries.

For a large automotive retailer, maintaining multiple servers and an outdated infrastructure had become overwhelmingly costly and burdensome. The legacy infrastructure was becoming inefficient, while technology upgrades were adding to costs. After evaluating different options, the retailer adopted a consolidated hybrid cloud model and migrate specific on-premises applications to a third-party public cloud. The retailer expects a cost savings of over a third over the next few years, as well as providing a frictionless online and in-store customer and employee experience.



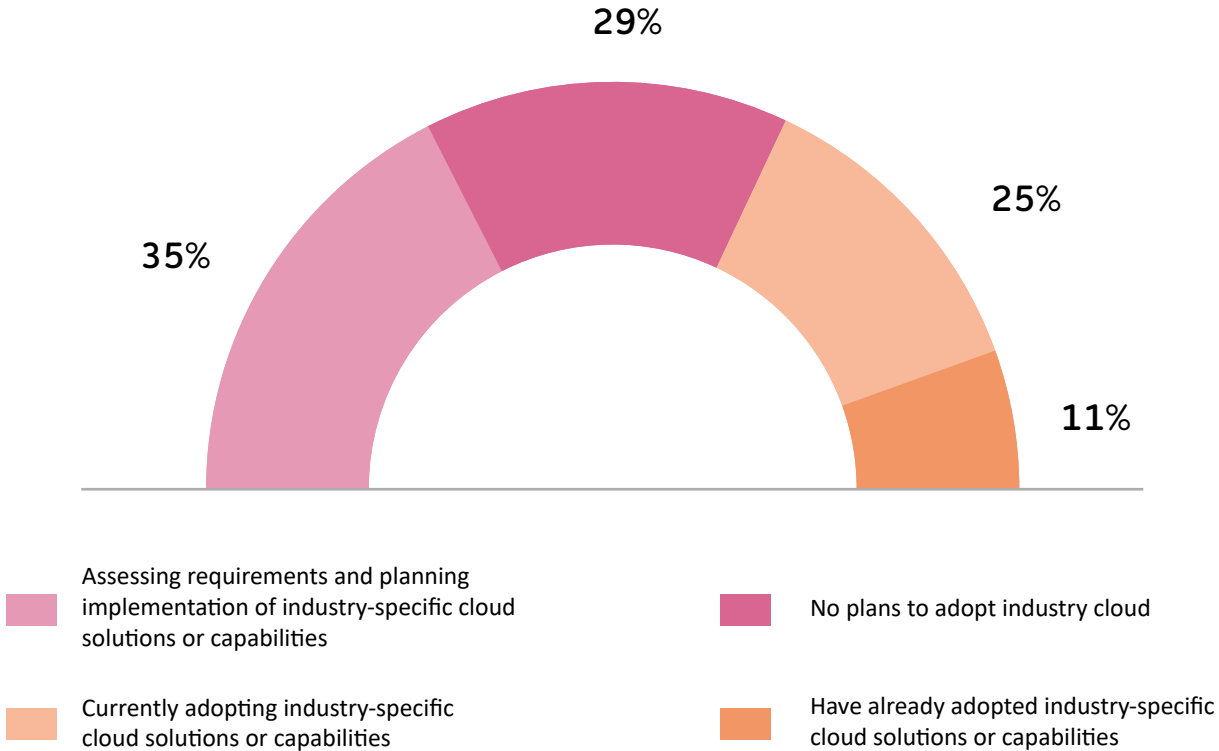
Another area of concern is expertise. Respondents say they are struggling to find or develop skills sets and capabilities in critical cloud areas, including FinOps and DevOps.

Proportion of respondents who report proficiency challenges with skills and experience in the following areas



A greater role for industry clouds

Industry clouds tailored for retail are quickly becoming an opportunity for rapid growth and transformation. These vertical cloud environments provide pre-built tools, compliance, governance and subject matter expertise – all of which play a significant role as drivers for industry cloud adoption. More than a third (36%) of retailers surveyed have already adopted industry cloud solutions or are currently doing so, and another 35% say they are assessing requirements.



Q. Have you considered or are you considering adopting industry cloud solutions or capabilities? In this survey, an industry cloud is defined as a vertical cloud environment heavily customized for a particular industry.



Realizing the true promise of cloud-enabled innovation

The retail environment has shifted rapidly in the past several years, and will continue to do so for the foreseeable future. Our research suggests that many retailers have recognized the crucial role cloud can play in innovation, including spurring new products and services and business models, and enabling ecosystem participation. However, compared to other industries, retailers are taking a more cautious approach to investments, leaving them vulnerable to their counterparts who are forging ahead.

To continue moving forward, retailers must prioritize:



Aligning business and IT stakeholders. Take an integrated approach to decision-making that makes cloud-enabled innovation the responsibility of all. Ensure collaborative governance across both IT and business stakeholders, connecting requirements for both high-level objectives and a focus on long-term change.



Investing in cloud-embedded technologies. Cloud technology can fuel the next level of edge computing, AI and the Internet of Things (IoT) for business innovation. As computation and storage get closer to data sources, there is enormous transformative potential for harnessing insights from data across multiple end points.



Evolving cloud-enabled sustainability. Look for new ways to assess the maturity of green IT ecosystems across cloud and on-premises infrastructures. Improve efficiencies for offering sustainably made products and services across the purchasing cycle

Read the [full global report](#) to learn how organizations are moving toward cloud-enabled innovation

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About the study

Tata Consultancy Services (TCS) conducted a global cloud study from 6 January to 14 February 2023 on the theme of cloud-enabled innovation. TCS surveyed 972 C-suite and IT senior executives and decision makers from companies with +\$1 billion in annual revenue, across UK & Ireland, Continental Europe, North America, and APAC (India, Japan, Australia, NZ). The 972 C-suite and IT senior executives and decision makers included 80 respondents in the retail sector.

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