

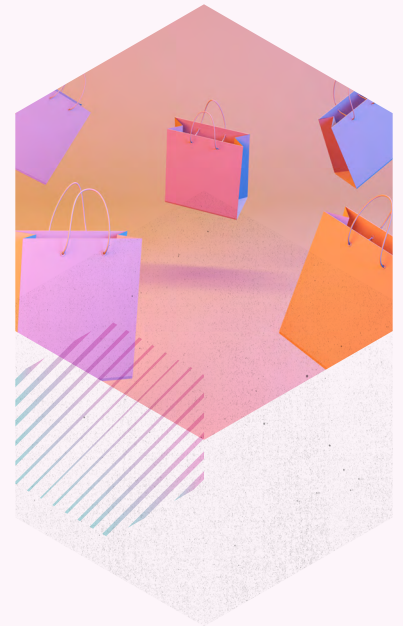


# State of Observability for Retail

Insights and analysis on the adoption and business value  
of observability for the retail/consumer industry

# Overview

The retail industry faces significant macroeconomic challenges, including rising energy costs, high inflation, and persistent supply chain disruptions. With profit margins under pressure, retailers are prioritizing cost reduction and strategic investments to drive business value without compromising the customer experience.



Omnichannel strategies are essential and retailers need an effective way to gain comprehensive visibility across disparate data sources. This includes the ability to monitor the entire customer, product, or order journey across all touchpoints. Many retailers rely on third-party tools and services to manage onsite, online, and in-transit operations—such as point of sale (POS) systems, kiosks, web and mobile apps, payment processing, and logistics and fulfillment APIs—without full access to these systems. The risk for blind spots is high, making it challenging for organizations to make data-driven decisions that affect their bottom line.

To maintain digital storefronts and engage customers, retailers are investing in observability tools that provide end-to-end visibility into their software and technology stacks. Observability tools proactively collect and visualize data, applying intelligence so organizations can both understand their IT ecosystem's behavior and quickly detect and resolve issues as they arise.

The *State of Observability for Retail* report examines the adoption and business impact of observability across the retail and consumer-focused sectors, based on insights from 148 surveyed respondents.

Findings reveal that the ecommerce industry is performing well compared to other sectors, with fewer outages and improved mean time to detection (MTTD) and mean time to resolve (MTTR) metrics. Retail and consumer organizations are reducing their reliance on multiple observability tools, with a focus on tool consolidation and unified telemetry data. These trends underscore the clear business value of observability for the retail sector. Looking ahead, as organizations aim to deploy more capabilities in the coming years, the shift from point solutions to comprehensive platforms offering full visibility is likely to accelerate.

# Security and AI adoption are top of mind for retail

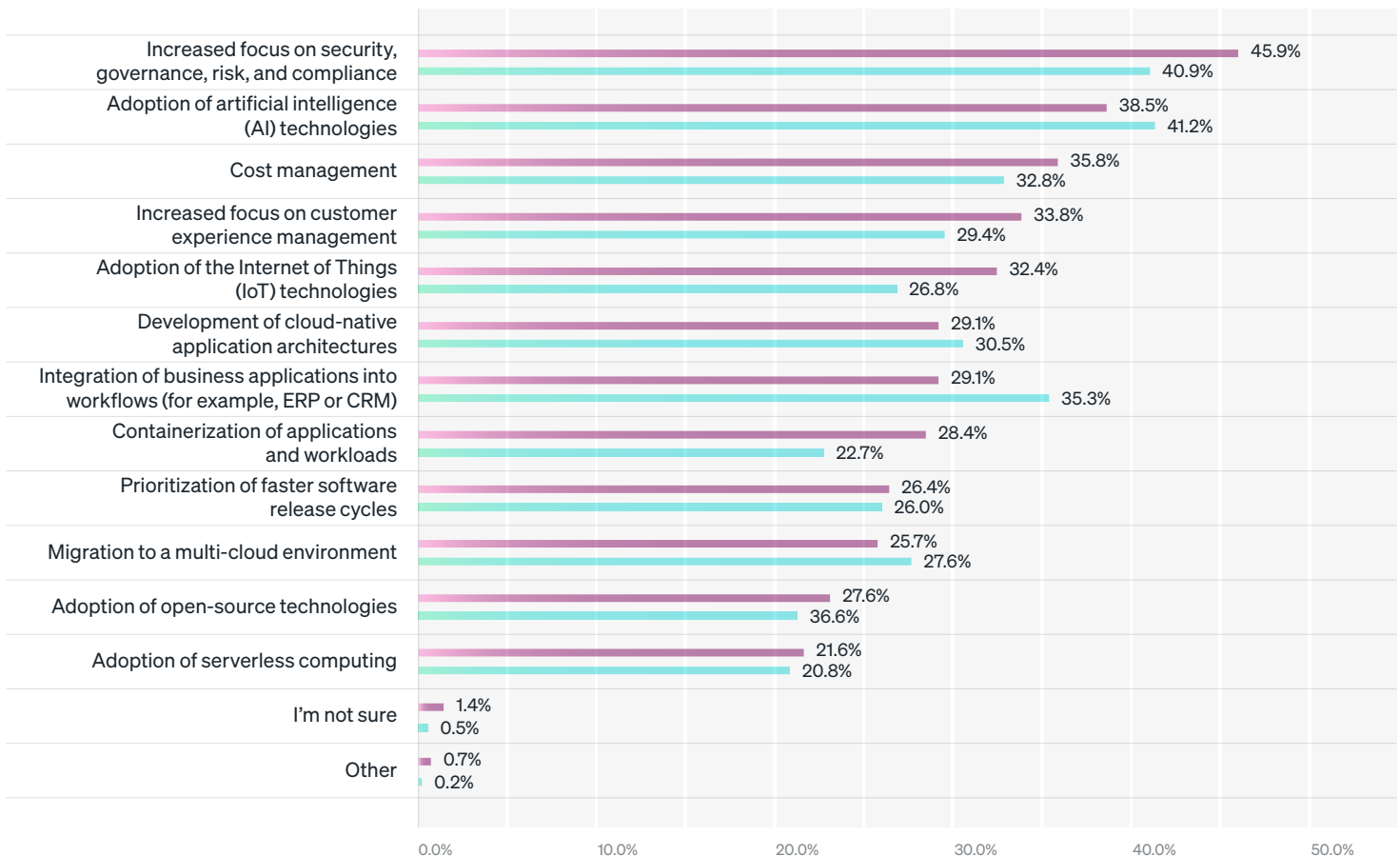
The top technology strategy driving the need for observability among retail/consumer organizations was an increased focus on security, governance, risk, and compliance (46%), 12% higher than the overall response. Close behind, the adoption of artificial intelligence (AI) technologies (39%), cost management (36%), and a stronger focus on customer experience management (34%) were the next highest-ranked strategies or trends driving observability in the retail/consumer sector.

The Internet of Things (IoT) serves multiple purposes for retailers, including inventory tracking and monitoring in-store sales personnel. IoT adoption (32%) was a significant driver for retail/consumer organizations—higher than in any other sector except media/entertainment—and was rated 21% higher than the overall response. Retail/consumer respondents were also more likely to indicate that the containerization of applications and workloads (28% compared to 23% overall) and the adoption of open-source technologies (23% compared to 21% overall) were driving the need for observability.

More than a third (36%) of retail/consumer respondents believed that forecasting and predictive analytics would most improve their organization’s observability practices, followed by AI-assisted troubleshooting (30%) and automatic root cause analysis (RCA; 30%).

**Technology strategies and trends driving the need for observability for all respondents compared to retail/consumer respondents**

■ Retail/consumer respondents  
■ All respondents



## DEM is a key priority for retail growth

With billions in consumer spending shifting online, retailers recognize the need to improve uptime, reliability, and digital customer experience (DCX) strategies to support a seamless omnichannel journey.

Digital experience monitoring (DEM) quickly became a cornerstone of these efforts, enabling brands to monitor and optimize performance and reliability to deliver smooth, uninterrupted online experiences. DEM combines real user monitoring (RUM)—covering browser and mobile monitoring—with synthetic monitoring for proactive testing and improvement.

Respondents from retail and consumer organizations reported slightly lower current deployment levels for browser monitoring (35% compared to 44% overall), mobile monitoring (32% compared to 35% overall), and synthetic monitoring (24% compared to 26% overall).

Yet, DEM is a key investment focus. Within the next one to three years, more than half of respondents (52%) expected to deploy synthetic monitoring, 49% anticipated deploying mobile monitoring, and 42% planned to implement browser monitoring. By mid-2027, projections indicated that 76% of respondents would have deployed browser monitoring, 81% would have implemented mobile monitoring, and 76% would be using synthetic monitoring, marking a significant increase and underscoring the commitment to DEM as a driver of retail success.

**“In particular, deployment markers have helped us to shed light on the customer journey by correlating incidents with releases and configurations. As a result, we have been able to identify and resolve issues while improving our mean time to recovery by 70–80%.”**

Sandeep Grandhi, Associate Director of Engineering at BigBasket



## Key capabilities deployed and future plans

Alerts led the way as the most widely deployed observability capability in the retail sector, with 62% of retail and consumer organizations utilizing them. Network monitoring followed closely at 59%, security monitoring at 55%, and dashboards at 53%. Notably, retail and consumer organizations adopted alerts and network monitoring at higher rates than other industries, highlighting the demand for rapid, actionable insights in fast-paced retail environments.

By mid-2027, most retail organizations expected to have adopted security monitoring (97%), network monitoring (95%), alerts (93%), database monitoring (93%), infrastructure monitoring (90%), and AI monitoring (90%). These planned investments reflect a robust commitment to improving operational visibility and resilience across the industry.



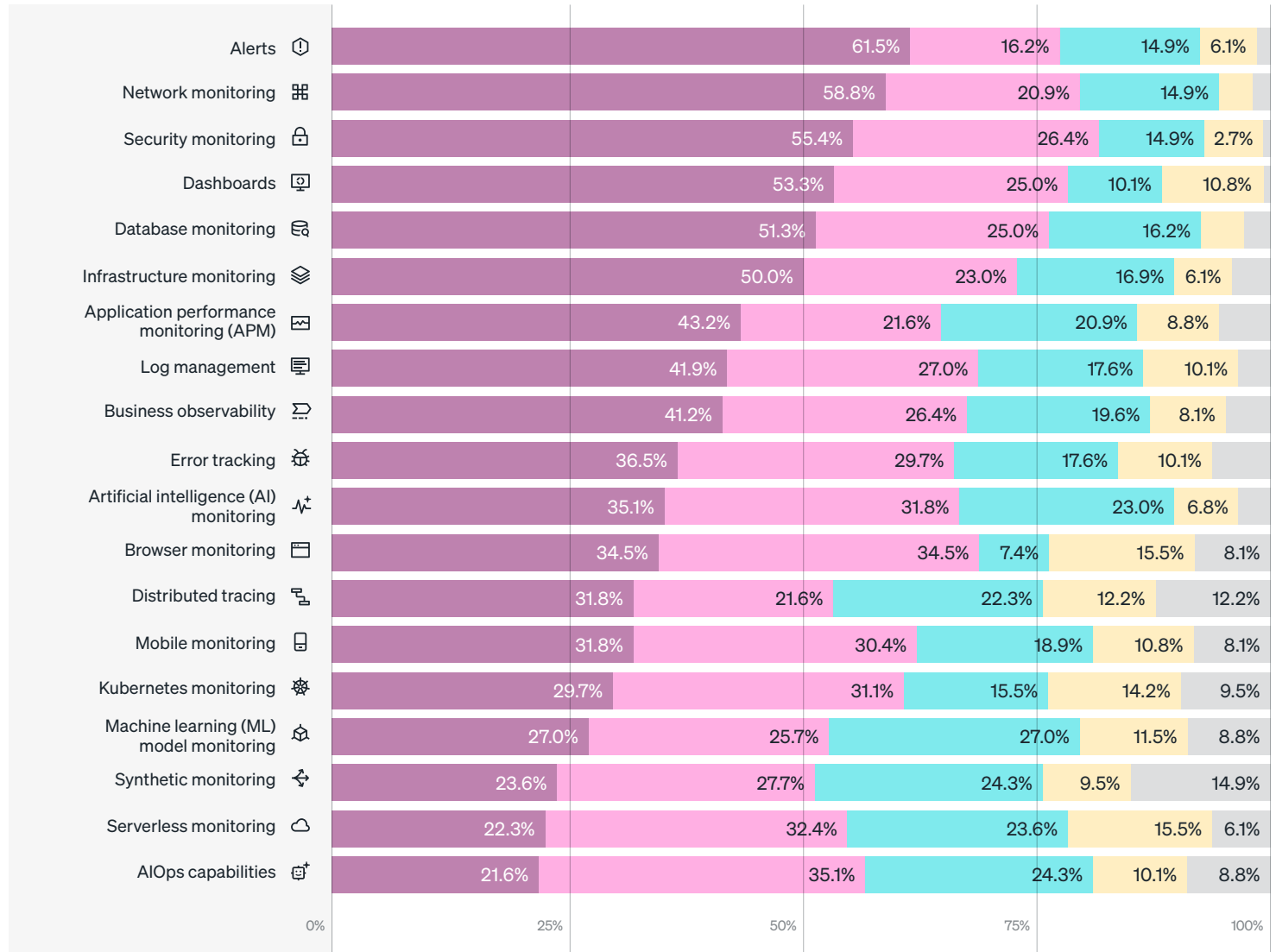
# 62%

of retail and consumer organizations deploy alerts

**“By leveraging incident alerts, mobile, and customer event integrations, we have greater visibility into customer concerns and can react to their needs. We can now pinpoint issues much faster and make fixes before they escalate, which allows us to deliver a better customer experience.”**

Sandeep Grandhi, Associate Director of Engineering at BigBasket

**Observability capabilities deployment summary for the retail/consumer industry from 2024 through 2027**



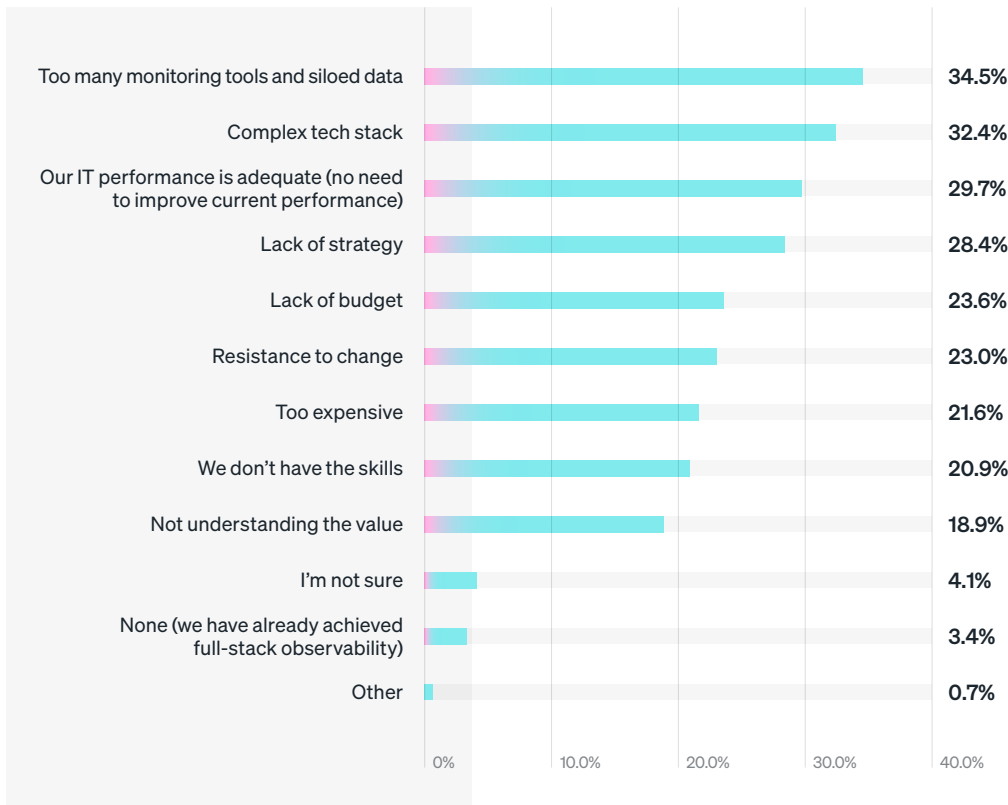
- We currently deploy
- We do not currently have deployed, but have plans to add in the next year
- We do not currently have deployed, but have plans to add in the next 2-3 years
- We do not currently have deployed, and have no plans to add
- I'm not sure

# Breaking the barriers to full-stack observability

Fewer than one in five (18%) retail and consumer organizations reported achieving full-stack observability, falling behind the overall industry average of 25%. The primary hurdle was an overload of monitoring tools and siloed data, a challenge noted by 35% of respondents. Additionally, the complexity of tech stacks posed a significant barrier, with 32% citing it as a roadblock to achieving comprehensive, integrated observability.

**18%**  
of retail and consumer organizations reported achieving full-stack observability.

Primary challenges preventing retail/consumer organizations from achieving full-stack observability



# Tool consolidation is retail’s path to greater efficiency and value

Retailers, often reliant on a variety of third-party tools, are making strides toward consolidation. Retail and consumer organizations were less likely to rely on five or more tools (40%, compared to 45% industry-wide) for the 19 observability capabilities analyzed in this study. This trend marks an improvement from prior years—on average, retail organizations now use 4.4 tools, down from 5.4 in 2023 and 5.9 in 2022, outperforming the industry average of 4.5.

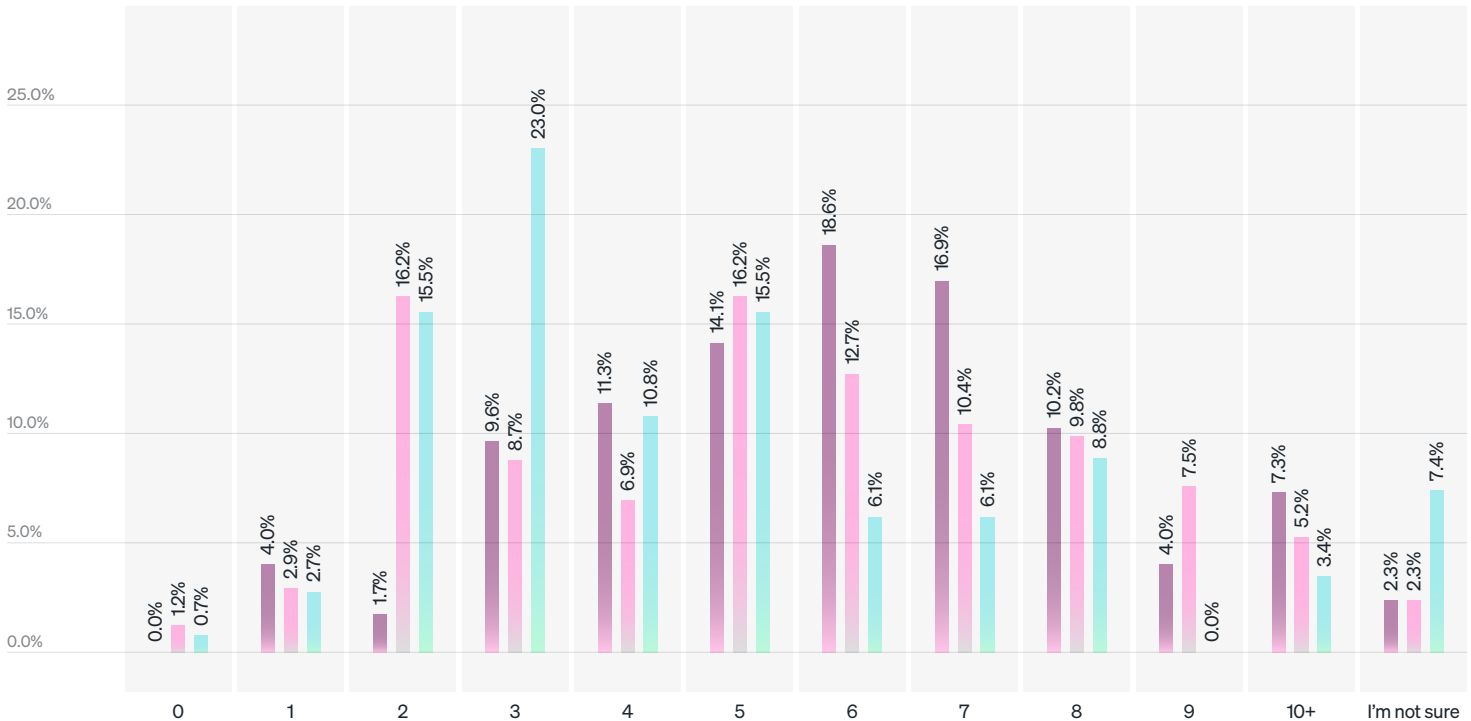
The data suggest a shift as retail organizations aim to streamline observability, maximizing both operational efficiencies and return on investment (ROI). Though the proportion of retail respondents using a single tool held steady at 3% year-over-year (YoY), nearly half (43%) indicated a strong likelihood of further consolidation within the next year to enhance observability’s business impact.

When selecting an observability solution, retail respondents prioritized a platform that offered a broad range of capabilities (34%), affordability (31%), and business observability, linking business outcomes to telemetry data in real time (30%). A significant share (41%) expressed a preference for a single, integrated observability platform to drive maximum value, signaling an industry-wide shift toward streamlined, powerful solutions.



Number of tools used by retail/consumer organizations for observability capabilities in 2024 compared to 2022 and 2023

- 2022 respondents
- 2023 respondents
- 2024 respondents





## Boosting resilience and ROI with unified data

When asked about the unification of their telemetry data (metrics, events, logs, and traces—or MELT), 52% of respondents reported having “more unified” data, while 23% indicated their data remained siloed, and 24% noted a mix of both. **Retail organizations were among the top industries for data unification, with the lowest rates of data silos compared to other sectors.**

Retail respondents showed a higher-than-average likelihood of integrating sales data (40% compared to 37% overall) and inventory data (39% compared to 36% overall) with telemetry data. However, integration rates for other critical data types fell below the average: customer data (37% compared to 41% overall) and operations data (33% compared to 43% overall). Human resources (22%) and product research data (31%) were the least commonly integrated, highlighting areas where further alignment could drive value. Additionally, only 30% of retail organizations integrated five or more business-related data types with their telemetry data, compared to 35% across all industries.

Data integration and unification proved powerful for organizations across the survey, showing significant benefits in reducing downtime, costs, and engineering hours. Among all respondents, those with more unified telemetry data reported:

- **78% less annual downtime:** 107 hours per year vs. 488 hours
- **11% less engineering time spent on disruptions:** 28% vs. 32%
- **4% higher median ROI:** 302% vs. 290%

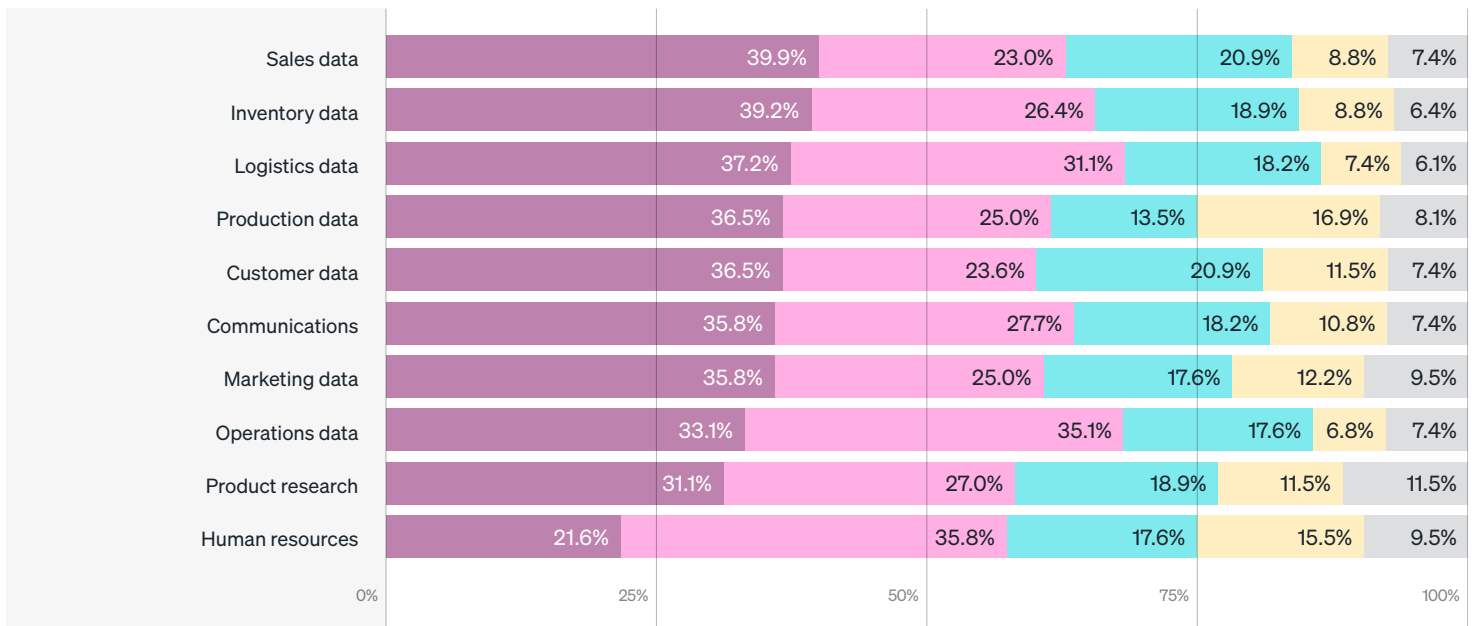


Organizations that integrated five or more business data types with telemetry data achieved even more impressive results:

- **63% less annual downtime:** 139 hours vs. 370 hours
- **27% fewer engineering hours** spent on disruptions, equating to 11 hours vs. 15 hours per 40-hour week

These findings indicate that while retail and consumer organizations are reaping benefits from unified telemetry data, deeper integration with additional business data types could further enhance resilience, cost savings, and ROI. Expanding business-related data integration presents a compelling opportunity for retailers to unlock the full potential of their digital investments.

Types of business-related data integrated in retail/consumer organizations' telemetry data



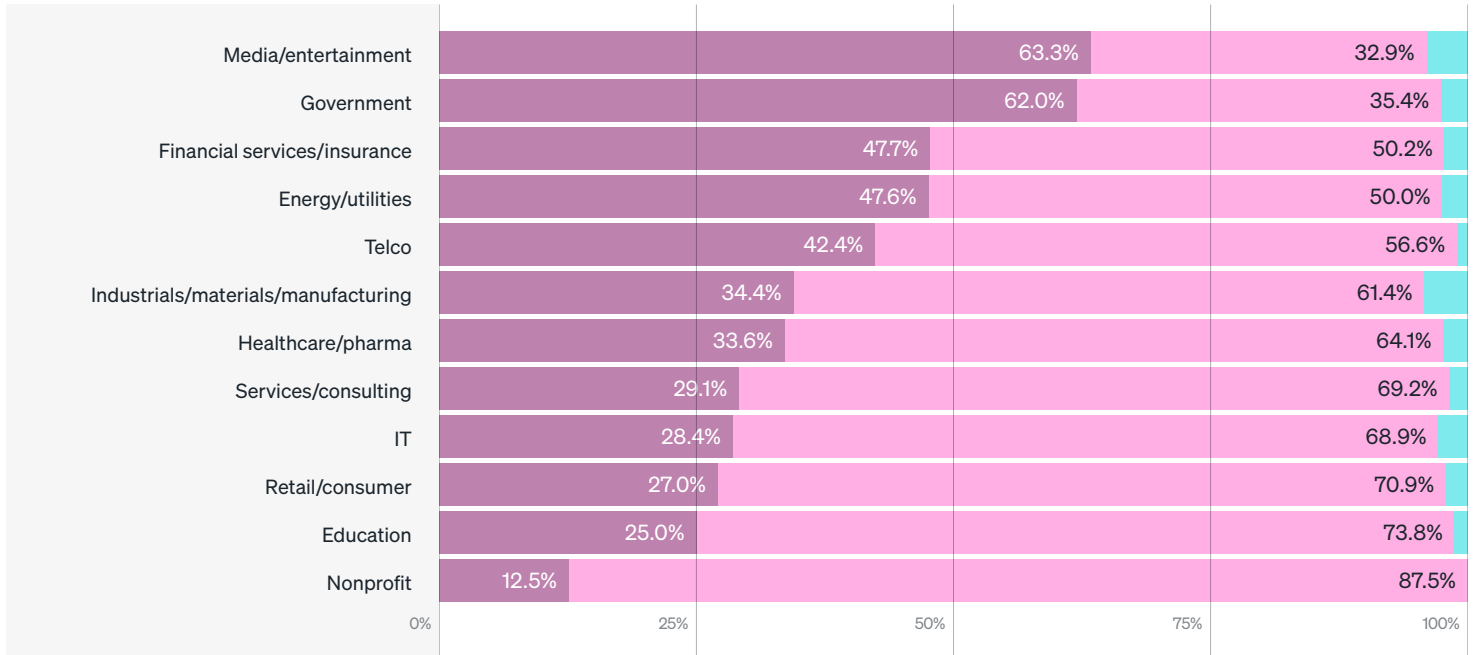
- We currently integrate with our telemetry data
- We do not currently integrate with our telemetry data, but have plans to integrate in the next year
- We do not currently integrate with our telemetry data, but have plans to integrate in the next 2-3 years
- We do not currently integrate with our telemetry data, and have no plans to integrate
- I'm not sure

**“Just as a carpenter has a suite of tools on hand to complete a job, running an effective ecommerce site requires that the right tools are used—it makes the team much more productive overall.”**

Goran Stefkovski, Chief Technology Officer at Kogan

# The high stakes of downtime in retail

Respondents reported fewer high-impact outages than most other industries, with only 27% experiencing these disruptions weekly, compared to an average of 38% across industries. This gave retail the third-lowest outage frequency. Network failures were the most frequent cause (32%), followed closely by software deployment issues (34%) and changes in the environment (31%).



Detection times for retail organizations outpaced other sectors. Fewer than half (49%) detected high-impact outages within 30 minutes, compared to the 54% average. The median mean time to detection (MTTD) was 32 minutes—14% faster than the overall median of 37 minutes. For mean time to resolution (MTTR), retail’s median was 46 minutes, ranking second lowest among industries and 10% faster than the 51-minute median across all sectors.

**High-business-impact outage frequency by industry**

- Once per week or more
- 2-3 times per month or fewer
- I'm not sure

This efficient detection and resolution contributed to a median annual downtime of 164 hours—41% lower than other industries. Moreover, MTTD and MTTR improvements were linked to observability solutions: three-fifths (60%) of respondents reported noticeable gains, with root cause analysis (41%) and monitoring latency, utilization, errors, and saturation (37%) being the most effective practices.

Full-stack observability also correlated with faster response times. Nearly half (48%) of retail respondents with MTTD under 30 minutes had full observability, compared to 32% without it. For MTTR under 30 minutes, 26% had full-stack observability versus 23% without it.

For retailers, the stakes are clear: a 30-minute website outage on Cyber Monday could mean millions in lost revenue and harm customer loyalty. Yet, observability tools can mitigate these risks, keeping retailers prepared and online even during peak traffic.

# Observability delivers high ROI and strategic value

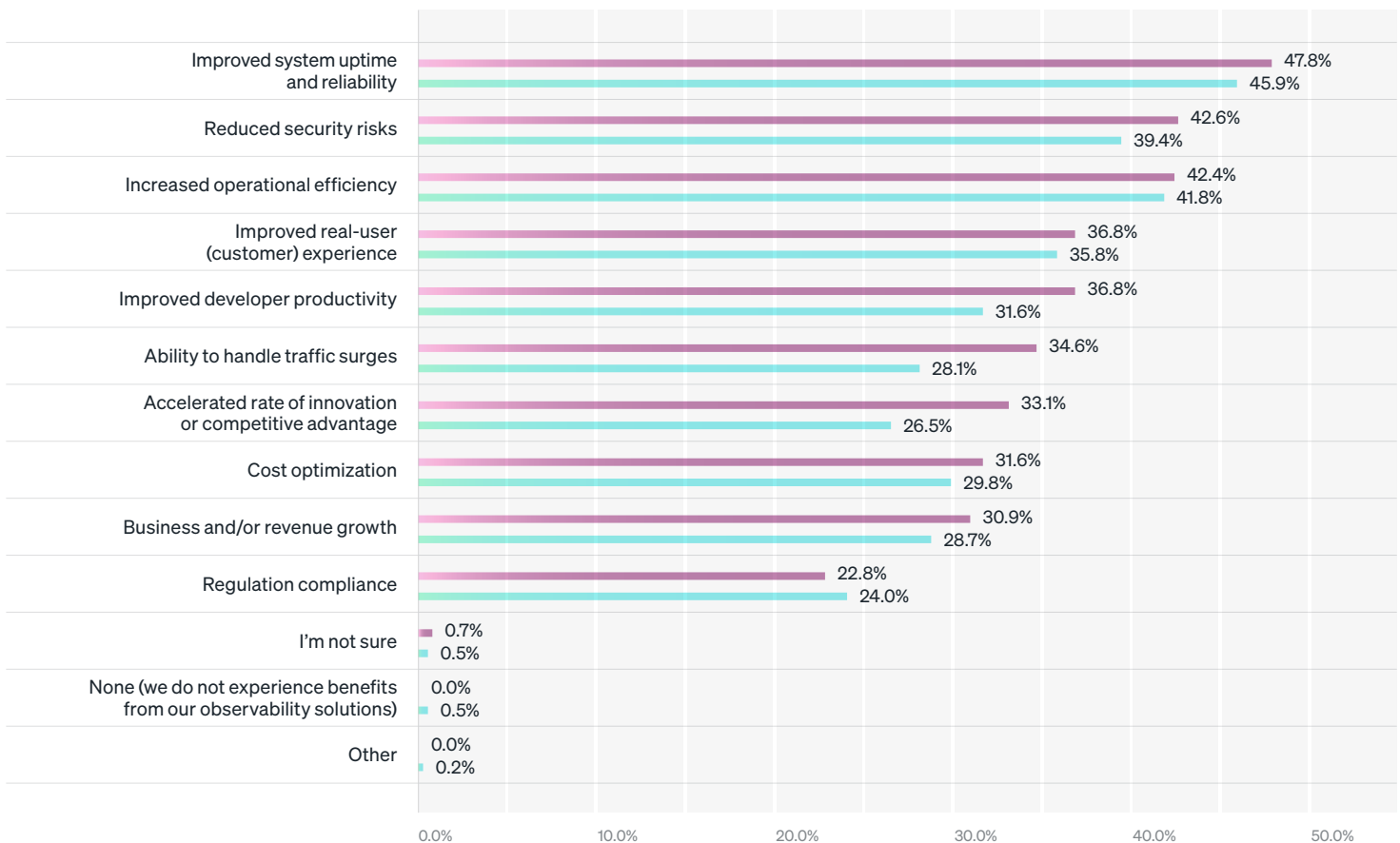
Retail and consumer organizations reported stronger investments in observability, with 74% indicating annual spending of \$1 million or more, while just 2% allocated less than \$100,000. This investment is delivering notable returns, with retail organizations achieving a median annual ROI of 302%, or 4x their spending, underscoring the strategic value of observability in this sector.

Regarding the benefits of observability, nearly half (48%) reported improvements in system uptime and reliability, while 43% saw a reduction in security risks. Operational efficiency (38%), developer productivity (37%), and enhanced customer experience (37%) also ranked among the top benefits.

Retail organizations achieving a median annual ROI of 302%, or

# 4x

their spending



In terms of measurable value, 79% of retail/consumer organizations estimated receiving over \$500,000 in annual value from observability, with 78% stating this value reached \$1 million or more. Based on annual spend and annual value received estimates, retail organizations receive a 302% median annual ROI, or 4x.

**Primary observability benefits**

- Retail/consumer respondents
- All respondents

# About this report

All data in this report are derived from a survey, which was in the field from April to May 2024 as part of our work in publishing the **2024 Observability Forecast** report.

Retail/consumer respondents comprised 148 of the total respondents surveyed in the **2024 Observability Forecast** study, or 9%.

ETR qualified survey respondents based on relevant expertise. ETR performed a non-probability sampling type called quota sampling to target sample sizes of respondents based on their country of residence and role type in their organizations (in other words, practitioners and ITDMs). Geographic representation quotas targeted 16 key countries.

All dollar amounts in this report are in USD.

View the [definitions](#) used in this report.



## About ETR

ETR is a technology market research firm that leverages proprietary data from its targeted ITDM community to deliver actionable insights about spending intentions and industry trends. Since 2010, ETR has worked diligently at achieving one goal: eliminating the need for opinions in enterprise research, which are typically formed from incomplete, biased, and statistically insignificant data.

The ETR community of ITDMs is uniquely positioned to provide best-in-class customer/evaluator perspectives. Its proprietary data and insights from this community empower institutional investors, technology companies, and ITDMs to navigate the complex enterprise technology landscape amid an expanding marketplace.



## About New Relic

The New Relic Intelligent Observability Platform helps businesses eliminate interruptions in digital experiences. New Relic is the only platform to unify and pair telemetry data to provide clarity over the entire digital estate. We move problem solving past proactive to predictive by processing the right data at the right time to maximize value and control costs. That's why businesses around the world—including Adidas Runtastic, American Red Cross, Domino's, GoTo Group, Ryanair, Topgolf, and William Hill—run on New Relic to drive innovation, improve reliability, and deliver exceptional customer experiences to fuel growth. Visit [www.newrelic.com](http://www.newrelic.com).



[Learn About New Relic Retail Solution](#)

