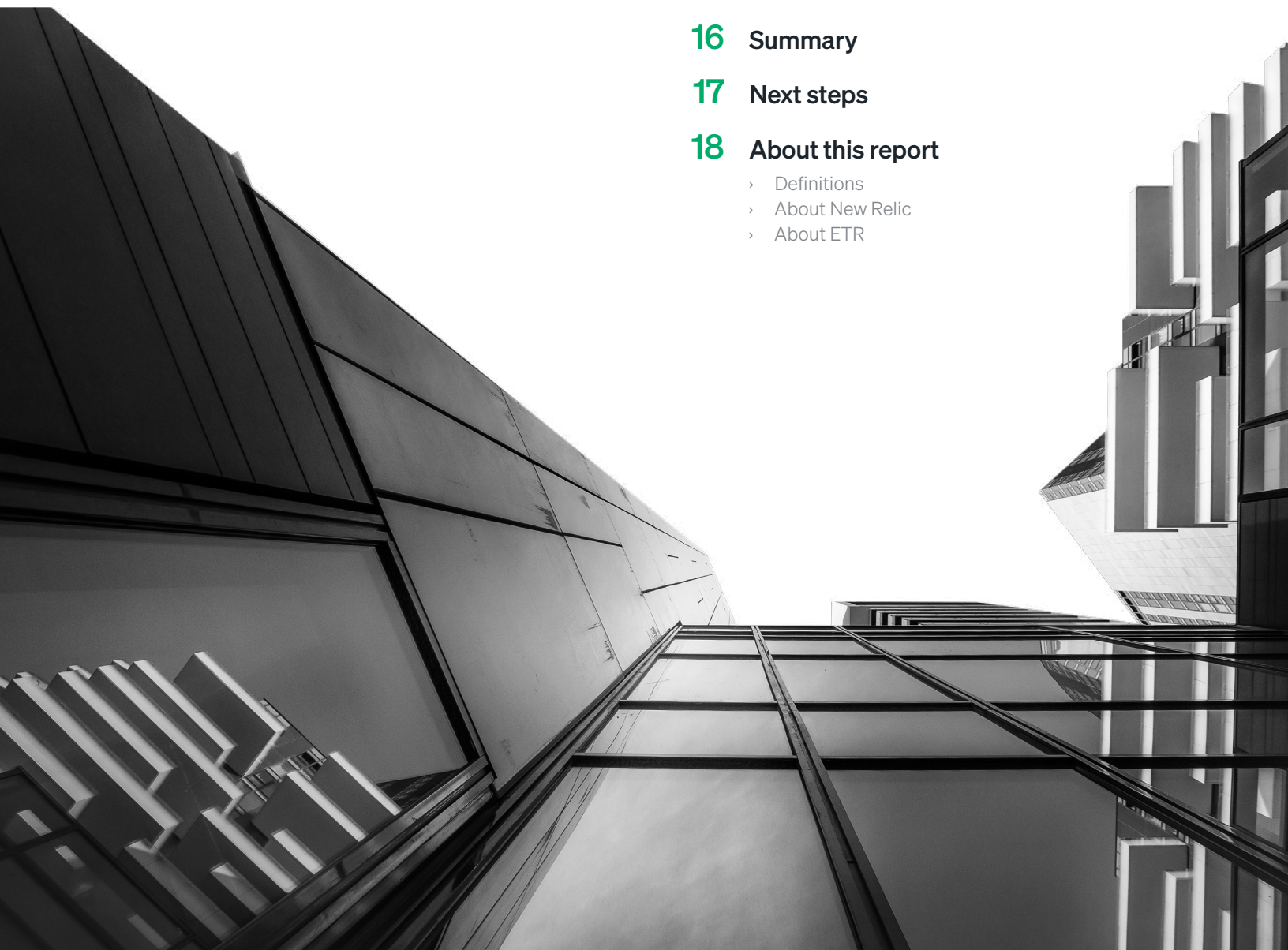


State of Observability for Financial Services and Insurance

Insights and analysis on the adoption and business value of observability

Contents

- 03** Overview
- 04** Trends driving finance observability adoption
- 06** Observability capabilities deployed
- 08** Number of finance data monitoring tools and preference
- 10** Outage frequency, downtime, and cost
- 12** Finance observability spend
- 13** The business value of observability
- 15** The future of observability for FSI and insurance
- 16** Summary
- 17** Next steps
- 18** About this report
 - › Definitions
 - › About New Relic
 - › About ETR



Overview

Financial institutions are experiencing an incredible transformation, stemming from consumers expecting a higher level of digital interaction and access to services and a lower dependency on physical services. Increasing disintermediation and local and global financial services industry (FSI) players such as Apple Pay, Revolut, and neo-banks are feeding consumers' desires to complete transactions online, including from mobile devices, whether that's checking bank balances, making mobile deposits, getting a quote, tracking budgets, paying bills, making purchases, or transferring funds.

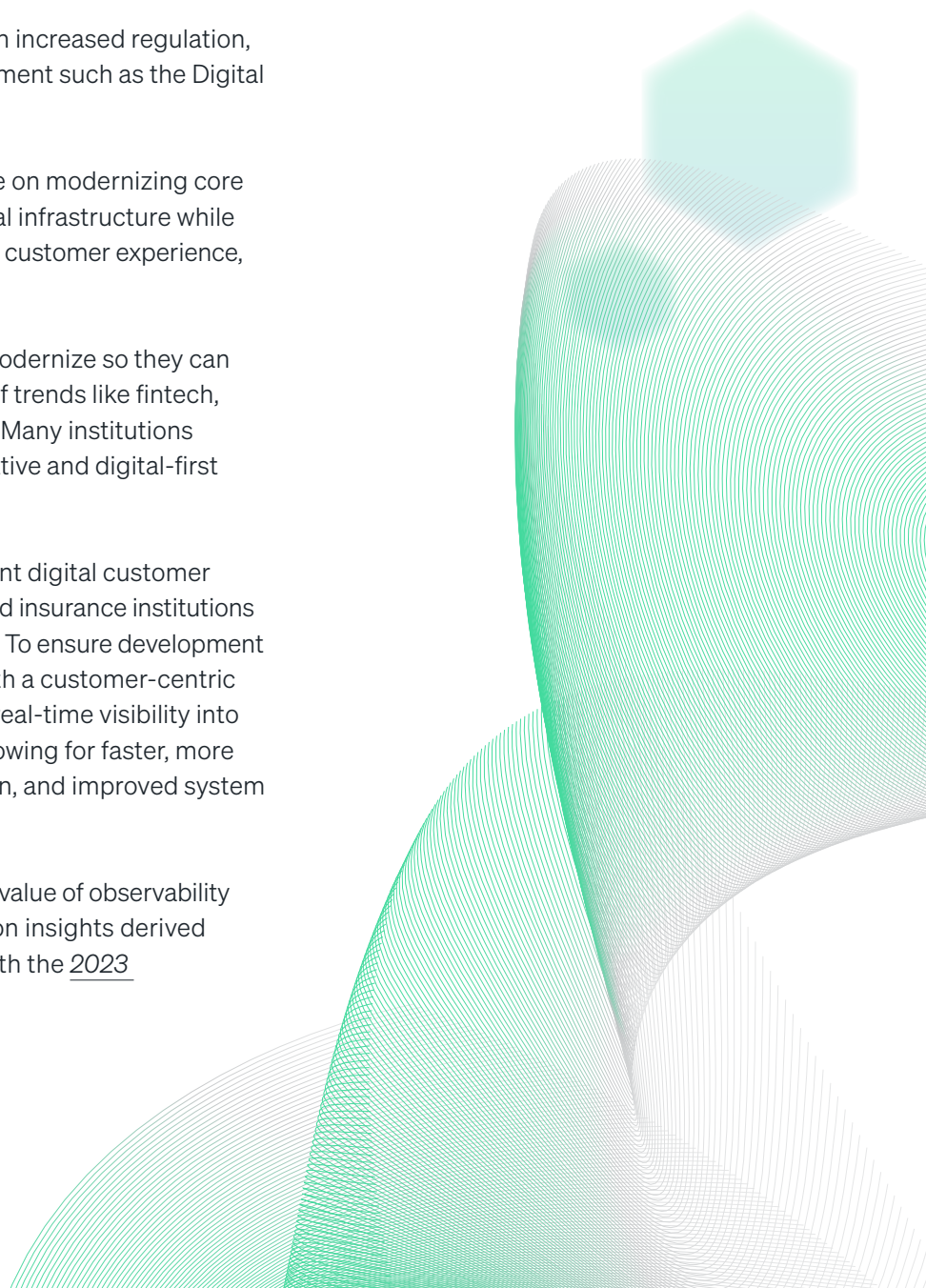
At the same time, FSI organizations are faced with increased regulation, with new mandates for IT and cyber risk management such as the Digital Operational Resilience Act (DORA).

All of these factors drive unprecedented pressure on modernizing core software, dematerialization, and scaling the digital infrastructure while delivering optimal uptime, reliability, performance, customer experience, and innovation.

Traditional financial institutions are in a race to modernize so they can remain relevant and competitive amidst a flurry of trends like fintech, insurtech, automation, mobile, and digital native. Many institutions are accelerating their migration toward digital-native and digital-first models rapidly.

In their quest to create a fluid, reliable, and efficient digital customer experience (DCX) at all times, financial services and insurance institutions are dealing with increasingly complex tech stacks. To ensure development and innovation proceed at the required speed with a customer-centric focus, they're turning to observability to provide real-time visibility into their infrastructure and software architecture, allowing for faster, more accurate decision-making, accelerated innovation, and improved system uptime and reliability.

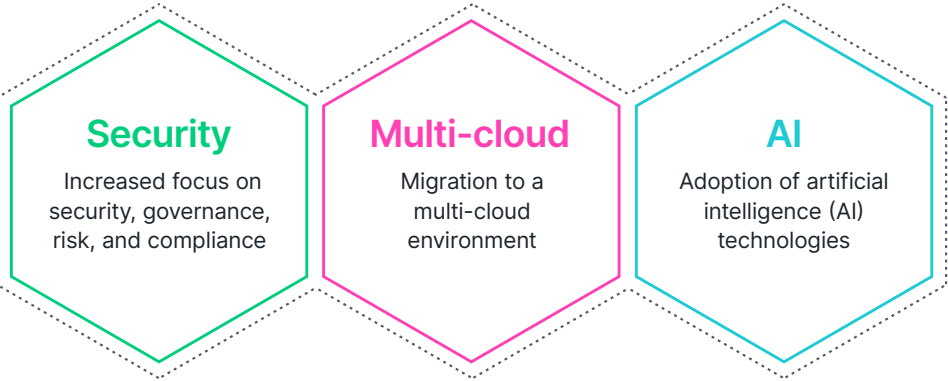
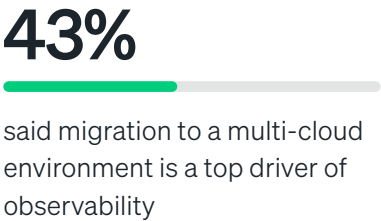
This report focuses on the adoption and business value of observability across the FSI and insurance sectors. It's based on insights derived from 176 respondents surveyed in association with the [2023 Observability Forecast](#).



Trends driving finance observability adoption

Migration to the cloud and creating digital-native subsidiaries are now recognized as the quickest way for financial institutions to modernize their systems. This approach allows them to go to market quickly with agile and innovative services, which will find their full potential when the core systems are also modernized.

It's no surprise that some of the top technology strategies and trends driving the need for observability among financial services/insurance organizations were migration to a multi-cloud environment (43%), adoption of artificial intelligence (AI) technologies, such as GPT (40%), development of cloud-native application architectures (38%), and an increased focus on customer experience management (35%). Given the complex regulatory requirements in the industry, it makes sense that an increased focus on security, governance, risk, and compliance (54%) was the top driver.

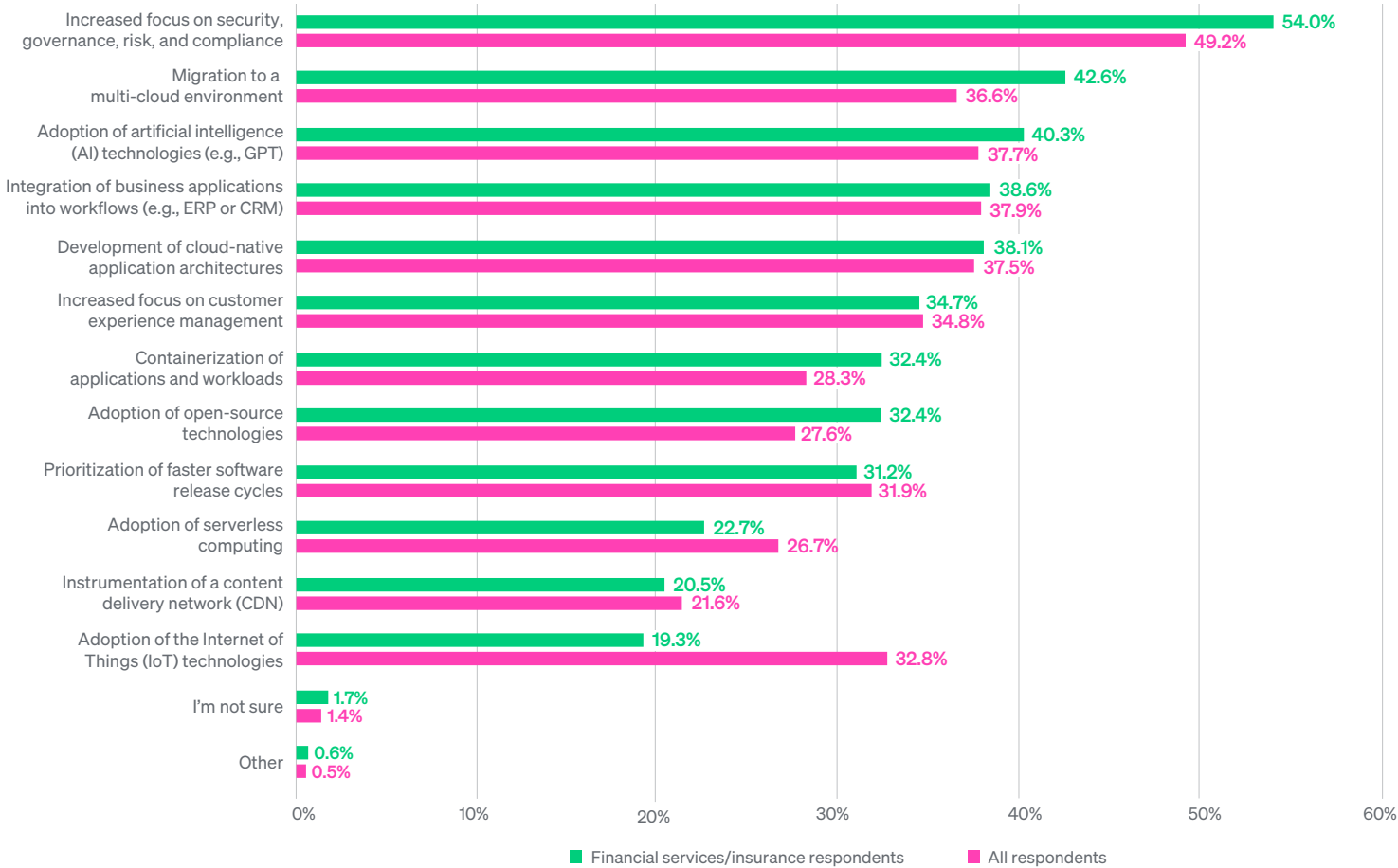


Top three drivers of observability adoption



Respondents also noted the integration of business applications such as enterprise resource planning (ERP) or customer relationship management (CRM) into workflows at a higher rate (39% compared to 38% for all respondents) as well as containerization of applications and workloads (32% compared to 28% for all respondents) and adoption of open-source technologies (32% compared to 28% for all respondents).

However, financial services/insurance respondents put a much lower emphasis on the adoption of the Internet of Things (IoT) technologies, ranking twelfth at 19% compared to its seventh place ranking at 33% among all respondents. This result makes sense since IoT is typically not deemed relevant in the mostly dematerialized world of banks.



Deployed observability capabilities for financial services/insurance respondents

Observability capabilities deployed

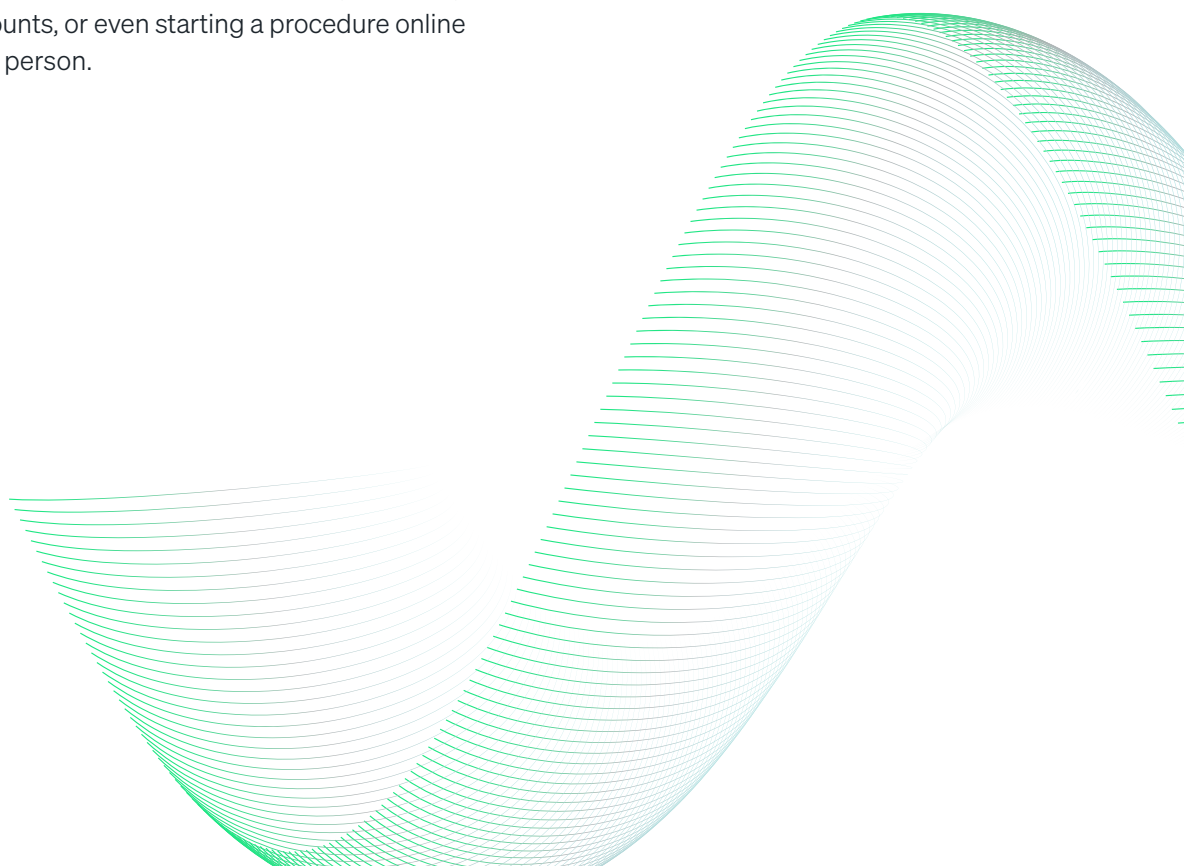
Complex financial and insurance offerings require full-stack observability and a breadth of integrations with middleware, cloud platform as a service (PaaS), and mainstream platforms. Financial services/insurance organizations are 15% more likely to have achieved full-stack observability, with 38% having full-stack observability compared to 33% overall. In fact, financial services/insurance organizations had deployed 12 of the 17 capabilities included in the survey in greater proportions than all respondents.

Financial services/insurance organizations more widely deployed capabilities that are critical to backend and core banking systems operations, such as infrastructure monitoring (75% compared to 57% overall), application performance monitoring or APM (63% compared to 50% overall), and Kubernetes (K8s) monitoring (35% compared to 25% overall).

Creating customer-centric services and an optimal DCX is vital for finance and insurance institutions as they try to build and maintain trust and loyalty with consumers. An easy and reliable connection across any device is expected for day-to-day operations for all services, including selecting providers, quickly opening accounts, or even starting a procedure online that they intend to complete in person.

38%

of financial services/insurance organizations had achieved full-stack observability

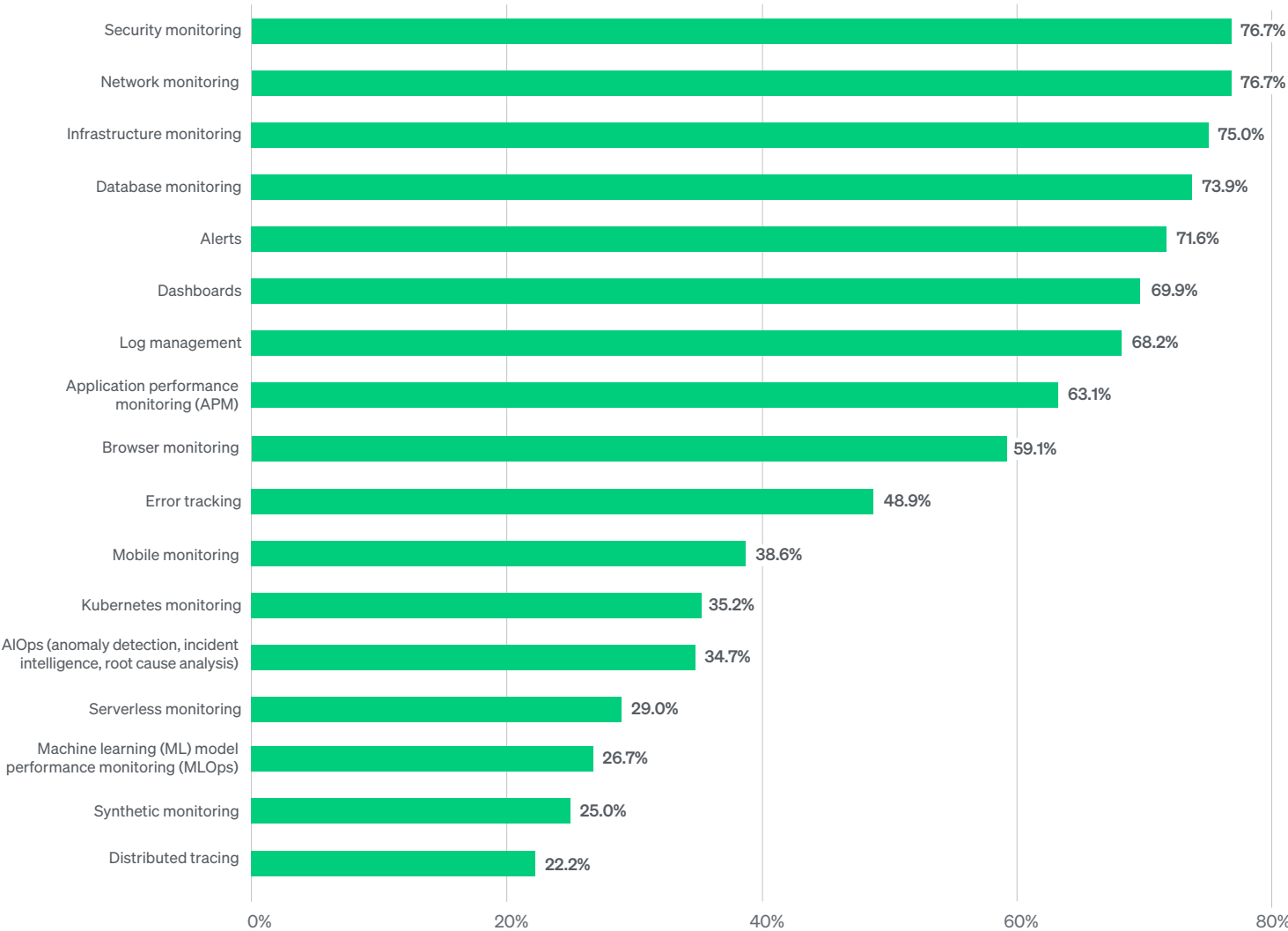


Digital experience monitoring (DEM) involves the tracking and optimization of performance and reliability to deliver a flawless DCX. DEM is a combination of real user monitoring (RUM)—which includes browser monitoring and mobile monitoring—as well as synthetic monitoring.

Respondents from financial services/insurance organizations reported higher levels of deployment for browser monitoring (59% compared to 51% overall) and synthetic monitoring (25% compared to 24% overall). They reported slightly lower levels of deployment for mobile monitoring (39% compared to 43% overall), which is likely due to business banking, private banking, core banking,

trading, credit and loans, payments processing, corporate insurance, reinsurance, and many other FSI sectors often not having associated mobile applications.

In addition, at least three-quarters of financial services/insurance organizations had deployed security monitoring (77%), network monitoring (77%), and infrastructure monitoring (75%). Database monitoring (74%), alerts (72%), dashboards (70%), and log management (68%) were also widely deployed. Each of these capabilities was generally more widely deployed by financial services/insurance organizations than across all sectors.



Deployed observability capabilities for financial services/insurance respondents

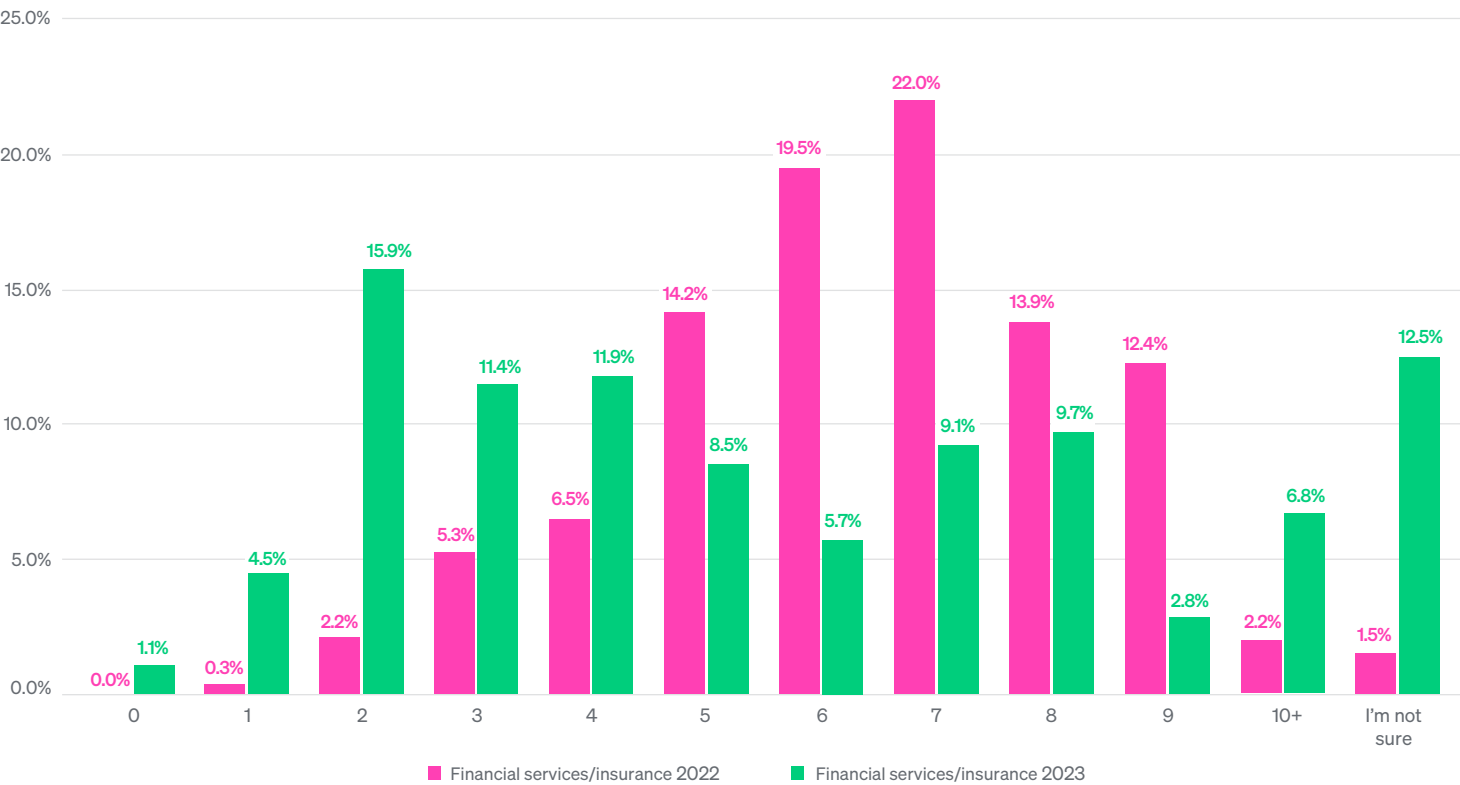
Number of finance data monitoring tools and preference

The data show that financial services/insurance organizations tended to use fewer monitoring tools than average for the 17 observability capabilities included in this study. For example, 32% used fewer than four tools for observability compared to the average of 28%.

The proportion of financial services/insurance respondents using a single tool has increased 15-fold since last year, growing from 0.3% to 4.5%. The average number of tools has also gone down by more than one tool, from an average of six tools in 2022 to five tools in 2023.

The data indicate that FSI and insurance organizations, relative to other industries, are making the move to reduce the number of observability tools they use to get a single, unified view of their tech stacks.

15x ↑
increase in the proportion of financial services/insurance respondents using a single tool since last year



Number of tools used by financial services/insurance organizations for observability capabilities in 2022 compared to 2023

When asked how unified their organization's telemetry data (metrics, events, logs, traces; or MELT) is, 32% said it's more unified, 43% said it's more siloed, and 22% said it's roughly equally unified and siloed.

Moreover, IT teams in financial services/insurance organizations detected software and system interruptions primarily from one or more monitoring tools (69%), though 28% said they detect outages through manual checks or tests, complaints, or incident tickets.

That said, the prevailing preference among financial services/insurance respondents was for a single, consolidated platform (52%). And 42% said their organization is likely to consolidate tools in the next year to get the most value out of their observability spend.

43%

said their telemetry data is somewhat, mostly, or entirely siloed

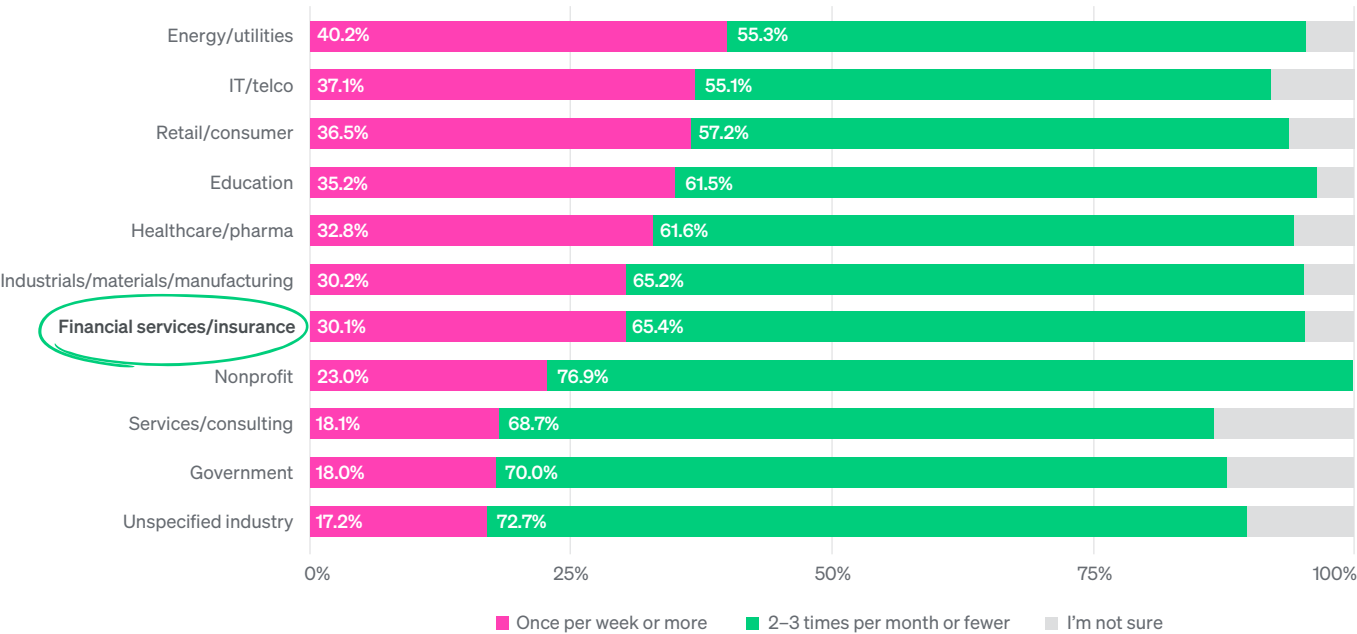
“In some of my previous roles, one of the biggest mistakes I faced was having one application to monitor infrastructure, another to monitor logs, and another for APM. It was annoying and a waste of time to investigate an incident and detect the source of the anomaly across tools. When we started Pomelo, we decided on one tool because we wanted all of our developer teams to get proficient at using that specific one.”



Juan Jose Behrand
Director of Engineering at [Pomelo](#)

Outage frequency, downtime, and cost

Financial services/insurance organizations experienced fewer high-business-impact outages than many other industries, with 30% reporting these outages at least once a week compared to the average of 32% among all respondents. This finding means that financial services/insurance organizations had the fifth lowest outage frequency across all industries.



High-business-impact outage frequency by industry

Total downtime is calculated by adding the mean time to detect (MTTD) and mean time to resolve (MTTR) outages. Two-fifths (40%) of financial services/insurance respondents said it takes at least 30 minutes to detect high-business-impact outages, which was less than the average of 44%, with 66% indicating it takes at least 30 minutes to resolve them. And 21% said it takes at least an hour to detect high-business-impact outages, with 36% saying it takes at least an hour to resolve them.

66%

took 30+ minutes to resolve high-business-impact outages

Banks have traditionally had strong resiliency in their systems and a relatively slow pace of change and software developments for their core systems. So whenever they get high-business-impact outages, they tend to be more complex and therefore have a higher business impact and time to resolve.

In fact, we observe this in most industries. Once an organization can resolve and eliminate a large number of incidents with mature observability practices proactively, they're usually left with the more complex and unpredictable ones that take longer to resolve, even if they could detect them early and understand them quickly.

However, despite the relatively high MTTR, 64% said MTTR has improved to some extent since adopting an observability solution.

Notably, financial services/insurance organizations with full-stack observability were more likely to report faster MTTD for high-business-impact outages than organizations that had not achieved full-stack observability. For instance, more than half (51%) of those with an MTTD of 30 minutes or less for high-business-impact outages had full-stack observability, and 58% of those with an MTTD of five minutes or less had full-stack observability.

More than a third (35%) of financial services/insurance respondents said critical business app outages cost more than \$500,000 per hour—which was higher than average and third highest overall compared to other industries—and 22% estimated they cost their organizations more than \$1 million an hour.

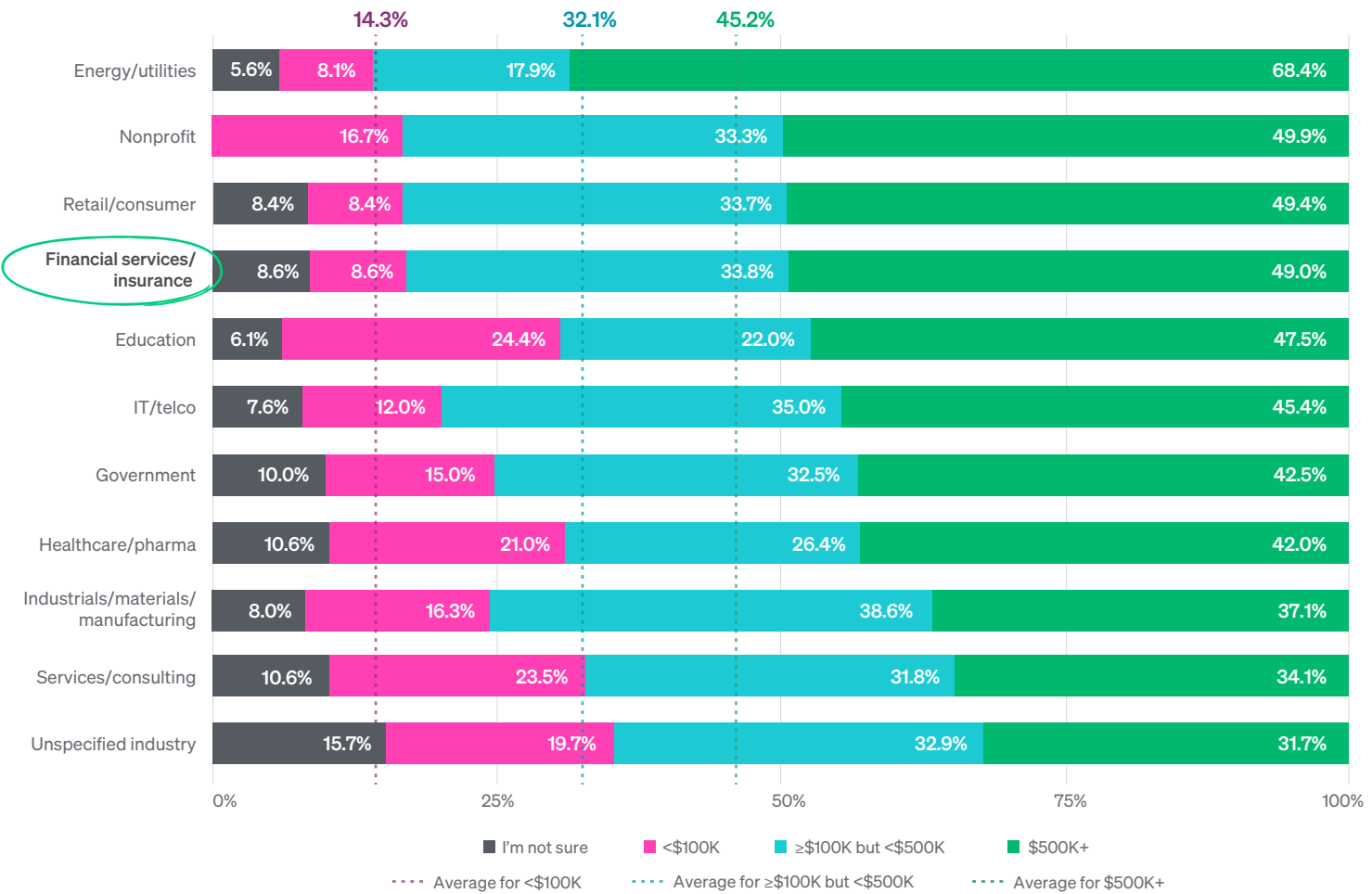
Therefore, despite having a lower-than-average outage frequency and MTTD, the higher-than-average MTTR and hourly outage cost for financial services/insurance organizations translated to a median annual outage cost of \$10.44 million, which is about 35% higher than the \$7.75 million annual outage cost across all industries and fourth highest overall.

FSI is a high-stakes business with a potentially large cost average per transaction for some areas of the financial sector, such as global corporate wire transfers and money movements, trading, and so on, so it's not illogical that the cost of incidents is high in this vertical.



Finance observability spend

Financial services/insurance organizations tended to spend more on observability than most other industries—almost half (49%) said they spend \$500,000 or more, and 31% said they spend \$1 million or more per year on observability. Just 9% said they spend less than \$100,000 per year on observability.



Annual observability spend by industry

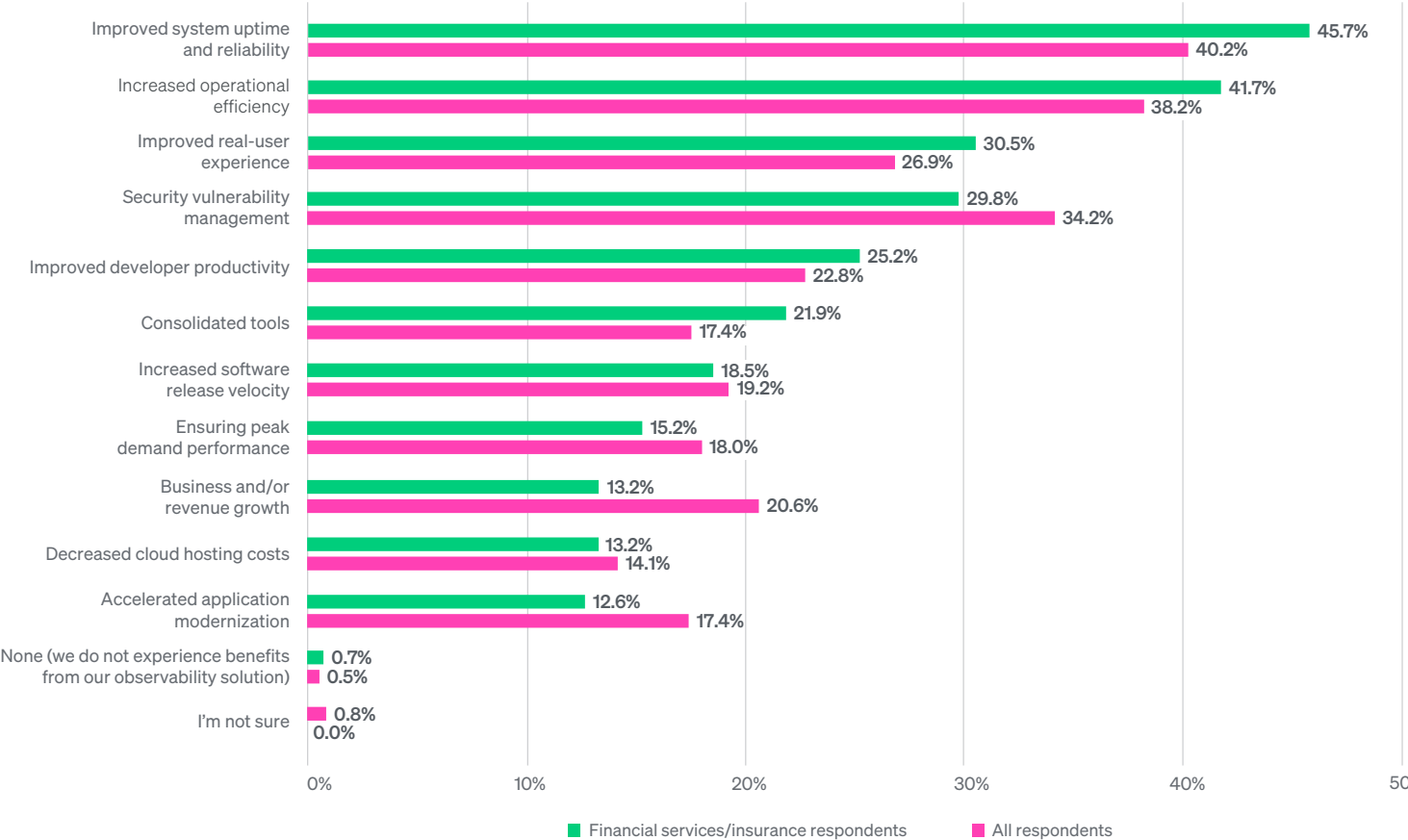
The business value of observability

When asked in what ways observability helps improve their life the most, the top two answers for IT decision makers (ITDMs) were that it helps achieve business key performance indicators (KPIs) (47%) and technical KPIs (43%). The top two answers for practitioners were that it increases productivity so they can find and resolve issues faster (45%) and makes their job easier (36%).

As far as business outcomes enabled by observability, 40% of financial services/insurance respondents said observability improves collaboration across teams to make decisions

related to the software stack. Nearly two-fifths (39%) also noted that observability improves revenue retention by deepening their understanding of customer behaviors compared to 34% overall.

Financial services/insurance respondents also indicated that the primary benefits enabled by observability were improved system uptime and reliability (46%), increased operational efficiency (42%), an improved real-user experience (31%), and security vulnerability management (30%).



Primary observability benefits

When we asked them how much total value their organization receives from its observability investment per year, 52% said more than \$500,000, with 41% saying the total annual value is \$1 million or more. A fifth (22%) estimated they receive \$5 million or more per year in total value. Financial services/insurance organizations reported a higher total annual value received from observability than average.

Based on annual spend and annual value received estimates, financial services/insurance organizations receive a 2x median annual return on investment (ROI).

Several factors had an even more positive impact on ROI. Respondents whose organizations had:

- Achieved full-stack observability had a higher median annual ROI (114%) than those who hadn't (100%).
- A mature observability practice had a higher median annual ROI (250%) than those with less mature practices (100%).
- Five or more capabilities currently deployed had a higher median annual ROI (114%) than those with 1–4 deployed (0%).
- Five or more observability practice characteristics currently employed had a higher median annual ROI (114%) than those with 1–4 employed (100%).

These findings strongly suggest that financial services/insurance organizations receive a minimum 2x ROI and that the ROI is even higher for organizations that monitor more of their tech stack or have more mature observability practices.

41%

said their organization receives \$1M+ total annual value per year from its observability investment



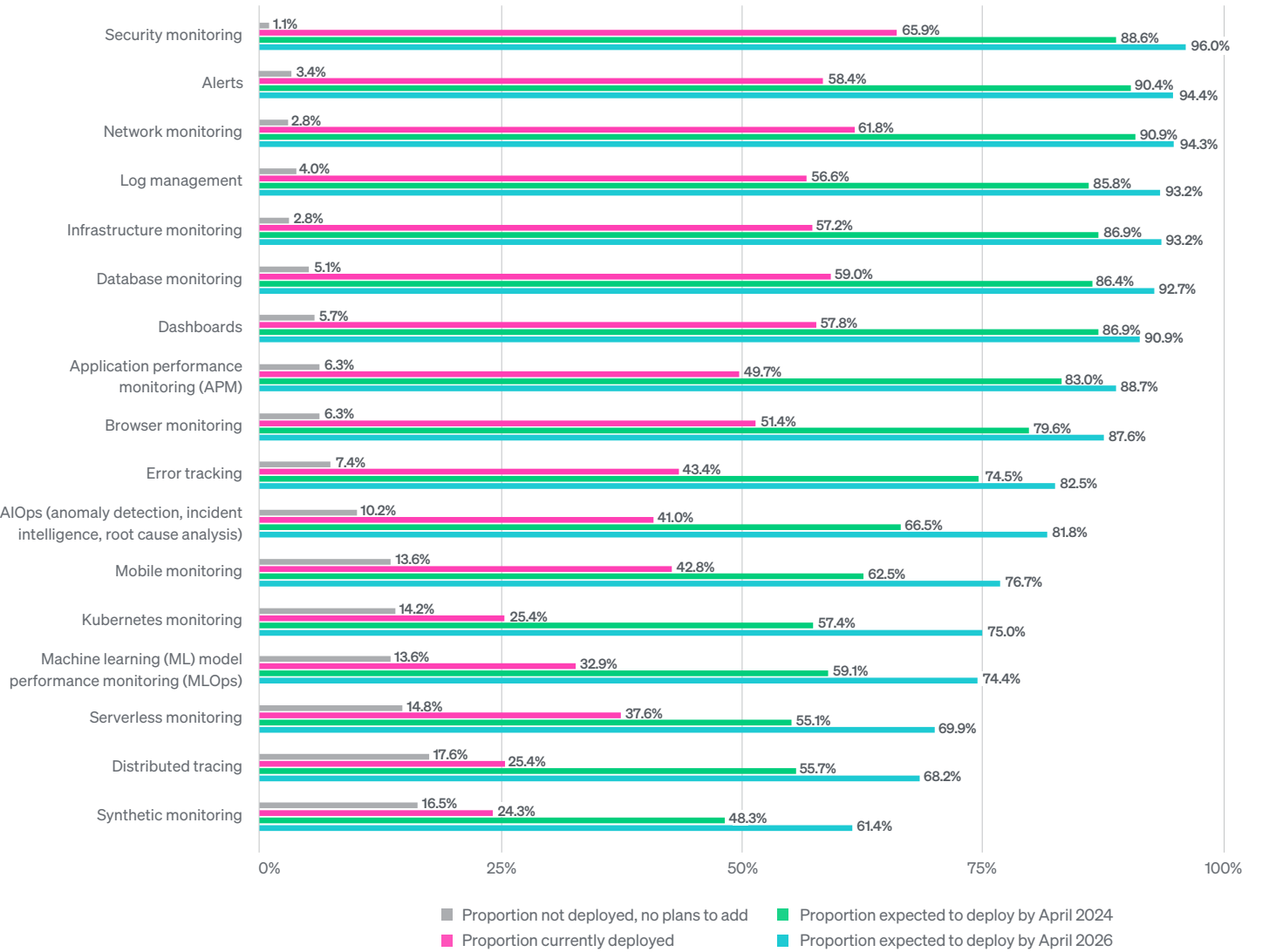
The future of observability for FSI and insurance

Financial services/insurance organizations had ambitious observability deployment plans for the next one to three years. For example, by mid-2026, most (96%) expected to have deployed security monitoring, followed by alerts and network monitoring (both 94%).

Most also expected to have deployed capabilities that are critical to backend and core banking systems operations,

including infrastructure monitoring (93%), APM (89%), and K8s monitoring (75%), as well as DEM capabilities, including browser monitoring (88%), mobile monitoring (77%), and synthetic monitoring (61%).

To get the most value out of their observability spend in the next year, 47% planned to train staff on how to best use their observability tools, and 42% planned to consolidate tools.



Observability capabilities deployment summary for the financial services/insurance industry from 2023 through 2026

Summary

Financial services/insurance organizations are going through a significant market transformation, weathering new regulations and vying for customers while remaining focused on delivering new products and services. To keep this all in balance, they use observability to ensure uptime, reliability, performance, efficiency, a seamless customer experience, and cutting-edge innovation.

Insights from the *State of Observability for Financial Services and Insurance* report show that organizations in the industry understand the business value of observability and are investing more in it. To keep organizations secure while modernizing and innovating at a rapid pace, engineers rely heavily on observability to ensure end-to-end visibility across complicated tech stacks.

The data also indicate that financial services/insurance organizations are starting to consolidate monitoring tools. Given their strong interest in deploying more capabilities in the next few years, signs point to these organizations moving from point solutions to more robust platforms that provide end-to-end visibility.



Next steps

New Relic is uniquely positioned to help FSI and insurance organizations improve their [DCX](#) and achieve full-stack observability before, during, and after their digital transformation journeys.

By instrumenting data sources like mobile banking apps, web-based platforms, ATM networks, payment gateways, and third-party APIs, they can use the all-in-one [New Relic observability platform](#) to monitor important business metrics, including transaction success and failure rates, fund transfer speeds, loan processing times, customer engagement time, ATM uptime, third-party service availability, net promoter scores (NPS), customer attrition rate, and revenue leakage rate.

Financial services and insurance institutions can use New Relic capabilities that are critical to backend and core banking systems operations, such as infrastructure monitoring, APM, and K8s monitoring.

Teams can use the [New Relic core web vitals quickstart](#) (a pre-built, open-source integration that includes dashboards and alerts) to monitor their site's core web vitals with [New Relic browser monitoring](#) agent data and then take action on low scores.

Consolidating monitoring tools on the New Relic observability platform enables FSI and insurance organizations to achieve greater visibility into their tech stack and every stage of the customer experience. They can also use [New Relic Pathpoint](#)—the industry's only [business observability app](#)—to merge customer, product, and services paths into a single business journey and quantify the financial impact of business metrics. For example, if their website went down, Pathpoint could show not only that the outage occurred, but also how much potential revenue was being lost for every minute of downtime.

With New Relic capabilities like [service level management](#) and DEM (browser monitoring, mobile monitoring, and synthetic monitoring), FSI and insurance institutions and their IT teams can detect and resolve issues proactively before they affect consumers and ultimately deliver an optimal user experience.

Potential business outcomes include visualizing the entire customer journey, identifying patterns and pain points, predicting customer behavior, enabling personalized offerings, and ensuring regulatory compliance.



Core web vitals are metrics Google uses to gauge overall site user experience, which can influence the site's search engine optimization (SEO) rankings and provide valuable insight into how users perceive the business. The benefits of understanding core web vitals include an improved user experience, better SEO, enhanced performance optimization, greater insights and analytics, and increased business value.

Request an in-depth, customized demo to find answers to your tough technical questions and get competitive pricing information.

[Request a Demo](#)

About this report

All data in this report are derived from a survey, which was in the field from March to April 2023 as part of our work in publishing the [2023 Observability Forecast](#) report. It's the only study of its kind to open-source its raw data. View the [2023 Observability Forecast survey results](#).

Financial services/insurance respondents comprised 176 of the total respondents surveyed in the *2023 Observability Forecast* study, or 10%.

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 15 key countries.

All dollar amounts in this report are in USD.

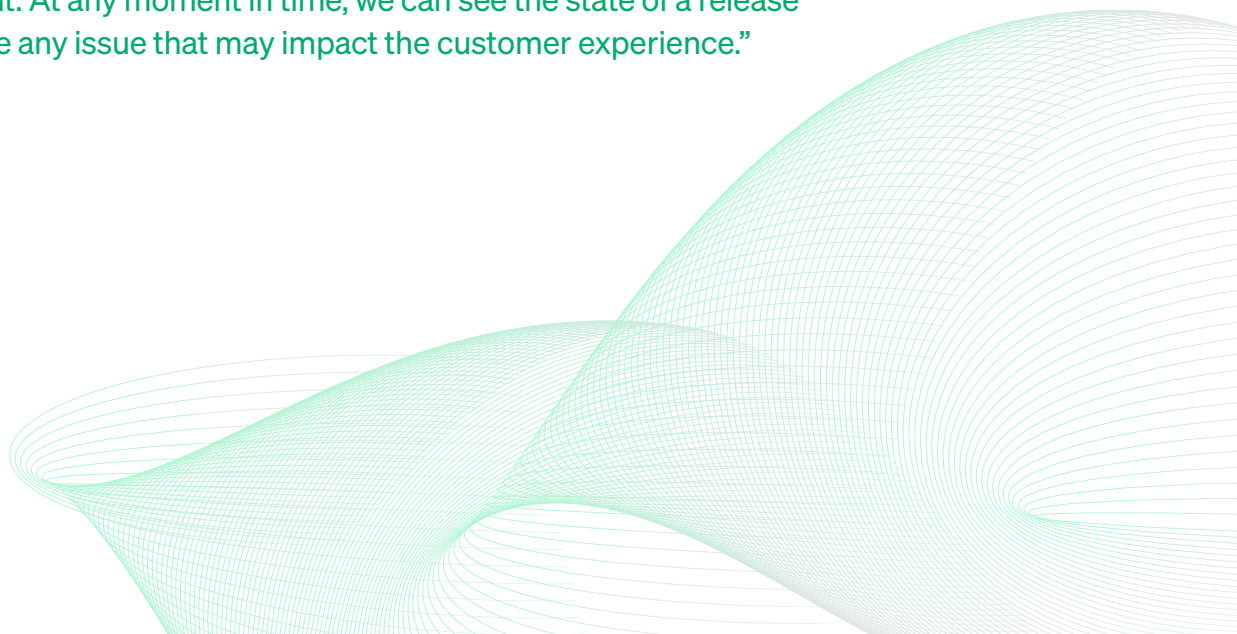
Definitions

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

“The data we collect from New Relic allow us to make sense of the chaos and understand performance in real time. In a fast-paced environment focused on continuous delivery, these real-time metrics provide us with a lens through which we can understand the system as a whole—and identify the services and APIs that need improvement. At any moment in time, we can see the state of a release and proactively resolve any issue that may impact the customer experience.”

Sonal Samal

Release Manager at [10x Banking](#)



About New Relic

As a leader in observability, New Relic empowers engineers with a data-driven approach to planning, building, deploying, and running great software. New Relic delivers the only unified data platform with all telemetry—metrics, events, logs, and traces—paired with powerful full-stack analysis tools to help engineers do their best work with data, not opinion.

Delivered through the industry's first usage-based pricing that's intuitive and predictable, New Relic gives engineers more value for their money by helping improve planning cycle times, change failure rates, release frequency, and MTTR. This helps the world's leading brands and hyper-growth startups to improve uptime, reliability, and operational efficiency and deliver exceptional customer experiences that fuel innovation and growth.



About ETR

Enterprise Technology Research (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.

