

2025 REPORT



OBSERVABILITY FORECAST



Over the past two decades every major leap in technology has

REWRITTEN THE RULES

for how we run and scale software.

SaaS and mobile freed applications from the corporate firewall. Cloud computing and microservices accelerated digital transformation, but also multiplied complexity.

Now we stand on the threshold of the next seismic shift: AI embedded in everything we do.

Just as these earlier shifts demanded a move from simple monitoring to true observability, the AI era demands something more—Intelligent Observability. This does not mean simply watching over AI models in production. This means preparing for a Cambrian explosion of software where anyone—from seasoned engineers to domain experts outside of IT—can build and deploy applications in minutes. The scale, speed, complexity, and diversity of what's coming will be unlike anything we've seen.

Observability as we know it will not be sufficient. Instead, to keep up with vibe coding, observability itself will need to be usable for everyone. Humans and agents will need to diagnose and solve problems in real time, correlate technical events to business outcomes, and take intelligent, automated actions before incidents impact customers.

Modern observability now extends beyond the telemetry pillars of metrics, events, logs, and traces (MELT). High-performing teams are using MELTx—where the “x” is everything else required for complete observability: security signals, cost and performance data, configuration changes, runbooks, and dependencies. In response, platforms like New Relic are powered by an intelligence engine that blends AI with deterministic insights, enabling predictive alerts, automated remediation, and seamless integration across the tools and systems you already rely on.

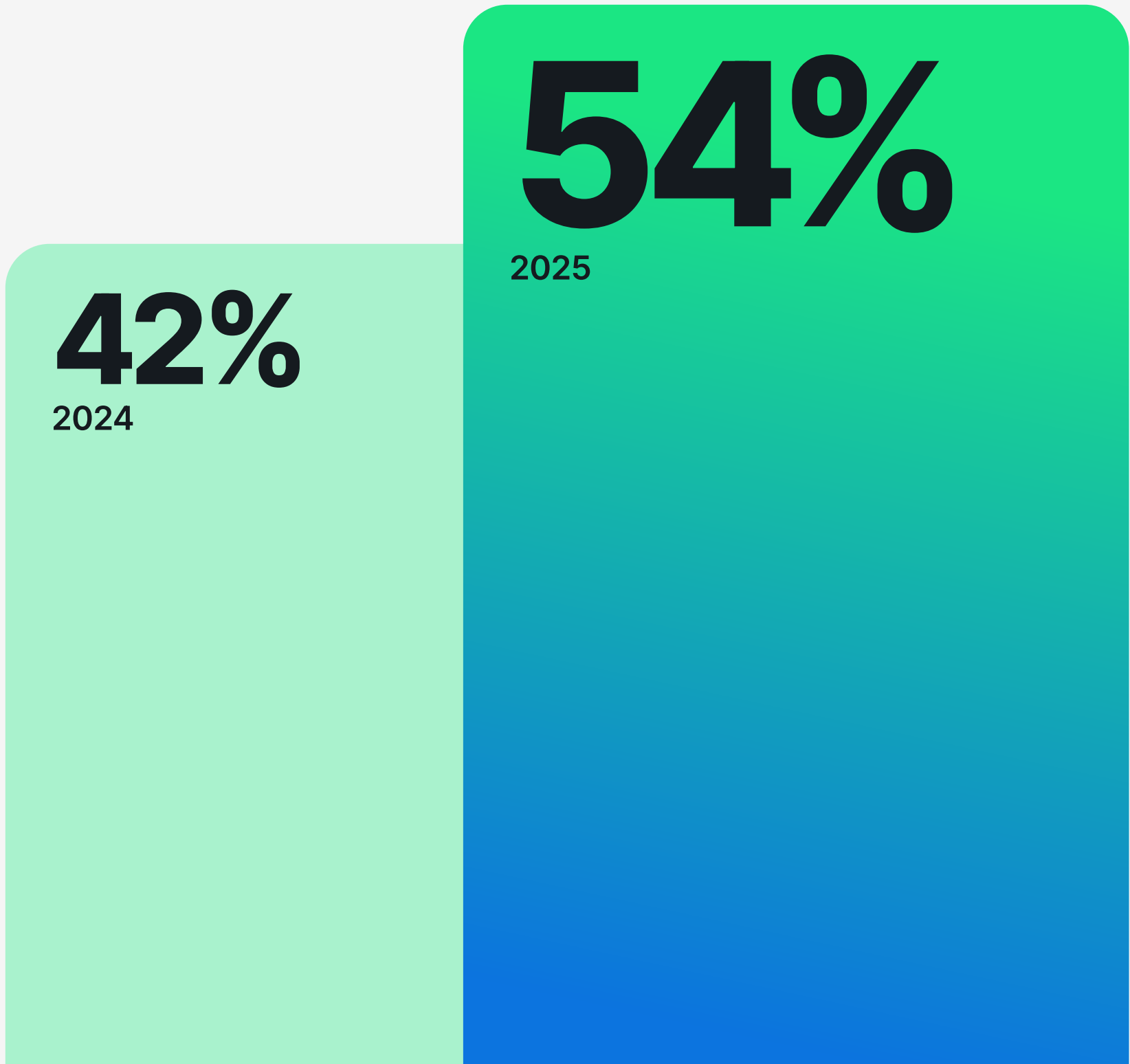
In this year's Observability Forecast, we surveyed 1,700 engineering and IT leaders to explore the capabilities, business outcomes, and operational challenges that will define success in this new era. You'll see how leading organizations are consolidating fragmented tools, reducing downtime, and unlocking the full business value of their telemetry data—and how Intelligent Observability will be foundational for the AI-driven enterprise.

KEY FINDINGS

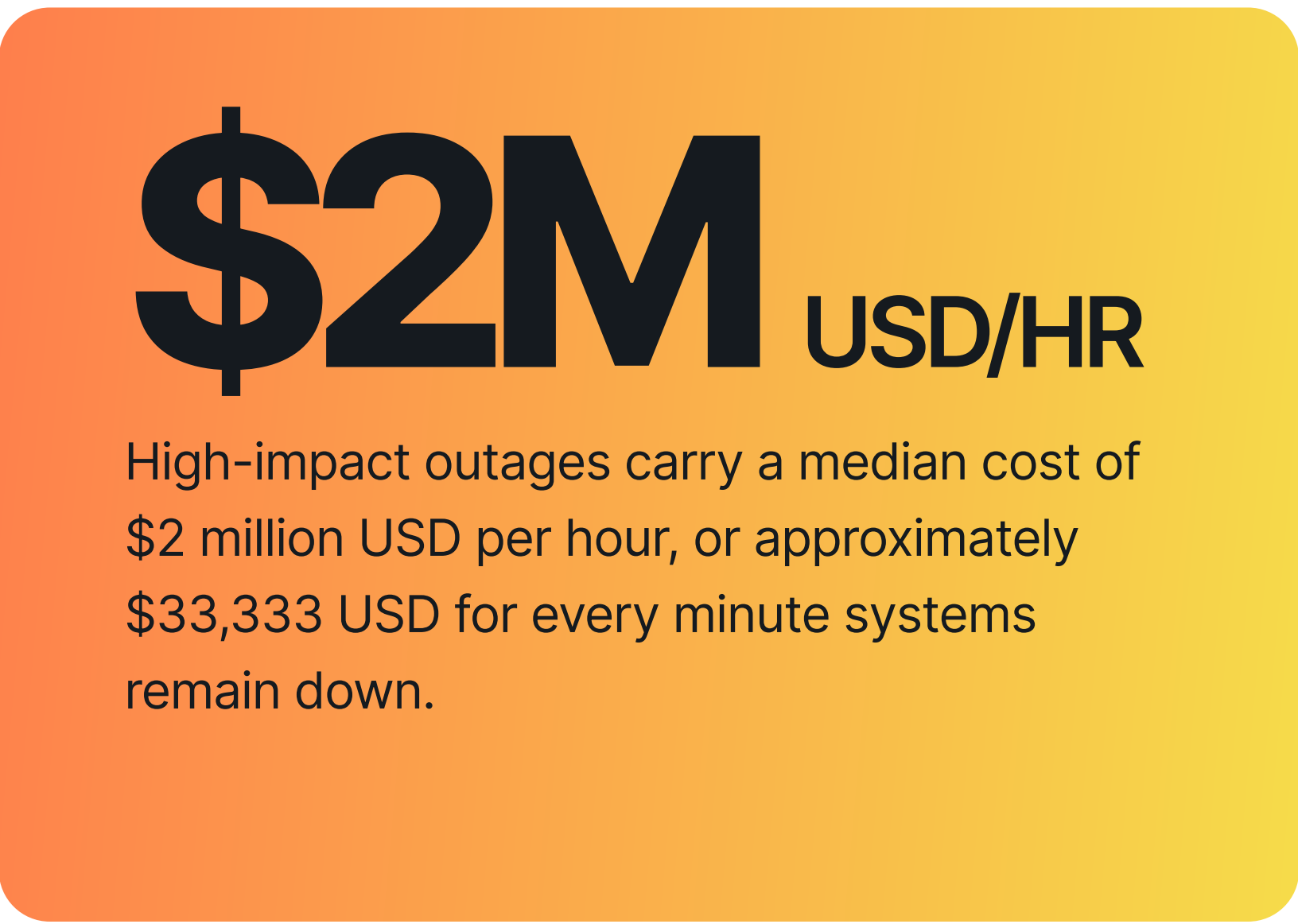
AI MONITORING

Artificial Intelligence is actively transforming operational and development practices. AI monitoring utilization went from 42% in 2024 to 54% in 2025 in current deployment—showing double-digit growth year over year.

Companies are moving beyond experimenting with AI to deploying it in live, customer-facing environments and business processes.



COST OF DOWNTIME



Setting a top-of-the line NVIDIA CPU on fire every sixty seconds would cost about the same. The financial drain from digital-system interruptions places considerable pressure on business resources. Cultivating operational resilience is a measurable way to safeguard both revenue and market confidence.

TOOL CONSOLIDATION



The average number of tools has declined by 27% over two years, but with an average of 4.4 observability tools per organization, there’s still work to be done. This pivotal shift is likely to continue, as **52% of organizations plan to consolidate** onto unified observability platforms.

FULL-STACK OBSERVABILITY

The full-stack observability (FSO) gap: 73% of organizations we surveyed lack full-stack observability¹, leaving broad segments of their technology stack and applications without comprehensive monitoring. **High-impact outages average \$1M per hour with full-stack observability versus \$2M per hour without.**

Median outage cost (high business impact)



BUSINESS IMPACT



Observability delivers real business impact: 75% of businesses report a positive return from their observability investments, nearly one in five (18%) say they are realizing 3-10X ROI.

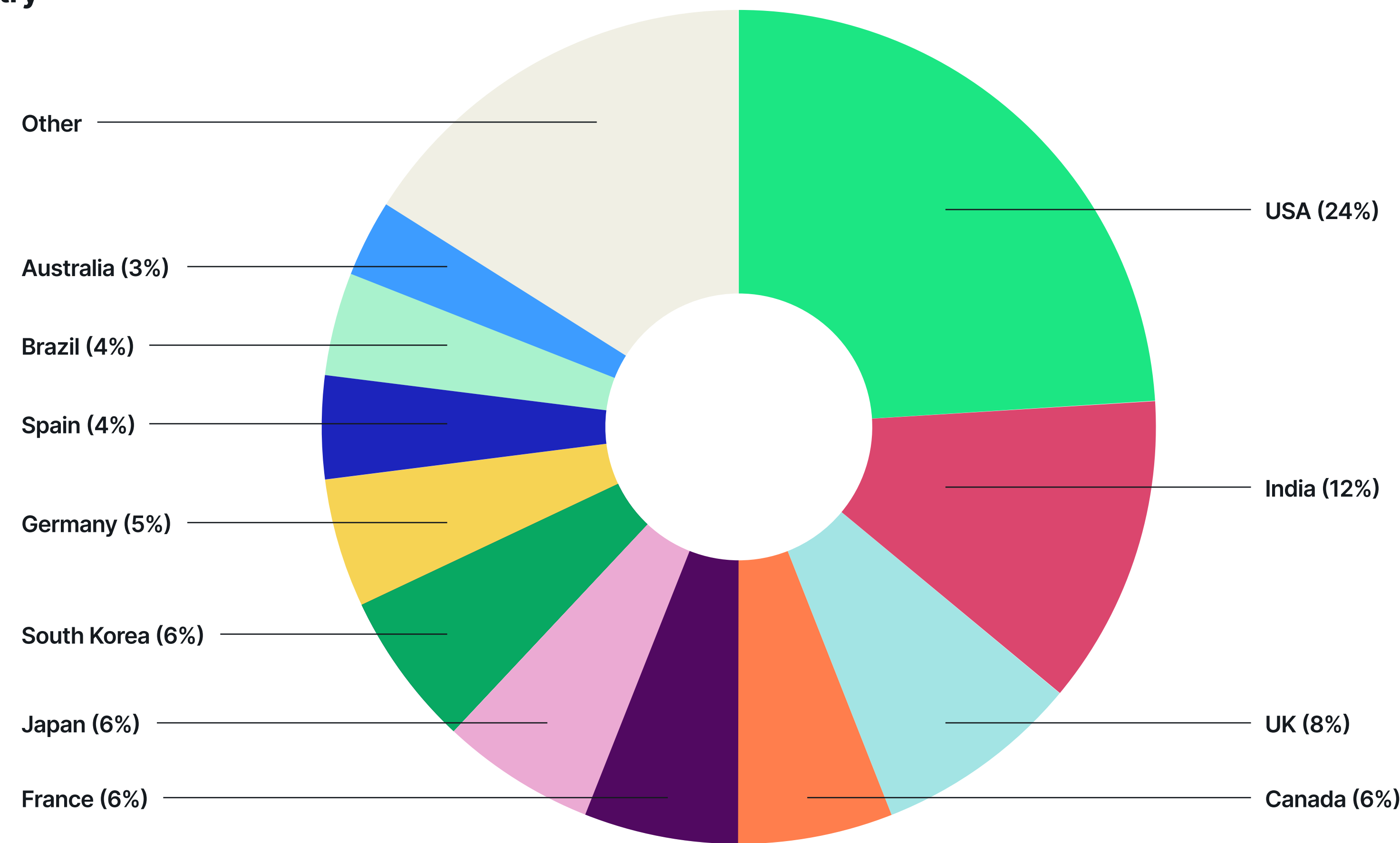
¹For the purposes of this report, full-stack observability (FSO) is defined as having visibility across five key categories: infrastructure, applications and services, security monitoring, digital experience monitoring (DEM), and log management.

Methodology

New Relic partnered with Enterprise Technology Research (ETR) to survey 1,700 IT and engineering teams and leaders worldwide. Respondents represent a wide range of industries and organizational sizes.

RESPONDENT COMPOSITION BREAKDOWN

Country



Organization Annual Revenue: 21% represent organizations with US\$1 Billion or more, 11% with US\$999.99 Million–US\$500 Million, 14% with US\$499.00–US\$250 Million, and 54% with < \$249.99 Million

Organization Employee Count: 14% of organizations have more than 10,000 employees
Firmographics: 65% practitioner vs. 11% executives vs. 24% management

1,700
IT leaders

20+
Countries

\$1B+
Revenue for 21% of organizations surveyed

THE RISE OF AI-POWERED OBSERVABILITY

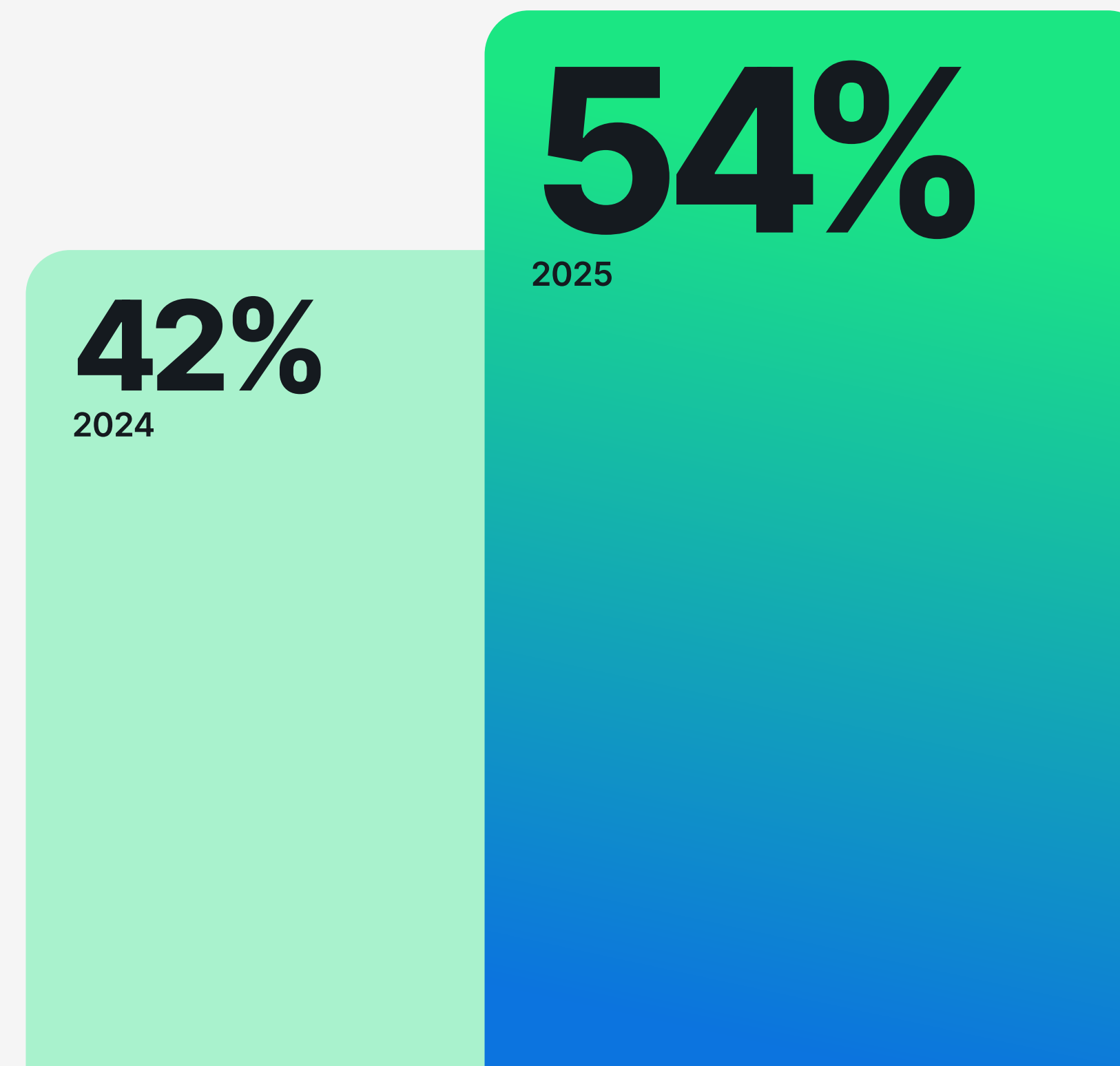
The shift is here. Generative and agentic AI are increasingly integrated into observability stacks.

Although AI-strengthened monitoring capabilities have been available for quite some time, most organizations lacked the observability maturity to take full advantage. That is now changing. By applying AI across full-stack telemetry (MELTx), organizations are moving IT operations from a reactive stance to a proactive, predictive one.

AI monitoring adoption and impact

AI monitoring utilization went from 42% in 2024 to 54% in 2025—a double-digit growth rate year over year—pushing adoption into the majority of organizations for the first time.

Percentage of organizations deploying AI monitoring capabilities



WHAT IT MEANS

The rise of AI in products and workflows is fueling demand for deeper observability, as organizations need real-time insight into how complex, distributed systems behave and interact in order to avoid hidden failures.

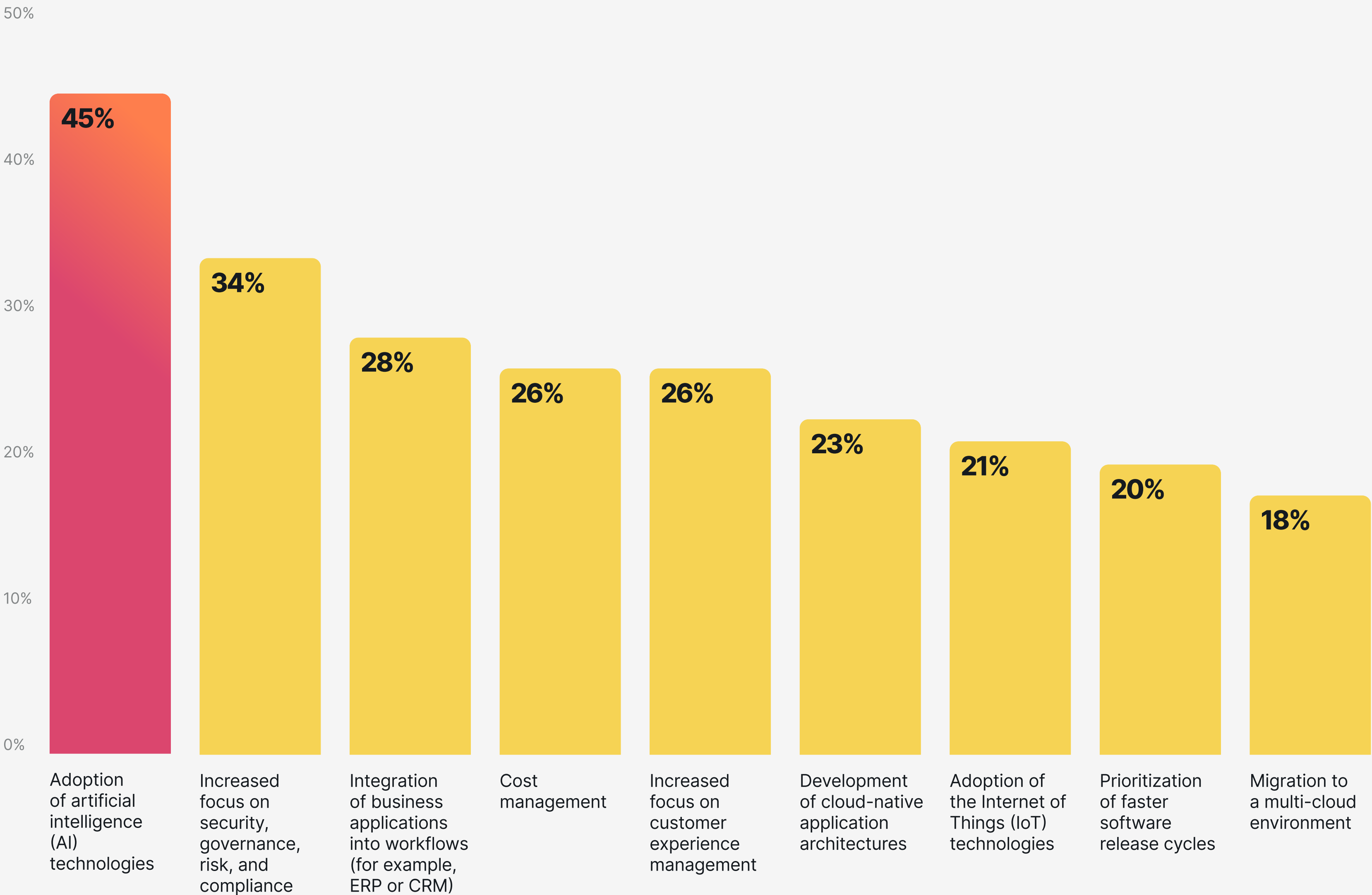
As LLM-powered applications and agentic AI become more widely adopted, they introduce unique visibility challenges. These models behave probabilistically, depend on dynamic and distributed environments, and often fail in ways that are opaque to traditional monitoring methods. Dependencies are harder to map. Failures are harder to catch. And without proper observability, silent issues can ripple through systems unnoticed.

Organizations adopting AI at scale now require a deeper level of system insight: one that goes beyond tracing code or monitoring infrastructure. In some cases, this can require deploying AI to monitor AI. In other words, using AI-powered observability platforms, in real time, to reveal how AI models interact with pipelines, APIs, and downstream applications.

This trend also underscores a key risk: without observability, AI adoption can outpace operational readiness. Undetected drift, silent failures, or latency in model-serving pipelines can result in degraded user experiences and missed business opportunities. For organizations betting on AI to accelerate growth, the operational stakes are immediate and measurable.

AI adoption is driving the demand for observability

Adoption of AI technologies was the top driver of observability demand, cited by 45% of executive leaders—more than any other factor in our survey.



WHAT IT MEANS

AI-strengthened observability is becoming essential as systems grow too complex for humans to track alone. By detecting issues earlier and automating responses, AI reduces downtime, speeds recovery, and prevents user impact.

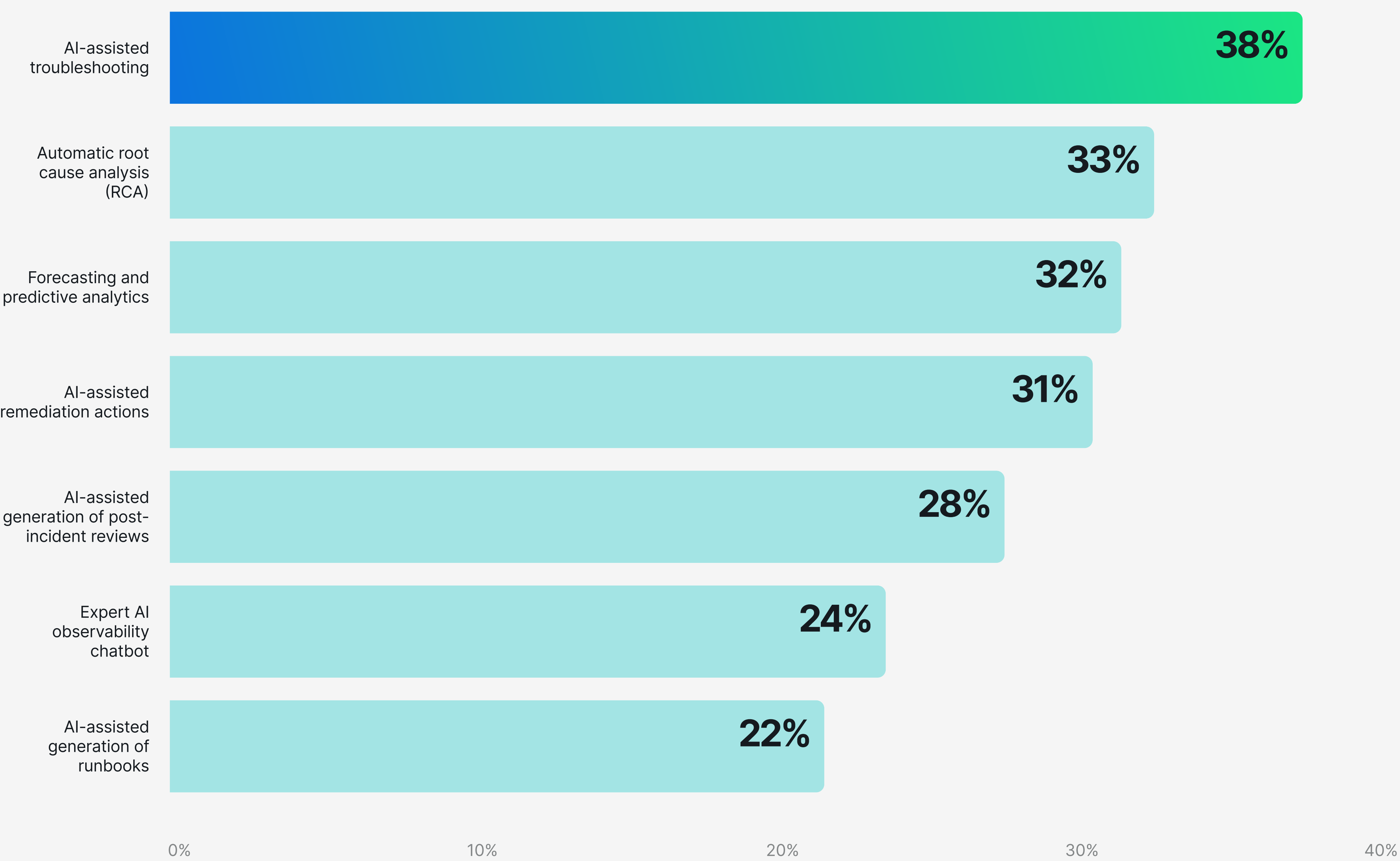
The acceleration of AI monitoring and observability reflects a simple reality: the complexity of today’s systems has outpaced what human operators can reasonably track. Services now run across highly distributed, fast-changing environments that generate staggering volumes of telemetry. Without intelligent assistance, critical anomalies can hide in a sea of data until they become business-impacting incidents.

Survey results reveal the biggest opportunities for AI to strengthen observability. Executives and IT leaders identified AI-assisted troubleshooting (38%) as the most impactful capability, helping teams diagnose issues before they escalate. Close behind are automatic root cause analysis (33%) and AI-assisted remediation actions, such as rollbacks or configuration updates (31%), which could dramatically reduce mean time to resolution (MTTR) and limit the blast radius of incidents. Predictive analytics (32%) also ranks highly, reflecting demand for capabilities that can forecast issues before they impact users.

This technology is reshaping operational strategy. Teams that once spent most of their time reacting to outages are starting to resolve problems before users notice them. Reduced downtime and faster recovery translate directly into lower financial exposure and more engineering hours for higher-value initiatives, like building products rather than chasing alerts.

The next stage of this evolution will involve more automated systems as AI moves beyond detection to active intervention. Organizations that adapt quickly will gain a structural advantage: higher resilience, lower incident costs, and the freedom to scale without expanding headcount at the same rate.

Which AI features do you think would improve your organization’s incident response or observability practice the most?



BUSINESS OUTCOMES

THE TANGIBLE VALUE OF OBSERVABILITY

While AI adoption is a powerful catalyst reshaping observability, it's only one part of the story.

Observability directly affects critical business metrics, demonstrating clear returns on these investments across various performance indicators. Survey respondents viewed observability's impact in three key areas: **operational resilience, engineering efficiency, and business growth.**



The staggering cost of downtime

Observability directly improves system stability and availability, protecting revenue and brand reputation by speeding incident resolution and reducing downtime.

\$2M USD/HR

The median cost for a high-impact business outage across organizations we surveyed.

WHAT IT MEANS

Observability directly enhances operational resilience, drastically reducing the time and financial impact of critical outages.

Downtime has evolved from an IT concern into a board-level risk. In our survey, organizations reported a median cost of **\$2 million USD per hour for high-impact outages**, a figure that highlights the considerable financial exposure that comes with even brief disruptions. When revenue, customer trust, and brand reputation are all on the line, every minute of system unavailability compounds the business impact.

To illustrate this compound effect, when you annualize the cost and the average frequency of outages reported the exposure rises to **\$76 million USD per year for high-impact business outages**. Can you spot the board-level risk here?

The economics are straightforward: reducing the duration and frequency of outages can directly translate into millions of dollars in savings. Organizations that have embraced observability practices report clear gains in both mean time to detect (MTTD) and MTTR. Faster detection and resolution shrink the window of exposure, preventing isolated incidents from escalating into cascading business failures.

“

Downtime is a direct cost for us. We use New Relic to **calculate the downtime of all the incidents.**

By looking at New Relic metrics, we correctly determine the number of transactions affected, which allows us to correctly identify the severity and the cost of the incident.

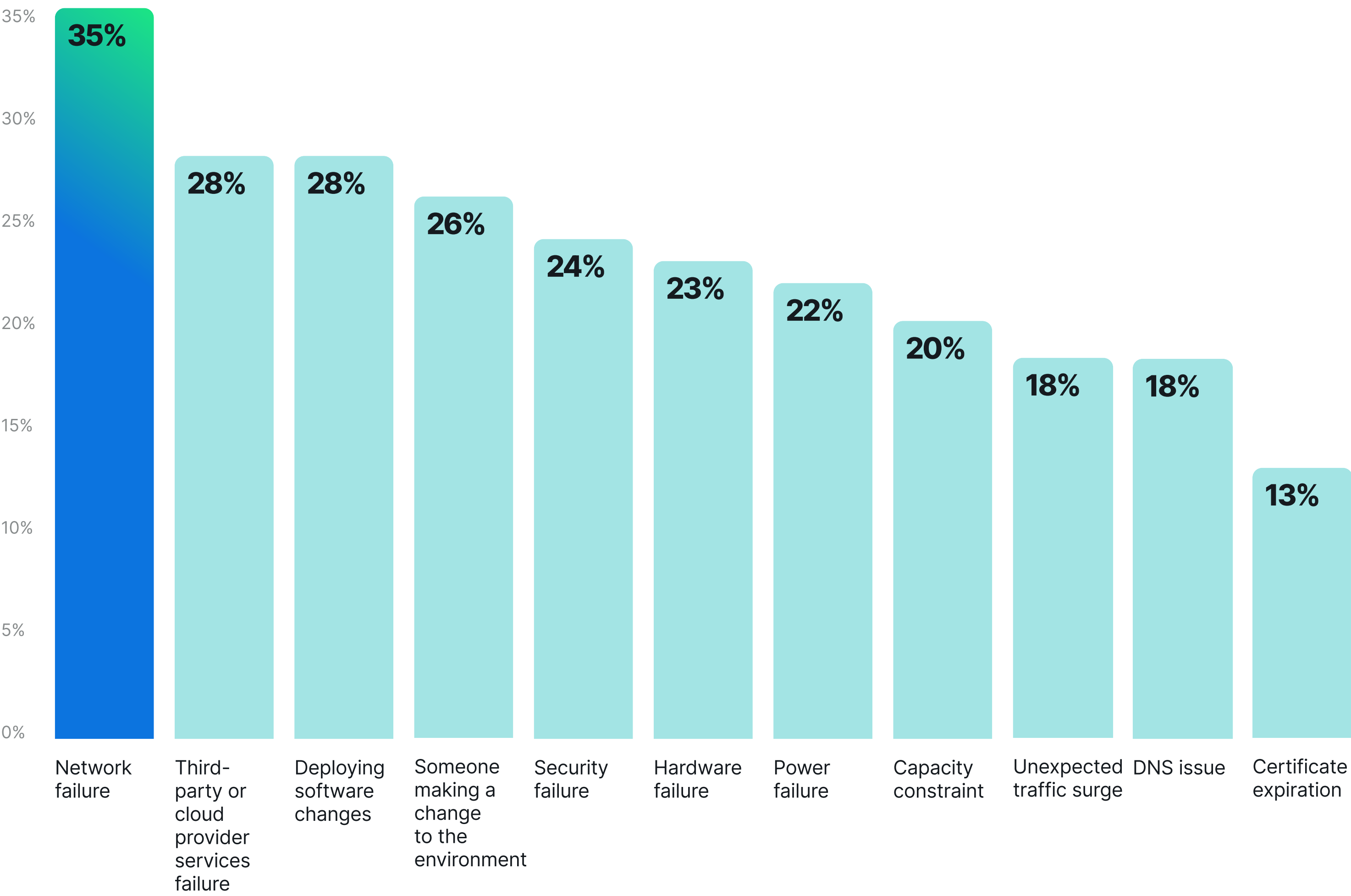
Tibi Guiu
Head of IT Governance



Nearly seven in ten (68%) organizations we surveyed reported measured improvements in MTTD since adopting observability, confirming that visibility and speed are both technical wins and financial imperatives.

The root causes of these costly outages reflect the complexity of modern digital environments. Network failure (35%) and third-party provider issues (28%) remain the leading culprits, underscoring the fragility of increasingly interconnected systems. At the same time, internal triggers such as software deployments (28%) and unplanned environment changes (26%) continue to generate preventable incidents, often due to limited pre-deployment visibility or fragmented monitoring. In a distributed architecture where a single misconfiguration can ripple across dozens of services, these weaknesses carry a steep price.

Primary causes of outages

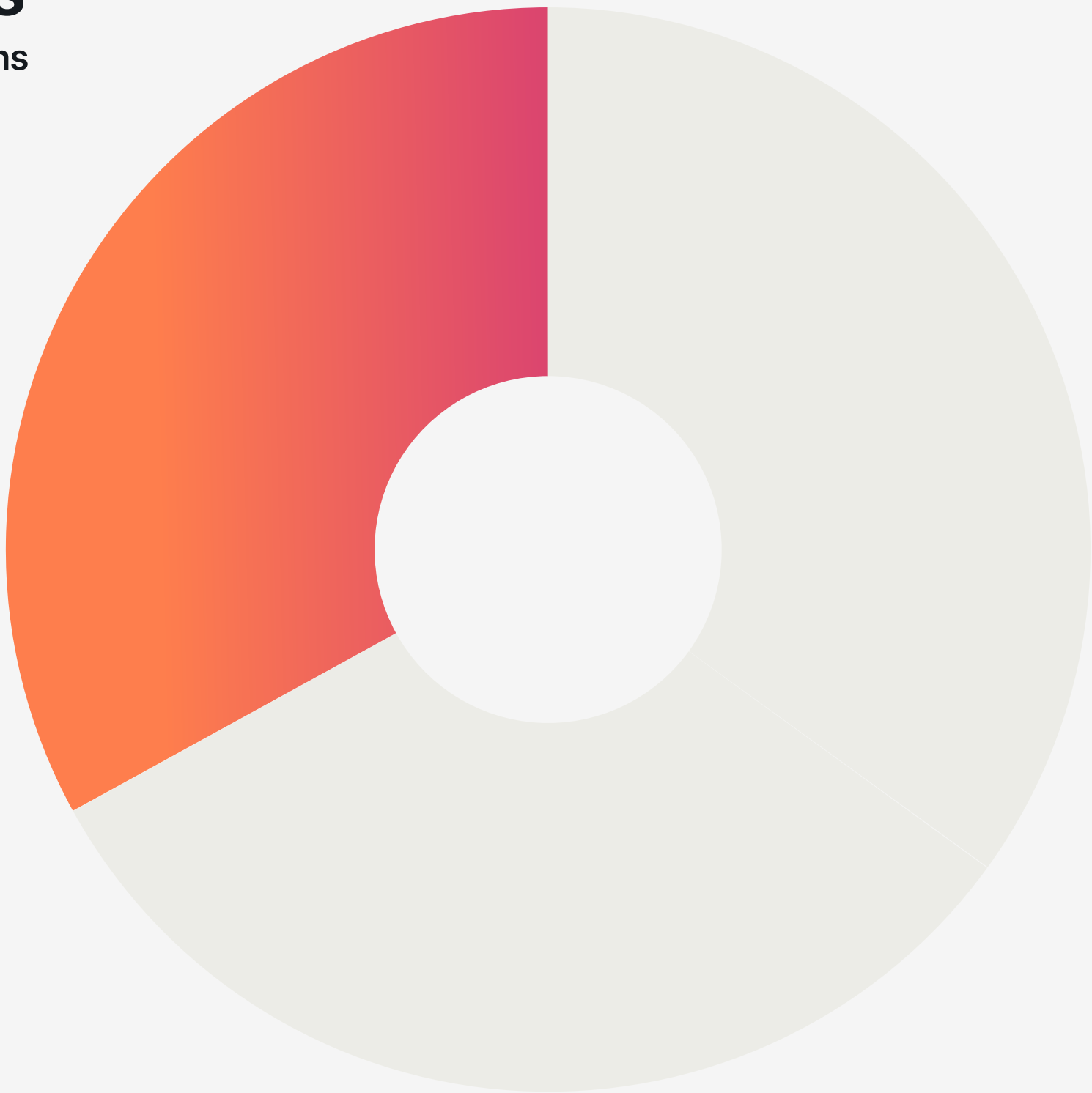


Improving engineering productivity and satisfaction

Observability tools empower engineering teams to focus on innovation rather than firefighting, fostering a more productive and fulfilling work environment.

33%

of engineering hours go to fighting fires or addressing disruptions



WHAT IT MEANS

Engineering teams are still disproportionately bogged down by reactive work, affecting their morale—and, in turn, the bottom line. It's more important than ever to free up engineers to work on projects with positive business impact.

AI-enhanced observability offers clear pathways to redirect effort towards innovation and improve morale.

A third of engineering time remains consumed by reactive tasks and firefighting. Another 33% of engineering time is spent on maintenance and technical debt, meaning more than two thirds of engineers' time is currently spent on tasks other than developing new features or coding innovations.

Both executives and practitioners recognize significant benefits stemming from better and more automated observability. For leadership, reduced unplanned downtime (cited by 55% of leaders) is the top benefit of observability, followed by overall operational efficiency improvements (50%), and reduced security risk (46%).

For practitioners, the top benefit is reduced alert fatigue, cited by 59% of engineers and SREs. Faster troubleshooting and root cause analysis (58%) and improved collaboration across teams (52%) round out the top three benefits of observability for practitioners.

Streamlined observability workflows, especially with AI-powered assistance, allow engineers to quickly pinpoint issues, reducing the cognitive load and frustration associated with debugging complex systems.

When less of their time is consumed by reactive work, engineering teams can dedicate more effort to building new features, improving existing products, and innovating.

This directly contributes to practitioner satisfaction and better work-life balance, reducing turnover and attracting top talent.



244 issues took 5 hours to fix with New Relic. We estimate saving \$16M per year via proactive monitoring.

If we can prevent incidents, it leads to better customer satisfaction and better customer experience.

Cody Chandler
Senior Director of Cloud Engineering



Observability is driving tangible ROI for businesses



Observability extends its influence beyond IT operations, directly impacting business performance, customer experience, and business growth.

75%

of businesses report a positive return from their observability investments, while nearly one in five (18%) say they are realizing 3-10X ROI.

WHAT IT MEANS

Observability's value extends far beyond IT, directly contributing to core business objectives like improved uptime and reduced operational costs.

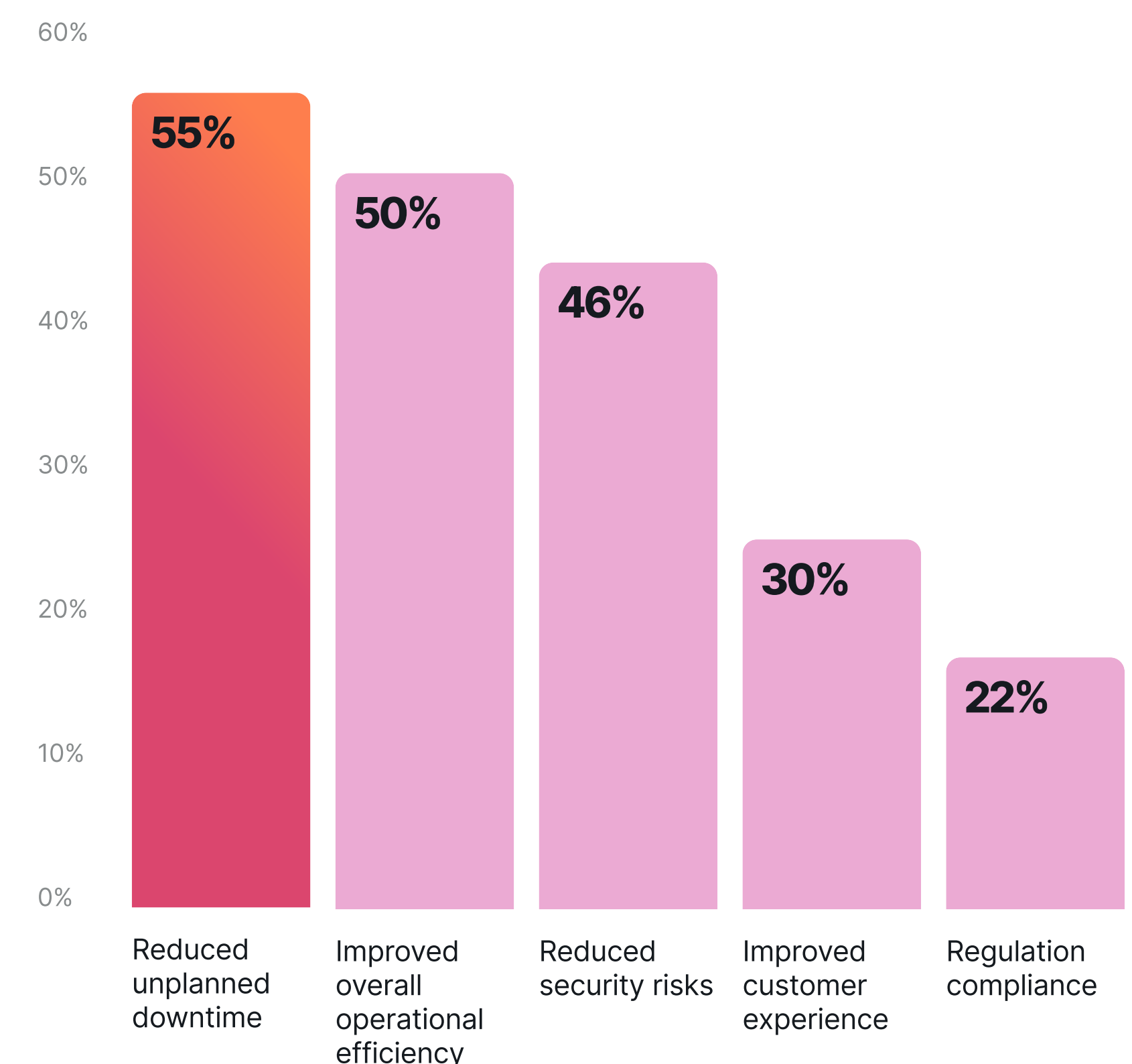
Reliable, high-performing digital services are fundamental to positive customer experiences. Observability directly supports this by minimizing disruptions and ensuring optimal application performance.

The top benefit of observability for the business is the reduction in unplanned downtime, cited by 55% of leaders. Faster identification and resolution of issues mean less downtime for critical business applications, leading to higher customer retention and satisfaction.

In addition, 50% cited improved operational efficiency as a top business benefit of observability, and 30% cited better customer experiences. That's no surprise, as the insights gained from observability equip teams to build more resilient and performant products from the start.

Observability is emerging as one of the rare technology categories that consistently pays for itself—a crucial advantage in a market where budgets are scrutinized and every investment must prove its value. For top performers, it goes further, generating outsized returns that can fund the next wave of innovation.

Top benefits of observability for the business



CHALLENGES TO ACHIEVING FULL-STACK OBSERVABILITY

Even as adoption accelerates, many organizations struggle to achieve true full-stack observability.

The barriers are often structural: sprawling technology stacks, overlapping or redundant monitoring tools, and siloed telemetry data create blind spots that slow incident resolution. While some teams are beginning to consolidate tools and standardize data flows, overall observability maturity still lags behind the complexity of modern digital environments.

The full-stack observability gap



73%
of organizations surveyed **lack full-stack observability**, leaving broad segments of their technology infrastructure and applications more likely to fail, disrupting operations or customer experiences.

WHAT IT MEANS

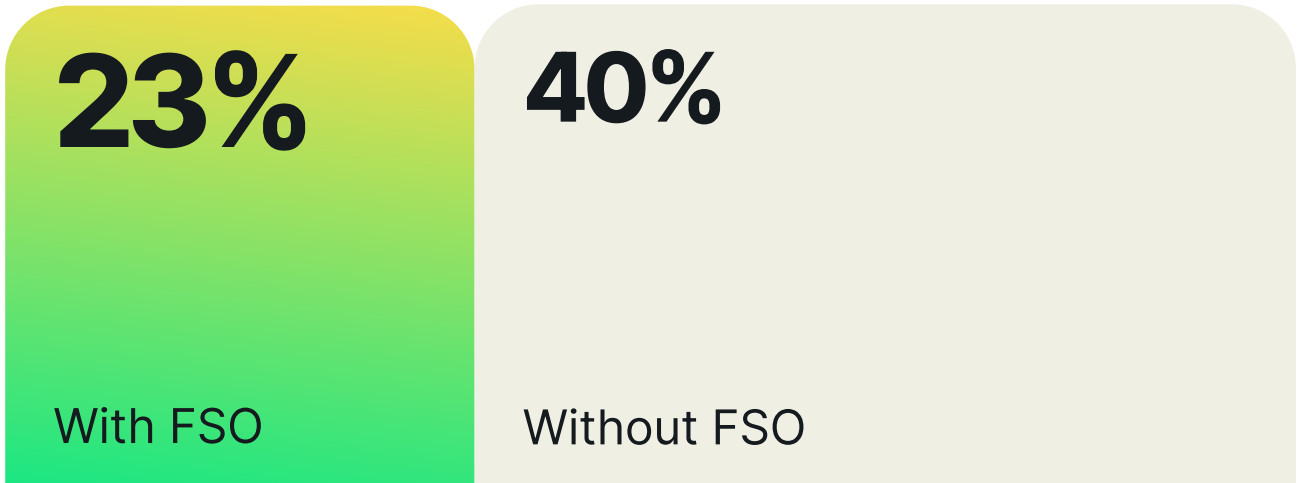
Full-stack observability integrates visibility across infrastructure, applications and services, security monitoring, digital experience monitoring (DEM), and log management. Without it, teams operate with critical blind spots that delay detection, prolong outages, and drive up costs.

The absence of full-stack observability leaves organizations exposed to both operational and financial risk. Disconnected monitoring tools and siloed data mean engineers must piece together partial insights when diagnosing an incident, slowing down response times and increasing the cost of outages. By contrast, organizations with FSO can trace issues end to end, from the frontend user experience to backend infrastructure and APIs, enabling faster resolution and more informed decision making.

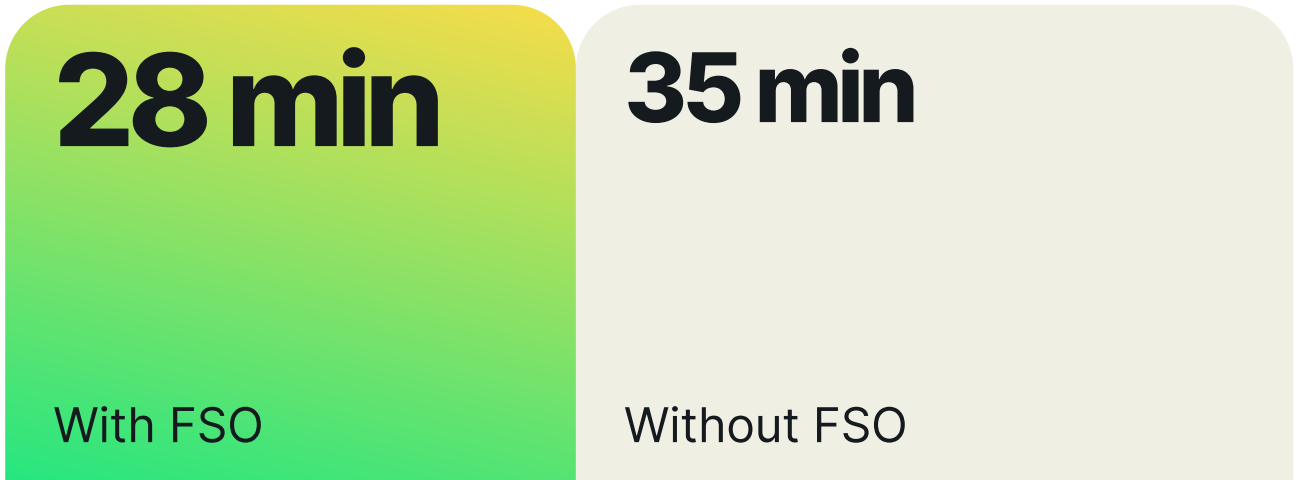
The performance and cost benefits are substantial. Teams with FSO report fewer outages (just 23% experience high-impact outages at least weekly vs 40% without) and detect them 7 minutes faster with an average MTTD of 28 minutes. Most striking is the financial delta: **high-impact outages average \$1M per hour with FSO versus \$2M per hour without.**

For leaders, the takeaway is simple: achieving full-stack observability reduces operational risk, speeds incident response, and delivers measurable financial returns.

At least weekly outage frequency (high-business-impact outages)



Median outage MTTD (high-business-impact outages)

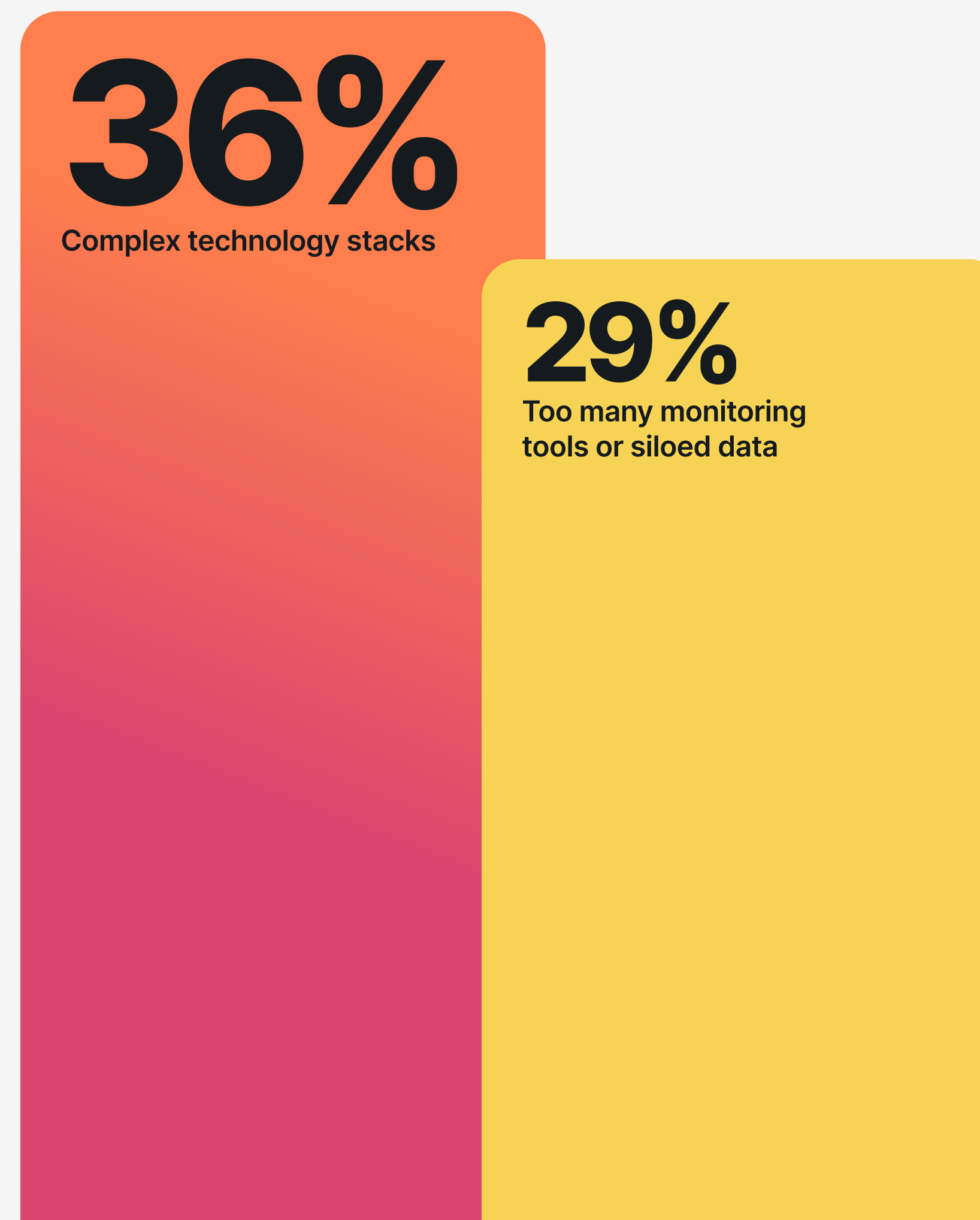


Median outage cost (high business impact)



Complex stacks and siloed data

36% cite complex technology stacks as their top challenge, with another 29% pointing to too many monitoring tools or siloed data.



WHAT IT MEANS

Complex, fragmented tech stacks and siloed data make it hard for teams to see system health clearly. Consolidating tools and unifying data is key to resilience and true end-to-end observability.

Modern digital environments are sprawling and fragmented, creating a major barrier to full-stack observability. Over a third of leaders (36%) cite complex technology stacks as their top challenge, with another 29% pointing to too many monitoring tools or siloed data. These issues are often two sides of the same coin: every new service, cloud, or framework introduces more telemetry, which often ends up scattered across disconnected tools.

The result is a fractured view of system health. Engineers must hop between dashboards to piece together an incident narrative, while valuable signals remain hidden in isolated data silos. Inconsistent telemetry also limits the effectiveness of AI-driven capabilities like anomaly detection or automated root-cause analysis, which depend on comprehensive, correlated data.

This operational drag is prompting many organizations to take a hard look at their monitoring ecosystems and recognize that complexity itself has become the enemy of resilience. The next stage of the observability journey is consolidation—simplifying toolsets and unifying data flows to break down silos and surface a true end-to-end view of system health.

Organizations are consolidating observability tools

Businesses understand the value of consolidating observability tools. Unified observability platforms streamline operations, reduce complexity, and provide a holistic view of system health.

27% ↓

decrease in the average number of observability tools per organization from 2023 to 2025.

WHAT IT MEANS

Organizations burdened with too many observability tools are making progress, reducing the average number of tools per organization from 6 in 2023 to 4.4 today. The median number today is even lower: 4 tools per organization.

Organizations are actively reining in tool sprawl.

The average number of observability tools per organization has dropped 27% since 2023, from 6 to 4.4; some leaders, notably, operate with even fewer. This trend reflects a recognition that too many tools create as many problems as they solve (fragmented data, higher overhead, and slower incident response).

Cost considerations are never far from the discussion either. Thirty-seven percent of leaders said cost was their top criterion when selecting observability platforms, signaling that financial pressures are accelerating the push toward unified solutions.

Multiple tools mean multiple licenses, integration work, and management cycles—consolidation promises relief on all fronts.

With fewer tools to juggle, engineers can focus on solving problems rather than managing dashboards or integrations. Consolidation reduces cognitive load and accelerates incident resolution, while also cutting the hidden costs of fragmented systems—from maintenance and licensing to the risk of delayed responses during critical outages.



Skyscanner was able to **replace over 12 monitoring and point solutions with New Relic.**

Previously 10 experienced engineers were dedicated to upkeeping these monitoring solutions. Now they can focus on accelerating adoption.

The Skyscanner engineering team

Organizations have far to go on the observability-maturity journey.



41%

of leaders reported they still learn about service interruptions through inefficient means—customer complaints, incident tickets, or manual checks.

WHAT IT MEANS

This is what the opposite of full-stack observability looks like. Many organizations are still stuck in reactive mode, relying on complaints and manual checks to spot issues.

Even as organizations invest in observability, many remain far from achieving full-stack visibility. **Forty-one percent of leaders reported they still learn about service interruptions through inefficient means—customer complaints, incident tickets, or manual checks.** These reactive signals indicate that, for a large share of organizations, observability has yet to deliver on its promise of early detection and prevention.

Relying on manual checks and external reports leaves teams exposed. Outages can persist longer than necessary, user experience suffers, and incident response becomes a fire-drill exercise rather than a controlled, data-driven process. This is observability in name only—a patchwork of dashboards and alerts that provide visibility without true insight.

By contrast, mature or full-stack observability correlates telemetry data across applications, infrastructure, and services to detect anomalies before users notice. It empowers teams to move from chasing incidents to preventing them, and it supports modern practices like intelligent alerting or predictive analytics.

In 2025, the maturity gap is one of the clearest dividing lines between resilient innovative leaders and those still in firefighting mode.

STRATEGIC IMPERATIVES FOR 2025 AND BEYOND

Looking across the findings of our observability forecast, clear imperatives emerge for IT and data leaders.

Prioritize unified platforms with one view of system health

Cultivate an observability-driven culture

Embrace AI for proactive operations

Prioritize unified platforms

The data strongly advocates for consolidating observability tools into unified platforms as a critical strategy to combat tool sprawl and achieve 360° visibility.

52%

of organizations plan to consolidate observability tools onto a unified platform in the next 12–24 months.

Organizational strategy for observability (next 12–24 months)

Consolidating observability tools onto a unified platform



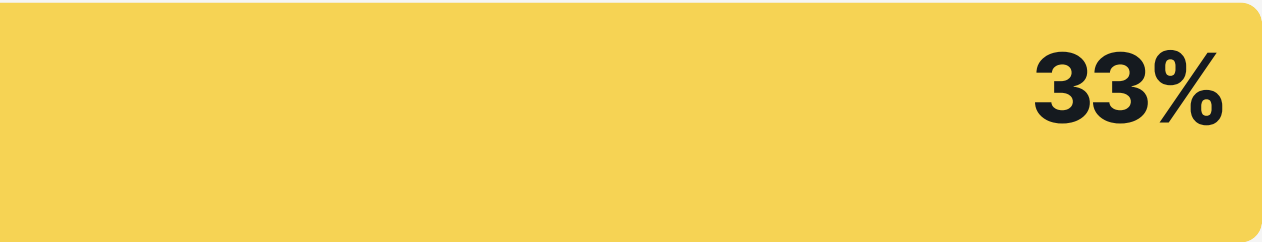
Increasing investment in AIOps/ML capabilities



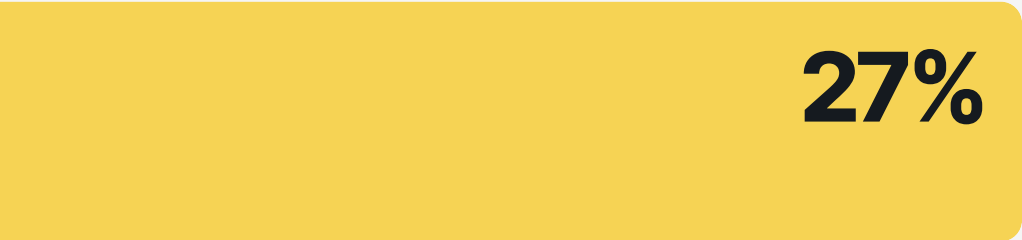
Adopting a consumption-based pricing model



Focusing on full-stack observability



Prioritizing OpenTelemetry adoption



0% 10% 20% 30% 40% 50% 60%

WHAT IT MEANS

The industry is decisively moving towards unified observability platforms, driven by a clear need to combat tool sprawl, enhance visibility, and gain comprehensive insights.

A majority of organizations plan to consolidate their observability tools onto unified platforms in the near future, indicating a strong industry trend away from point solutions and tool sprawl.

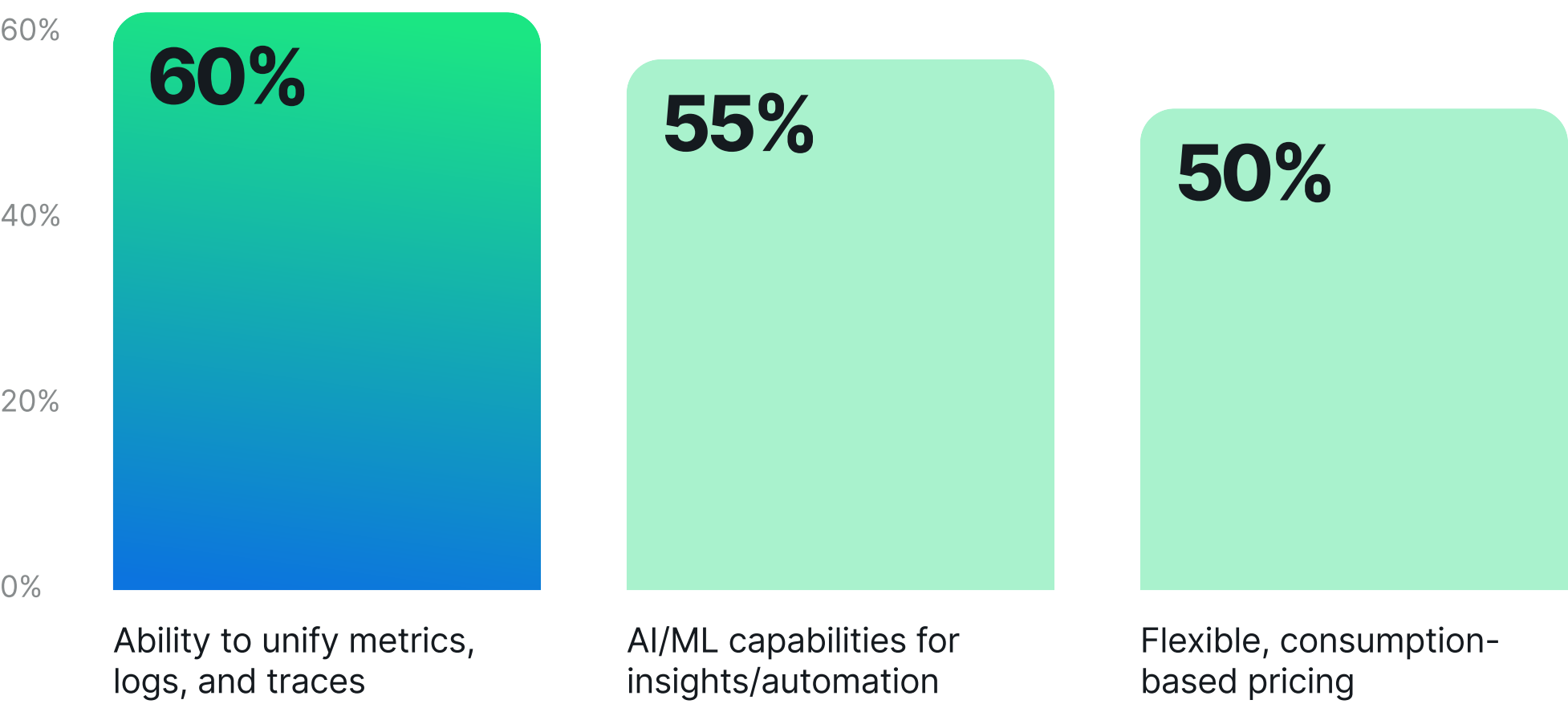
An even larger number, 60%, cited the ability to unify metrics, logs, and traces as their driver for selecting observability tool vendors.

Rounding out the top-three criteria, 55% cited AI/ML capabilities for insights and automation as a top reason for tool vendor selection, and 50% cited flexible, consumption-based pricing.

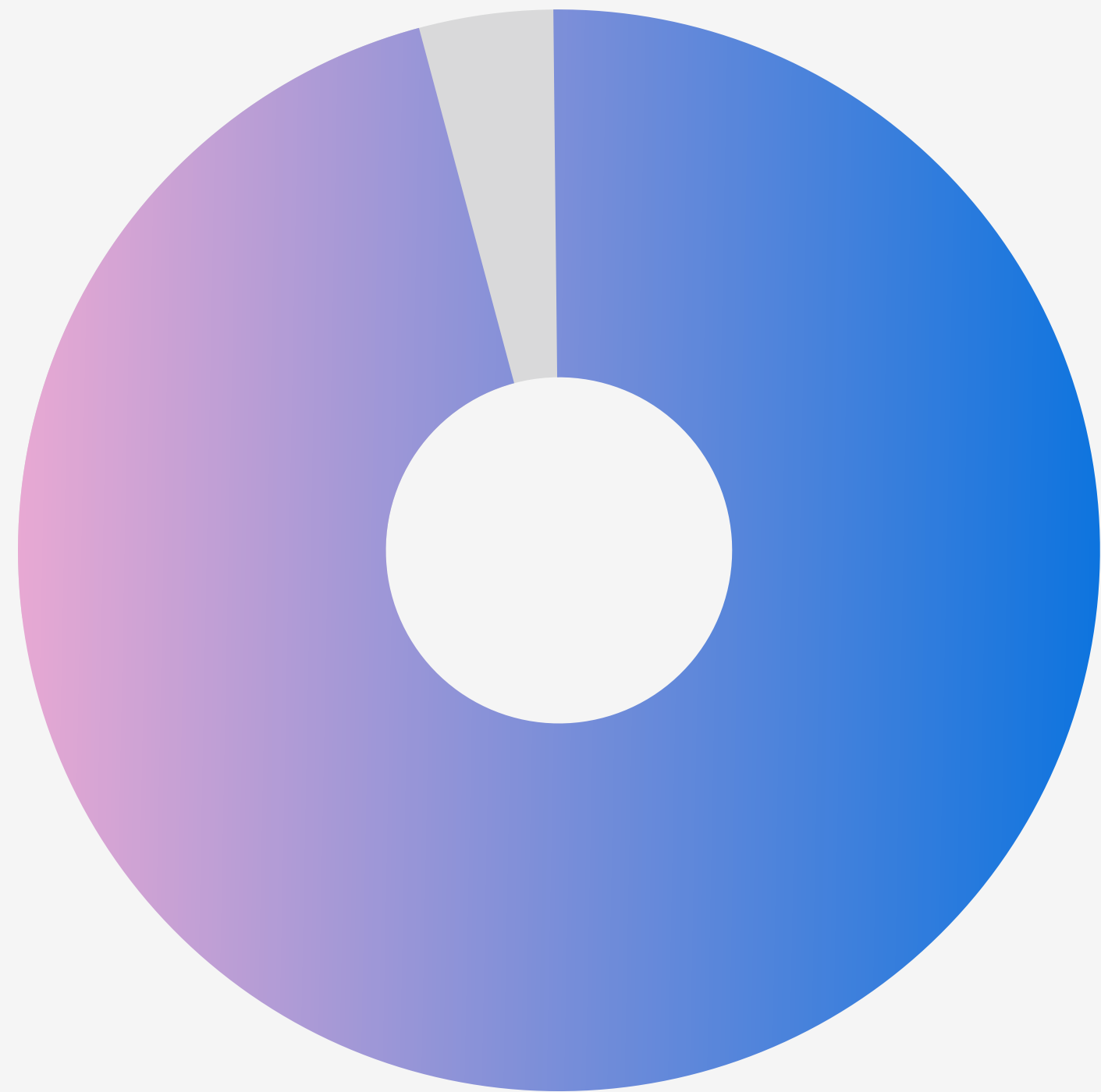
In other words, observability buyers are prioritizing unification, AI capabilities, and flexible pricing models. All of these directly address their primary pain points of tool sprawl and high costs.

Unified platforms address tool sprawl by providing a single pane of glass for metrics, logs, and traces, eliminating context switching and accelerating problem resolution through correlated data.

Top criteria for selecting observability vendors



Opportunities for AI in observability



96%

Share of businesses that currently
deploy or have plans to invest in
AI monitoring capabilities

WHAT IT MEANS

AI monitoring is rapidly becoming the norm. With only 4% of businesses not deploying or planning to deploy AI monitoring, organizations that fail to invest risk being left behind in both operational resilience and the race to profit from AI.

AI is fundamentally reshaping how organizations operate and innovate, moving beyond incremental improvements to create entirely new possibilities. While AI already reduces toil and accelerates release cycles, the most transformative advancements will come from AI-generated solutions that humans would not have conceived. These won't follow traditional product roadmaps; instead, they will emerge from autonomous systems that explore, learn, and optimize without human cognitive constraints.

For IT and engineering leaders, this means preparing for a wave of innovation that defies conventional expectations. The true competitive advantage will belong to teams capable of quickly detecting, evaluating, and operationalizing these unconventional, AI-driven solutions before their competitors. This demands robust observability frameworks designed to monitor and interpret the often-unfamiliar behaviors of AI systems in real time.

The stakes are high: leaders risk either ignoring breakthrough innovations because they don't fit existing models, or being unable to trust them due to their opaque inner workings. Observability serves as the critical bridge, providing the telemetry, context, and analysis necessary to understand how AI-driven systems reach their conclusions, measure their real-world outcomes, and confidently determine their adoption at scale.

Forward-looking organizations are investing now in observability that goes beyond just catching failures. It's about developing the capacity to interpret the unfamiliar—monitoring emergent AI-native architectures, analyzing patterns that diverge from human logic, and capturing the value of breakthroughs that will define the next era of software development. Ultimately, the winners will be those who can discern and capitalize on these opportunities well before they become obvious.

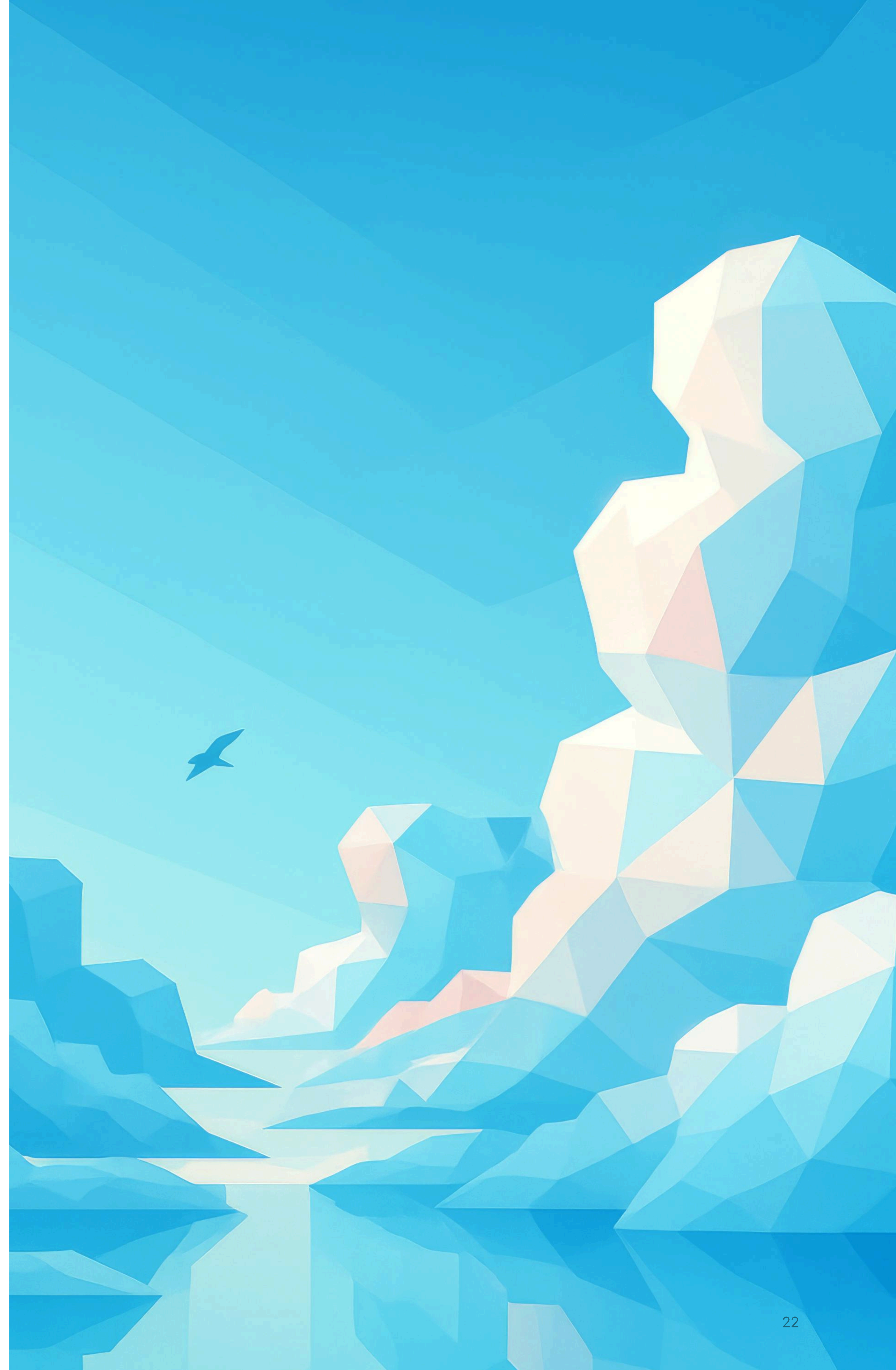
CONCLUSION / OBSERVABILITY'S FUTURE

PREDICTIVE ACTION, AI, AND RESILIENCE

Organizations can continue to accept tool sprawl and the multimillion-dollar hourly cost of outages as the price of doing business, or they can embrace the strategic alternative: AI-strengthened, full-stack observability.

This shift is already underway, driven by a cultural reset where reliability becomes everyone's responsibility. It requires consolidating platforms and using AI to move from asking “what broke?” to “what might break next?” As AI applications become central to business, understanding their behavior through a unified observability lens is non-negotiable for resilience and innovation.

The next phase of maturity is less about incremental gains and more about a decisive shift toward proactive, efficient, and intelligent operational models. For leaders ready to embrace this future, platforms like New Relic deliver the unified visibility and AI-powered insights essential to build, run, and scale with confidence.



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.

ABOUT THIS REPORT

All data in this report are derived from a survey as part of our research and work in publishing the 2025 Observability Forecast report. Asia Pacific comprised 575 (or 34%) of the total respondents. All dollar figures are reflected in USD.

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The background of the bottom half of the page is an abstract composition of various overlapping triangles in shades of orange, red, blue, and yellow, creating a dynamic, low-poly geometric effect.

[Learn about the New Relic Platform](#)