THE LANDSCAPE OF OBSERVABILITY IN 2026:

Balancing cost and innovation

A Survey of IT Decision Makers

dimensional research

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Introduction

As observability continues to mature, it has firmly transitioned from a "nice-to-have" capability to a business-critical necessity for enterprise IT organizations. As adoption deepens, the challenges observability decision makers face expand from solving technical implementation and architectural scalability issues, towards optimizing investments. Teams are no longer debating the benefits—they are focusing on balancing innovation with cost, and turning telemetry into tangible business value.

This evolution is happening at the same time as major technology innovations are reshaping the observability landscape: the meteoric adoption of Generative AI (GenAI), including Agentic AI, combined with the growing uptake of OpenTelemetry (OTel). Observability leaders tasked with managing their complex environments must get the most from established solutions and practices, while being open to innovations.

This report examines the current state of the observability landscape. How are observability teams leveraging their experience and capabilities to support business outcomes? Are attitudes and approaches to cost control evolving? Has the use of observability solutions expanded beyond the core IT and cloud operations teams? How are companies leveraging innovative technologies like GenAI and OTel to meet their observability goals?

The following report, sponsored by Elastic, is based on an online survey of more than 500 IT leaders with decision making responsibility for observability solutions at a company with more than 500 employees. Certain questions were repeated from a prior survey of observability decision makers to allow analysis of trends.

Key Findings

Observability has evolved from nice-to-have to necessity

- 60% characterize their observability practice as mature or expert, up from 41% in 2025
- 67% regularly experience unexpected costs or overages related to observability tools
- 96% are taking steps to reduce observability costs
- 83% use observability to report on business impact
- 68% report cybersecurity teams leverage their observability solutions

GenAI is upleveling teams and increasing observability efficiency

- 85% currently use GenAI for observability; this number is projected to grow to 98% within two years
- 75% use or plan to use the GenAI capabilities built into vendor observability solutions
- 23% are using Agentic AI today, with a further 38% planning to use in the next two years
- Expert (35%) and mature (28%) observability teams are much more likely to use Agentic AI than in-process (17%) or early-stage (0%) teams
- 14% have already experienced significant gains from use of GenAI for observability; that number is projected to increase by four times (56%) within the next five years

Open Telemetry (OTel) continues to build momentum

- Adoption of OTel is up in the past year (6% in production in 2025 up to 11% in 2026; 31% experimenting up to 36%)
- 90% of those with OTel in production say it is very important that observability solutions are OTel compliant
- Vendor sourced OTel distributions pass custom and vendor-neutral OTel distributions in use or intended use

Detailed Findings: Observability has evolved from nice-to-have to necessity

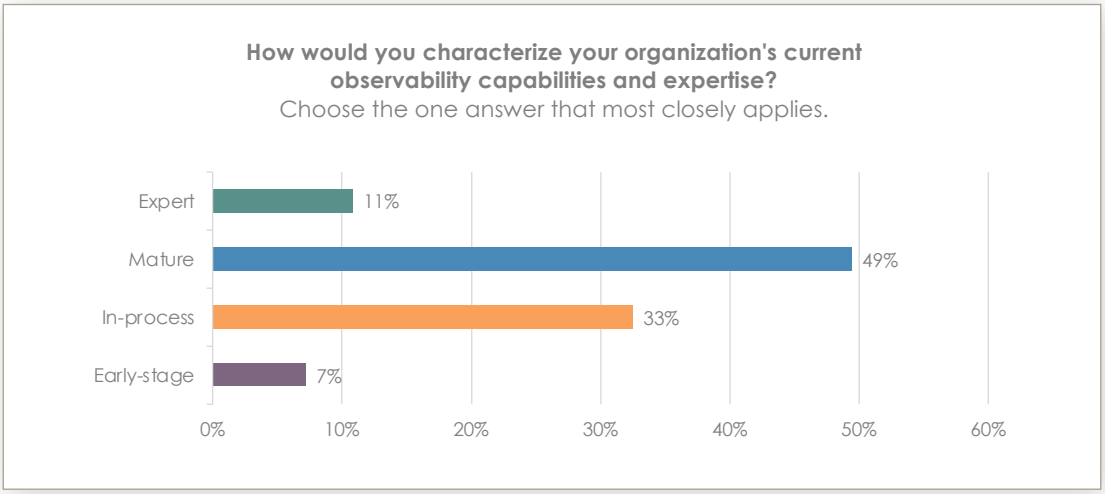
Observability capabilities and expertise are advancing quickly

Great observability practices require a strong mix of tooling, expertise, team structure, and culture. Each of these areas demands evolution and experimentation to get it right for a company's technology footprint and business goals.

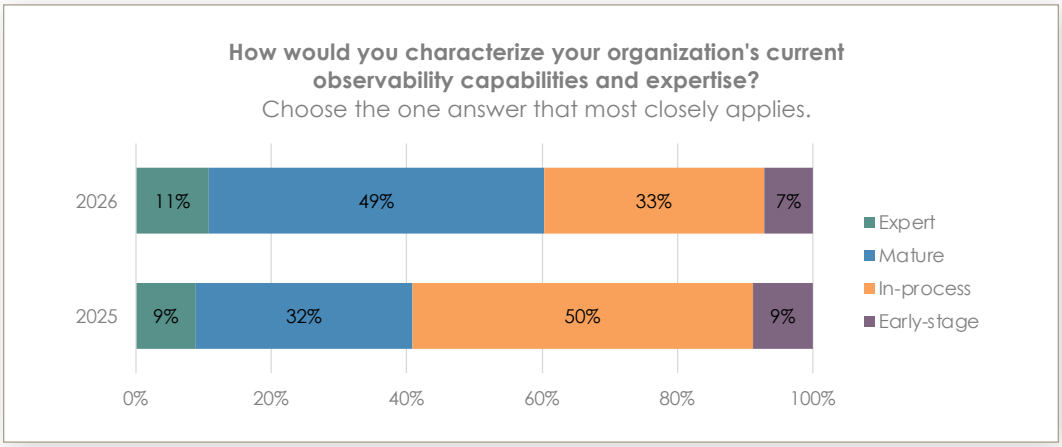
To understand where IT teams are in their observability journey, we asked participants to identify their maturity level based on the following definitions:

- **Expert** – We have implemented a strong observability practice based on comprehensive data collection and a modern AI-based technology ecosystem that supports our business.
- **Mature** – We are leveraging AIOps and already have or are considering establishing a cross-functional center of excellence.
- **In-process** – We are working on more effectively utilizing modern technologies for efficiency, scale, visibility, and root cause analysis and have fairly good visibility across our environment.
- **Early-stage** – Our primary source of intelligence is log data which we are in the process of enriching and transforming to gain better insights. We are looking to expand visibility across additional signal types: metrics, tracing, and profiling.

The data clearly demonstrates that significant progress has been made on observability, with only 7% reporting that they are still early with their adoption. About half (49%) of observability decision makers describe themselves as "mature" while a further 11% characterize their practice as "expert." A third (33%) put themselves in the middle of the adoption cycle, describing themselves as "in-process."



Observability teams are making excellent progress as time passes. These results are a **significant increase in maturity compared to just one year ago**. When we asked this same question in the similar 2025 study, only 41% of participants were in the top two levels of maturity (9% expert and 32% mature). That number has surged to 60% (11% expert and 49% mature) for this 2026 report.

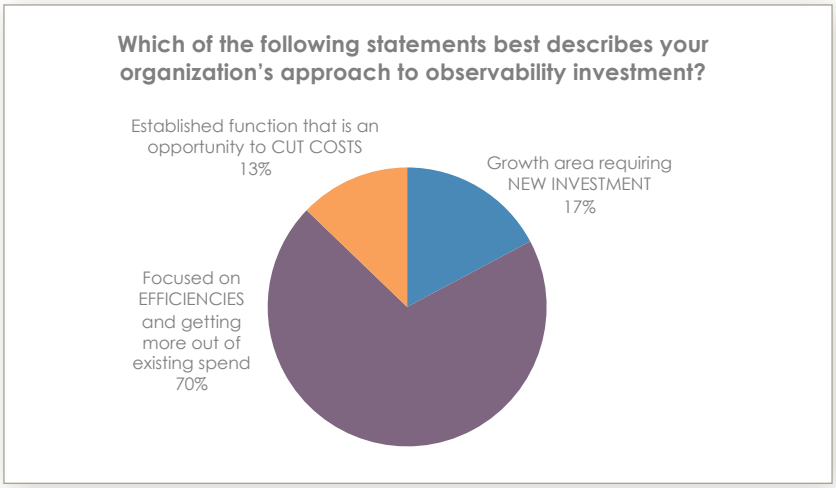


Organizations are looking to control observability costs

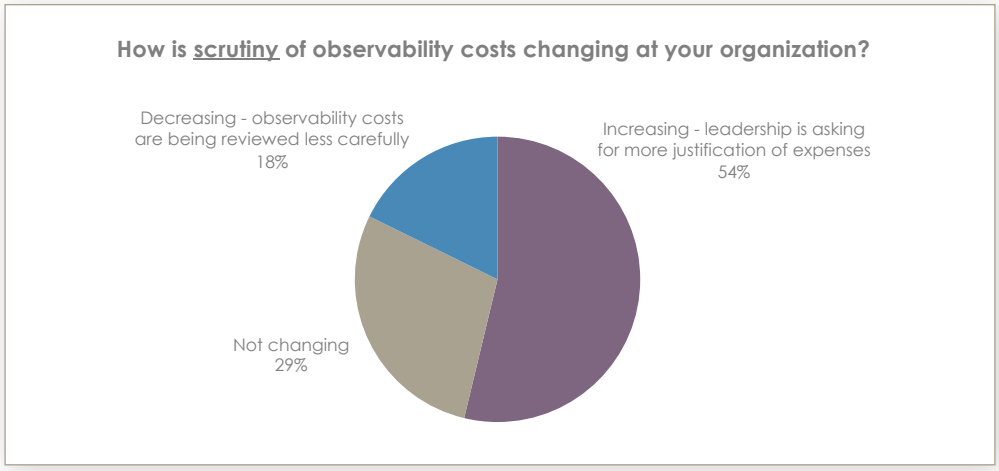
As any practice evolves and teams become more skilled, there is increased focus on the value delivered for the investment. Cost management assumes a larger role in evaluating business outcomes.

Observability is one of the areas of enterprise where cost management is highlighted due to unexpected costs. Unplanned data volumes, spikes in cloud infrastructure use, unexpected audits, variable tool licensing models, and more can all contribute to unpleasant surprises when invoices arrive. These types of unexpected costs are the norm for observability teams. **Almost all (97%) have experienced unexpected costs or overages related to observability tools, with two-thirds (67%) reporting that they happen regularly.** This includes an alarming 11% that report cost surprises happen frequently. Larger companies are much more likely to report cost issues. 18% of observability decision makers at companies with more than 20,000 employees report frequent experiences with unexpected costs or overages compared to only 4% at companies with just 500 to 1,000 employees.

Observability decision makers who have seen a rapid evolution in their capabilities in recent years and made significant investments to achieve those gains may need to shift gears when building budgets in the coming years. Only 17% of organizations view observability as a growth area, requiring new investment. Fortunately, only a few (13%) see observability as an established function that is a candidate for cost cutting. **The majority (70%) see observability as a place to optimize budgets and get more value from existing spending by looking for efficiencies.**

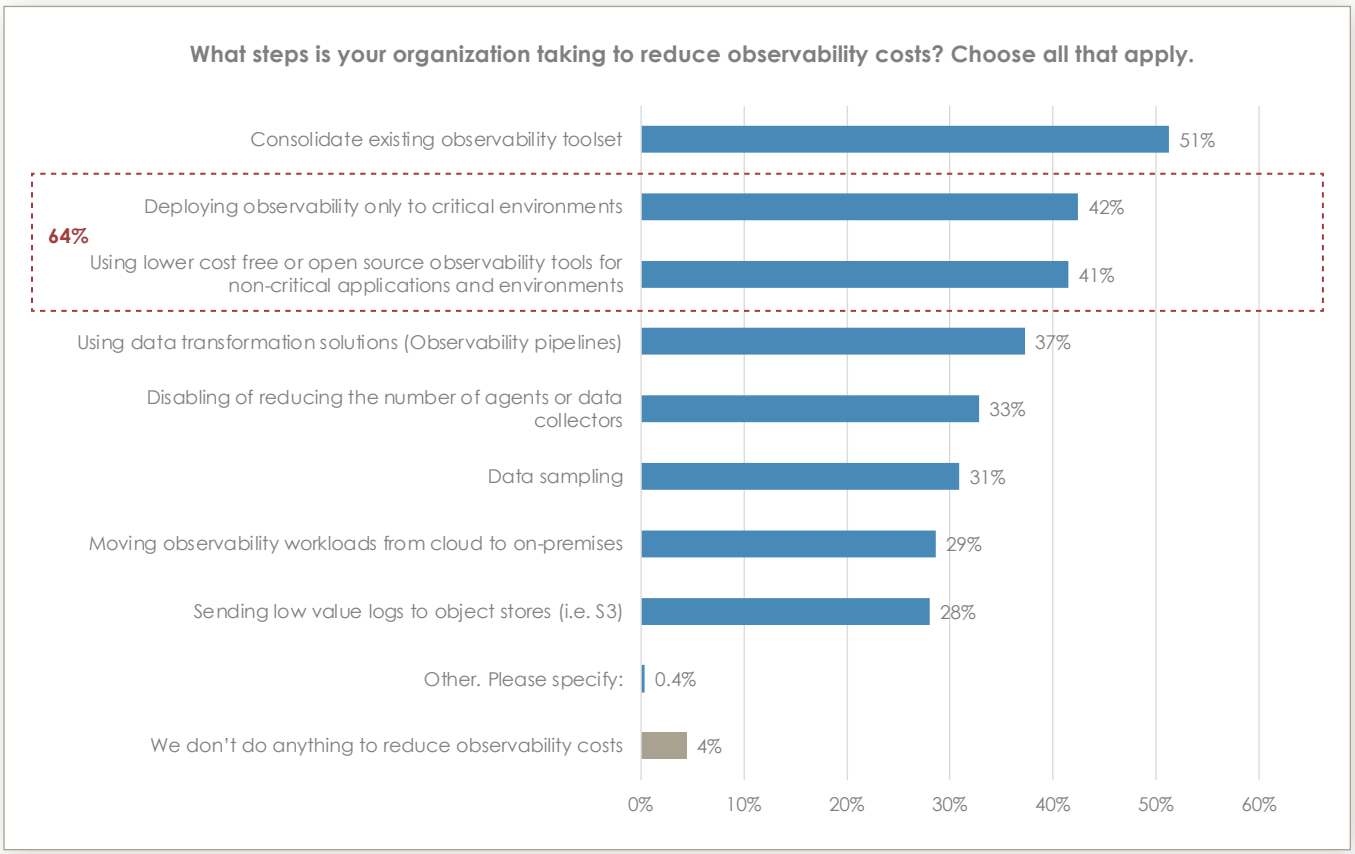


This focus on efficiency may be the new normal for many observability decision makers. **More than half (54%) report that their leadership is increasingly asking for justification of observability expenses.** It is not surprising that leadership will expect IT teams to justify their spending in any area. The interesting part of this data is the change in scrutiny and the way that it is increasing.



Observability decision makers are stepping up to deliver better cost management in the face of increasing expectations for operational efficiency. **Most teams (96%) are taking steps to reduce observability costs,** including evaluating tool licensing costs, data volume expenses, infrastructure workloads, and more. These are detailed in the graph below, with consolidating existing observability toolsets at the top of the list (51%). Participants who took the time to write in "other" approaches mentioned very specific items like limiting the use of expensive resources (i.e. custom metrics) and use of reservations instead of on-demand cloud infrastructure.

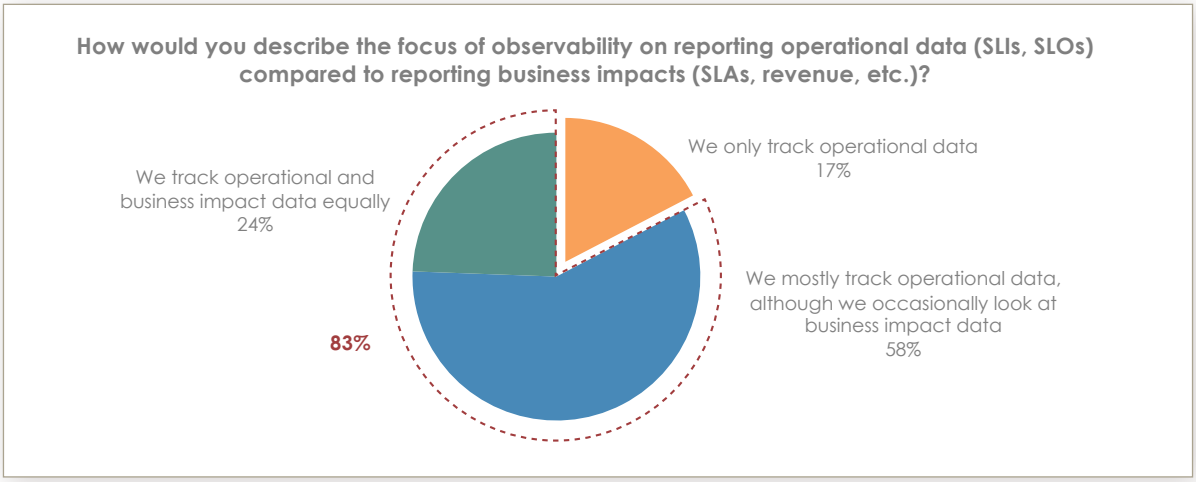
While most of these approaches are very sensible, it is notable that many (64%) are choosing to use a lower cost tool (41%) or eliminate observability (42%) for their less-critical environments as a way to cut costs. This could potentially create risk. Non-critical environments also require monitoring and analysis since problems can cascade into Tier 1 environments.



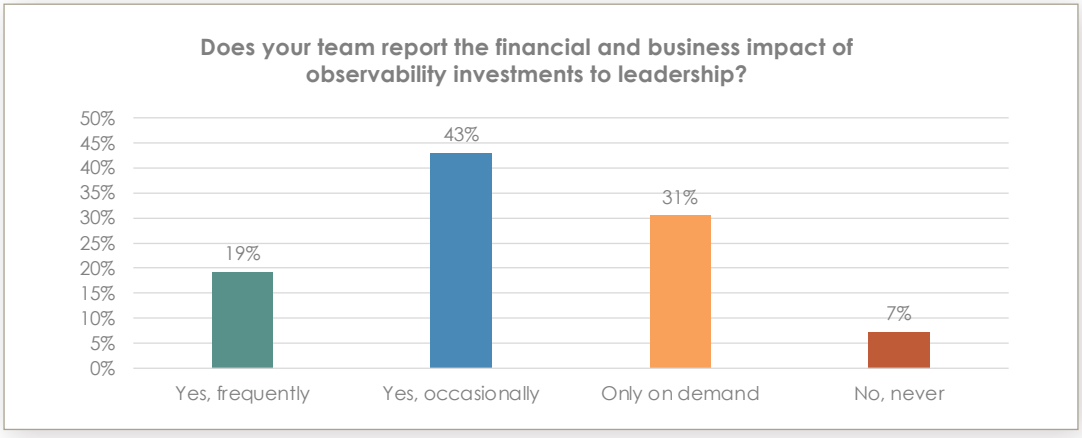
Observability is evolving from IT priority to business impact

As observability leaders strive to optimize value and cost, their perspective is broadening from the original goal of keeping IT systems and applications running, towards understanding how their efforts can improve broader business outcomes. As this research digs into the details of these efforts, a clear pattern emerges: observability teams see value in understanding business impact, but they still struggle to fully deliver with their current approaches.

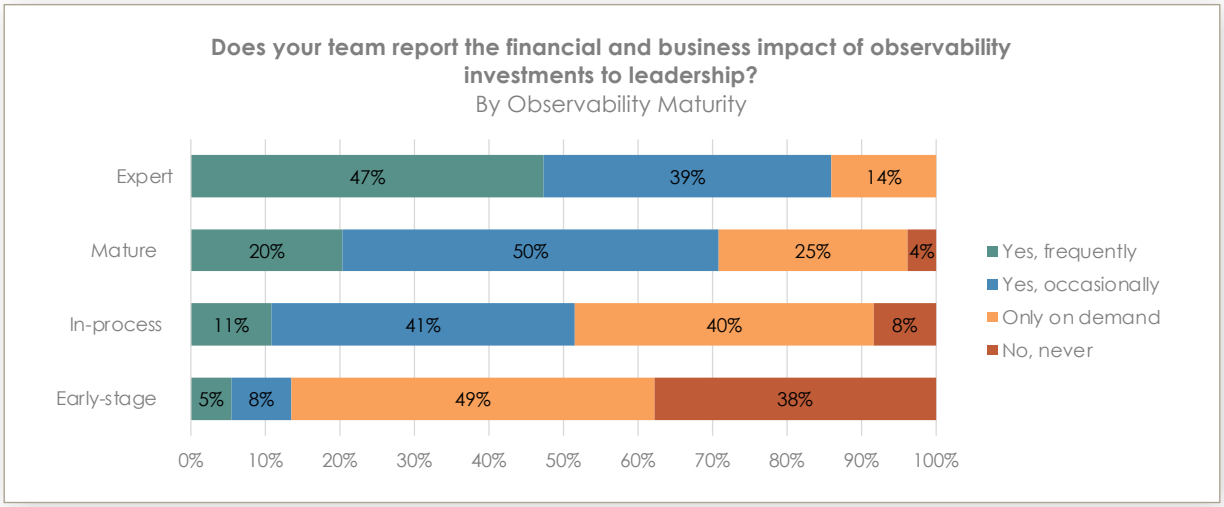
Observability teams who consider their job to be just about operational data and are focused on system performance (SLIs, SLOs, etc.) are becoming less relevant, with only 17% indicating that is their team's focus. 83% are using observability data to report on business impact. However, the transition to consider business impact data (SLAs, revenue, etc.) at an equal level as operational data is slow. Only a quarter (24%) put business impact metrics at the same level of importance as operational metrics. **Most observability teams (58%) focus primarily on operational data, with business impacting data a secondary consideration.**



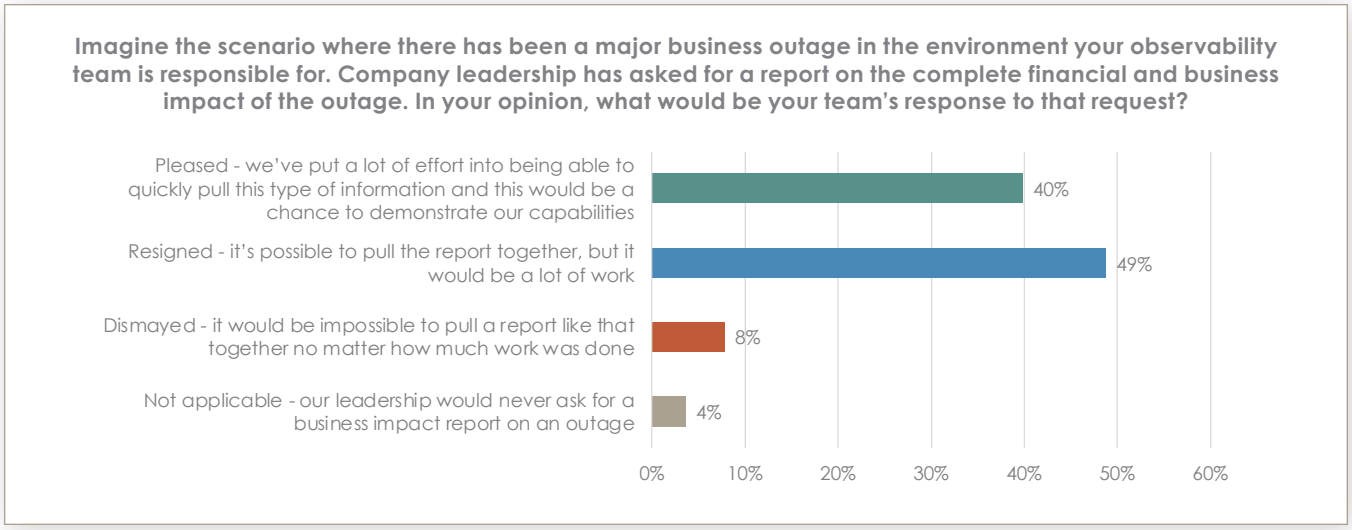
We see a similar pattern when we ask about reporting the financial and business impact of observability investments to leadership. This is something that most observability teams do (93%) but only a few have this baked into their processes and regularly report their outcomes to leadership (19%). For most, this is an effort that is done only occasionally (43%) or only when leadership requests it (31%).



It is unsurprising that organizations with more mature observability practices are much more likely to report financial and business impacts of their investments to leadership. Each stage of maturity maps to a doubling of those who frequently report outcomes to leadership. Only 5% of early-stage observability teams do this, which increases to 11% of those in-process, then 20% of mature observability teams. **Expert observability teams have actively embraced financial reporting with almost half (47%) stating that they report impact frequently.**

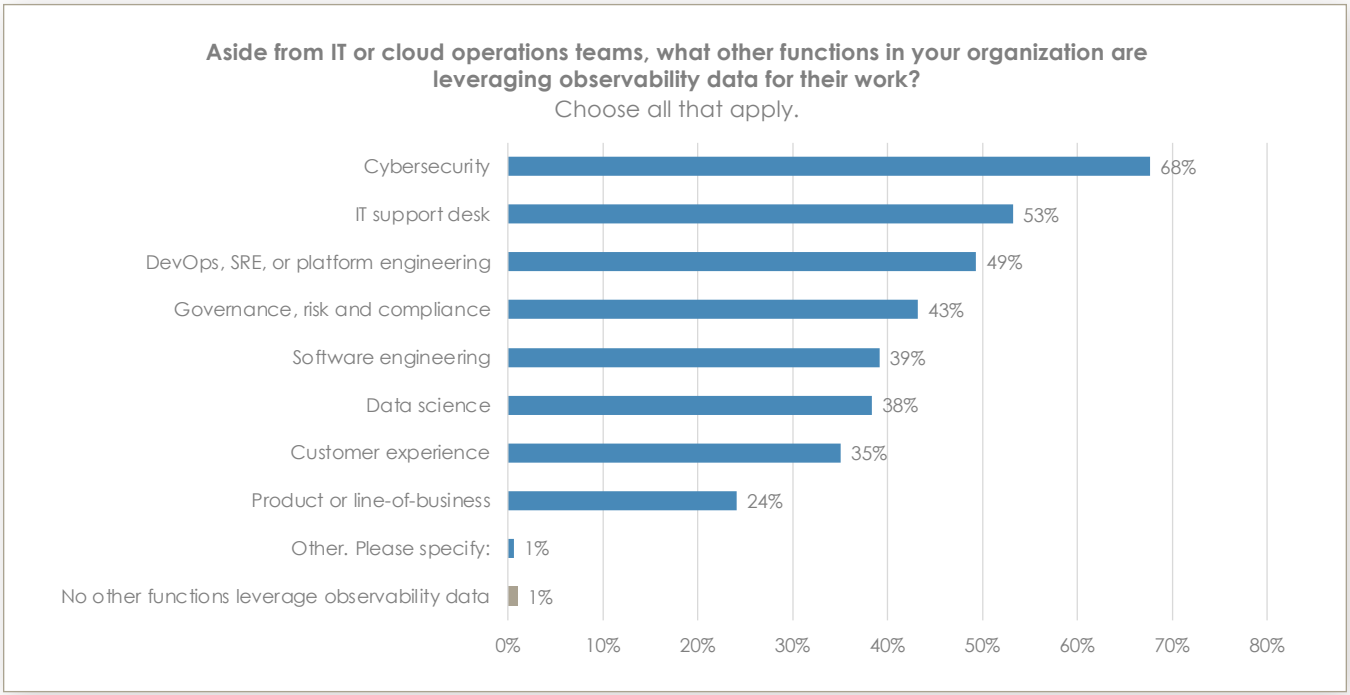


There are two factors that drive observability teams' focus on business impact. First is the culture and understanding of importance. Once a team embraces an interest and ability to consider business impacts, the next barrier will be having the infrastructure to do the necessary reporting easily. This is a problem that many observability teams face. **Only two in five teams (40%) have the ability to quickly pull together a report on the complete financial and business impact of a major business outage.** Half (49%) report their teams could put together the report, but it would be a significant effort. For some (8%) this would be an impossible task.

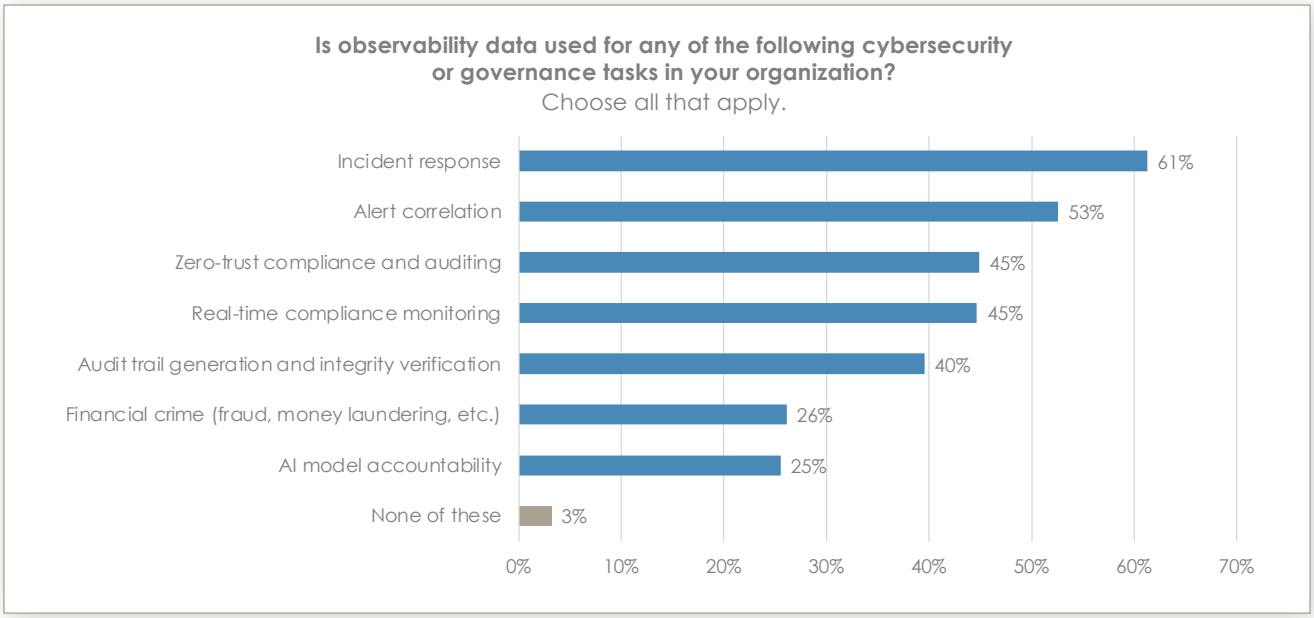


Observability is converging with compliance, regulation, and cybersecurity

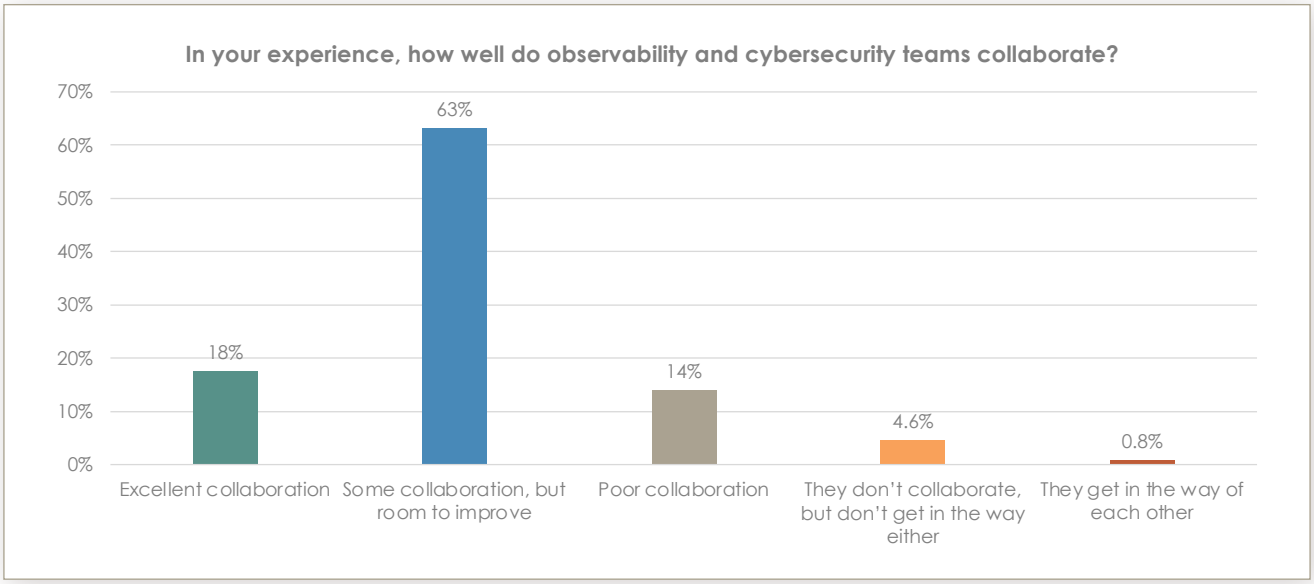
Observability investments are typically initiated to meet the needs of the IT and cloud operations teams, but one of the benefits of more mature practices is that other organizations are also seeing value. It is typical (99%) for additional organizations to leverage observability data. **At most companies (72%) there are three or more teams in addition to the IT and cloud operations teams that benefit from observability data, with cybersecurity (68%) being the most frequent user.** Other uses of observability data include IT support desk (53%), DevOps or Site Reliability Engineering (49%), governance/risk/compliance (43%), software engineering (39%), data science (38%), customer experience (35%), and product or line-of-business functions (24%). Several participants wrote in "other" functions in addition to those offered in the question. These included analytics and BI teams, as well as specific functions like critical infrastructure.



Observability data is widely used for a variety of cybersecurity and governance tasks (97%). Most frequently reported tasks that use observability data include incident response (61%) and alert correlation (53%).



Given that cybersecurity teams are active users of observability data and that a wide range of security tasks leverage it, this research wanted to capture perceptions on how these teams work together. This is rarely a problem area, as only 19% characterize their teams as having issues, but participants frequently agree that there is room to improve (63%).



Detailed Findings: GenAI is upleveling teams and increasing efficiency

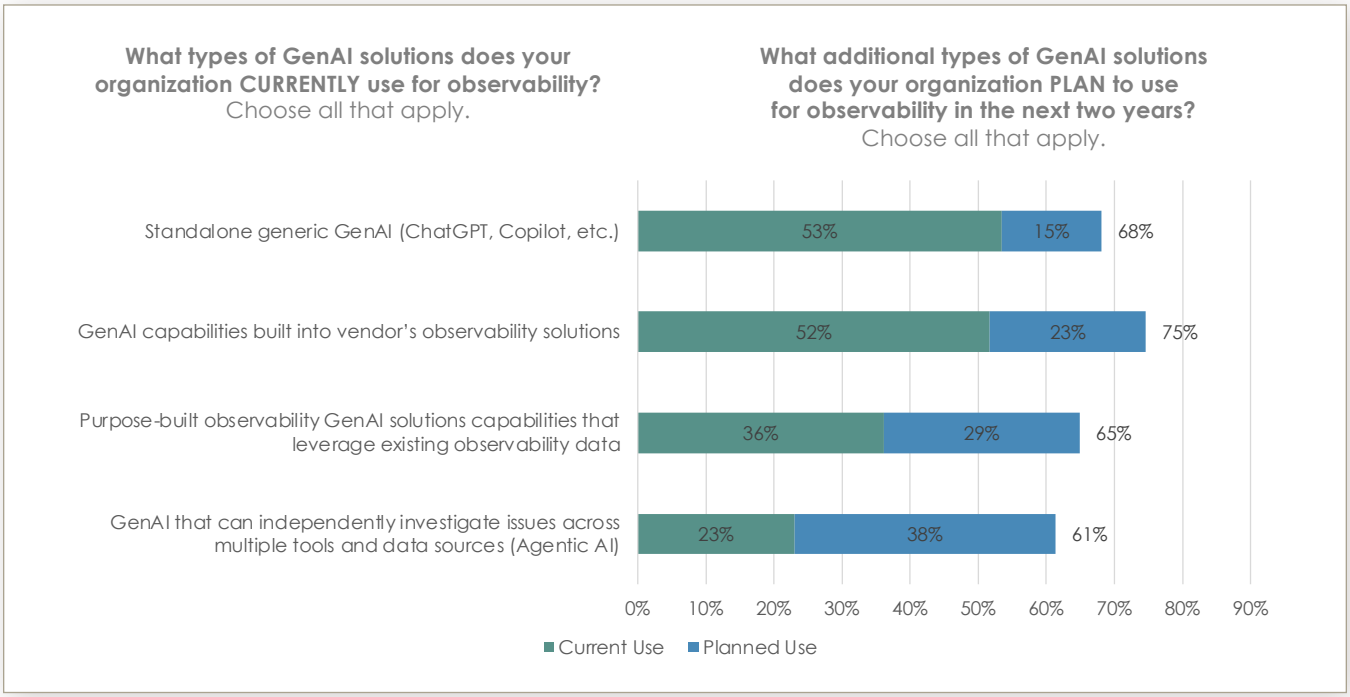
GenAI is already widely used for observability, with expectations for strong growth

The launch of Generative AI (GenAI) has taken the world by storm. The ability to problem solve using natural language and Large Language Models (LLMs) has been a game changer across industries and tasks. Observability is no exception.

GenAI has already been widely adopted for observability, with **85% reporting that their teams already use some form of GenAI.** This number is expected to grow. Among the few organizations that haven't adopted GenAI yet, most plan on adding GenAI functionality to their existing observability solution set, for **a total of 98% reporting that they will use GenAI for observability two years from now.**

Observability decision makers have frequently demonstrated openness to trying new approaches, experimenting with a range of approaches to see what works best for their teams and business needs. GenAI adoption is following this pattern, with no single adoption path.

For now, companies are more likely to be using standalone generic GenAI (53%) or built-in GenAI capabilities in their existing tools (52%). These are the two types of GenAI with the easiest adoption path as neither requires additional development or huge integration efforts. While these two approaches currently have similar adoption levels, observability decision makers are expecting to add built-in GenAI more rapidly (23% vs. 15% for standalone generic GenAI). As a result, **two years from now the most commonly used type of GenAI will be capabilities built into existing observability solutions (75%).** Both purpose-built observability GenAI and Agentic AI are drawing interest, but at a much slower rate, unsurprisingly given the additional effort needed to integrate and/or build these technologies.



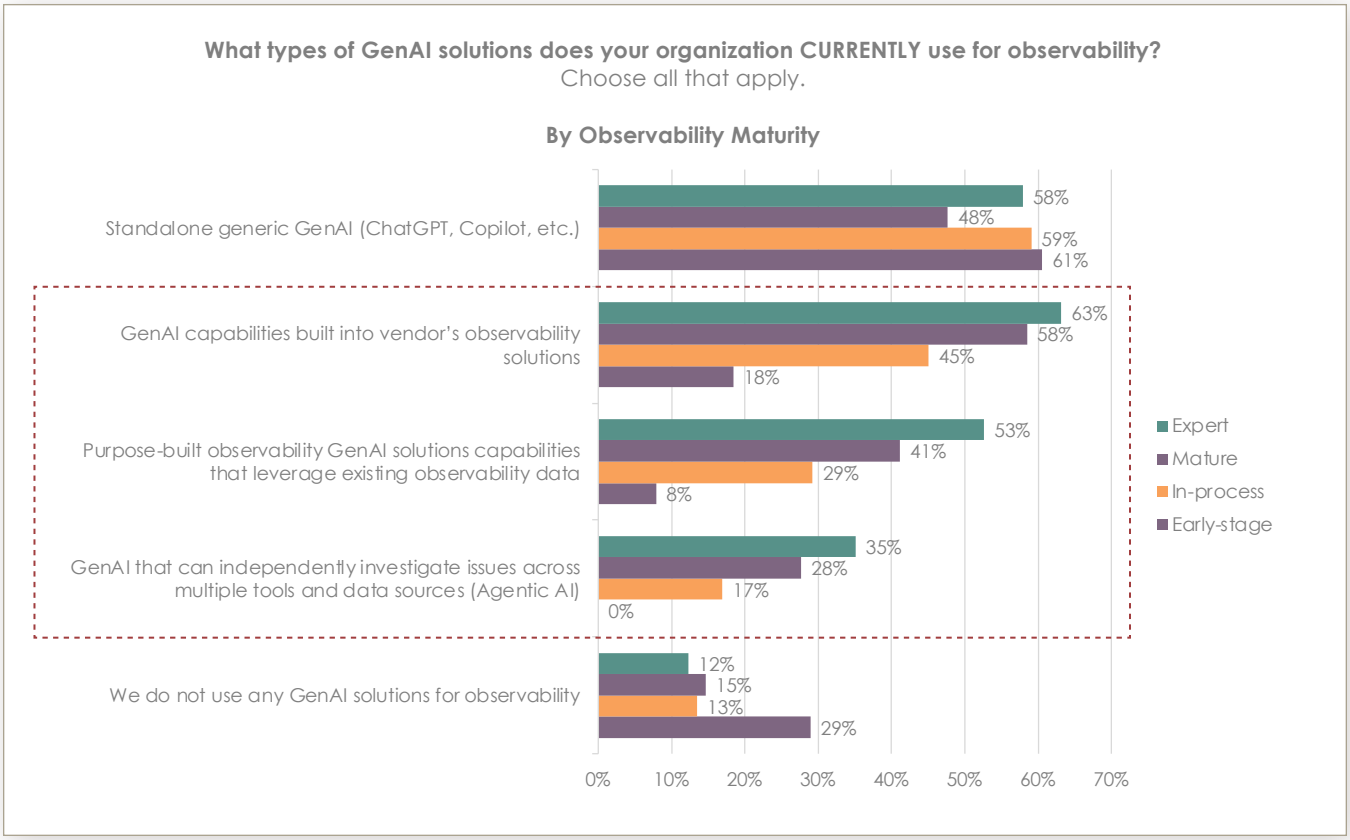
Companies use more types of GenAI as observability practices mature

Interestingly, the type of GenAI used for observability evolves in a very obvious way as capabilities and expertise mature. Drilling down into the type of GenAI solutions that organizations are currently using for observability, we see three clear patterns.

First, early-stage companies are twice as likely not to be using GenAI. Consider the last bar on the next chart, which represents the organizations that are not using any type of GenAI for observability. As a reminder, we saw above that this number is 15% across all companies, as 85% are currently using GenAI. We see a difference exclusively among early-stage observability, where 29% are not using GenAI. Once an organization moves to any higher level of maturity, they are consistently using GenAI at a similar level, with only a few (between 12% and 15%) reporting they are not currently using GenAI.

Second, all levels of maturity use standalone GenAI at a similar level. This time we'll consider the top bar on the chart below, and we see there is little difference in use by maturity level. This data reflects the ease of getting started with this type of basic GenAI.

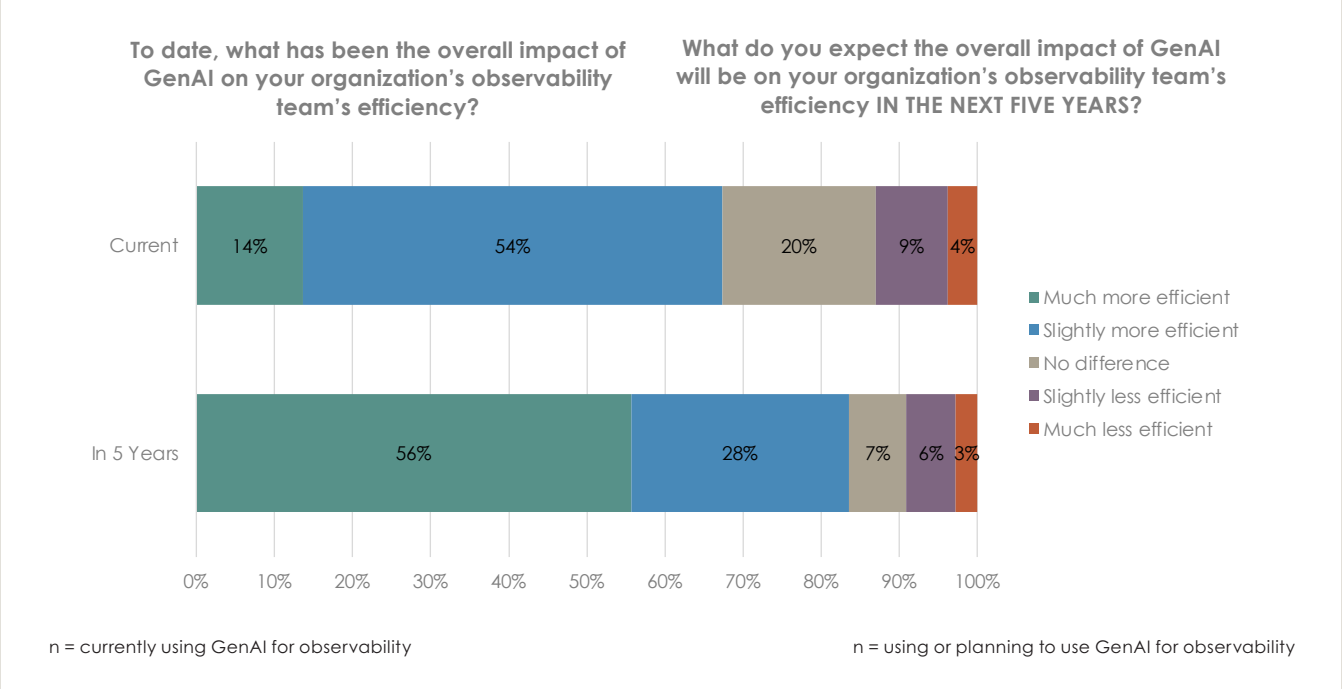
Finally, and most interesting, is the way the use of observability-specific GenAI solutions map to maturity levels. Whether it is GenAI built into existing observability solutions, purpose-built GenAI for observability, or Agentic AI, **all observability-specific GenAI solutions follow a pattern where every additional level of maturity maps to a notable jump in use**. Observability-specific GenAI is clearly seen as particularly valuable among the more mature users of observability.



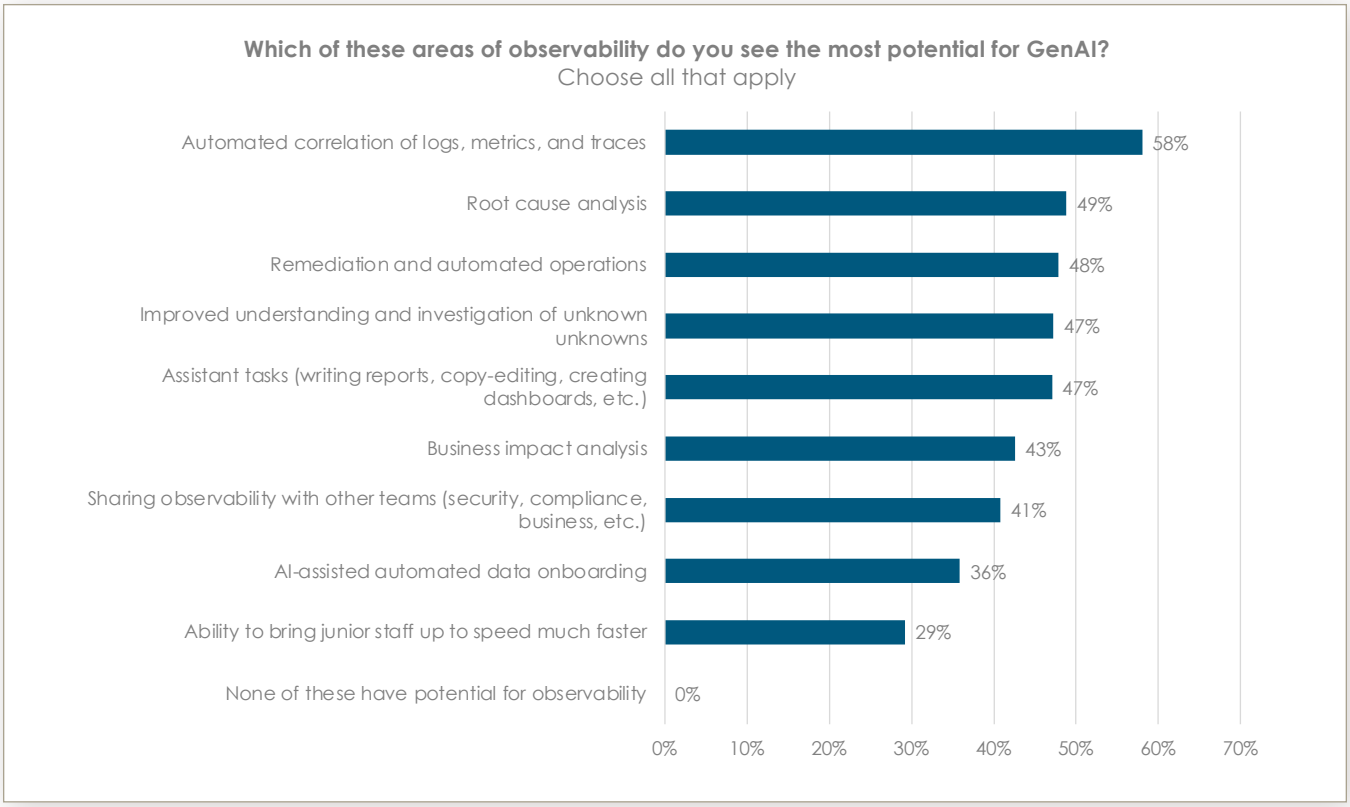
GenAI is already positively impacting efficiency, with significant gains expected

Observability decision makers are very clear about their opinions of GenAI. Currently GenAI is helpful, but expectations are high for much better results in the future. Teams that are currently using GenAI were overall positive about its impact on efficiency, with over two-thirds (68%) saying that it was making their teams more efficient. That same number increases to 84% when these same stakeholders are asked about expectations for efficiency gains five years from now.

It is more dramatic to consider the scope of the impact expected in the next five years. The number who report they are currently "much more efficient" as a result of GenAI for observability is relatively low (14%). This number jumps dramatically to over half (56%) who expect the same "much more efficient" impact five years from now—**a 400% increase compared to the current experience**!

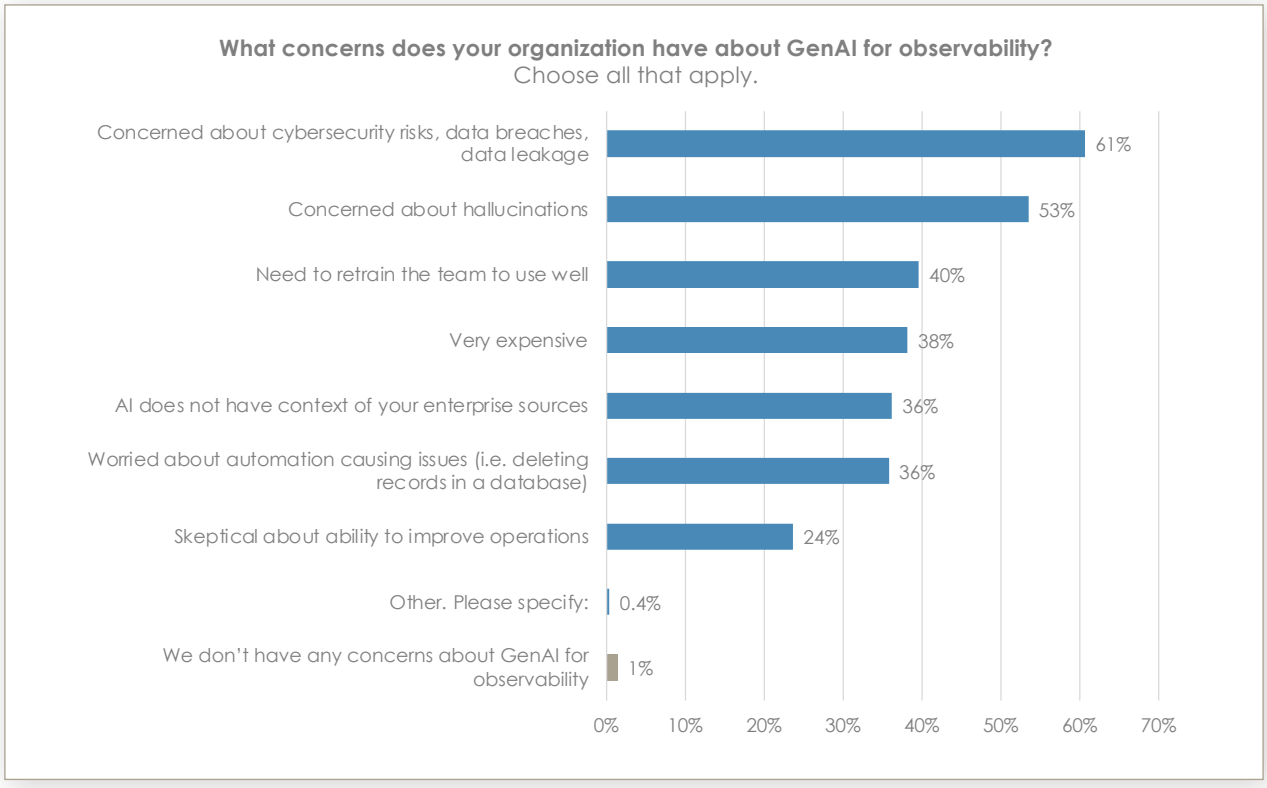


Even the observability decision makers who are most negative about the impact of GenAI on their team's efficiency, do see that there is potential for benefit. **All (100%) view GenAI as having potential for observability.** Our audience had a clear top use for GenAI and observability: automated correlation of logs, metrics, and traces (58%). There was also strong support for root cause analysis (49%), remediation and automated operations (48%), improved understanding and investigation of unknown unknowns (47%), and assistant tasks like writing reports, copy-editing, and creating dashboards (47%).



Concerns must be addressed to gain full value from GenAI for observability

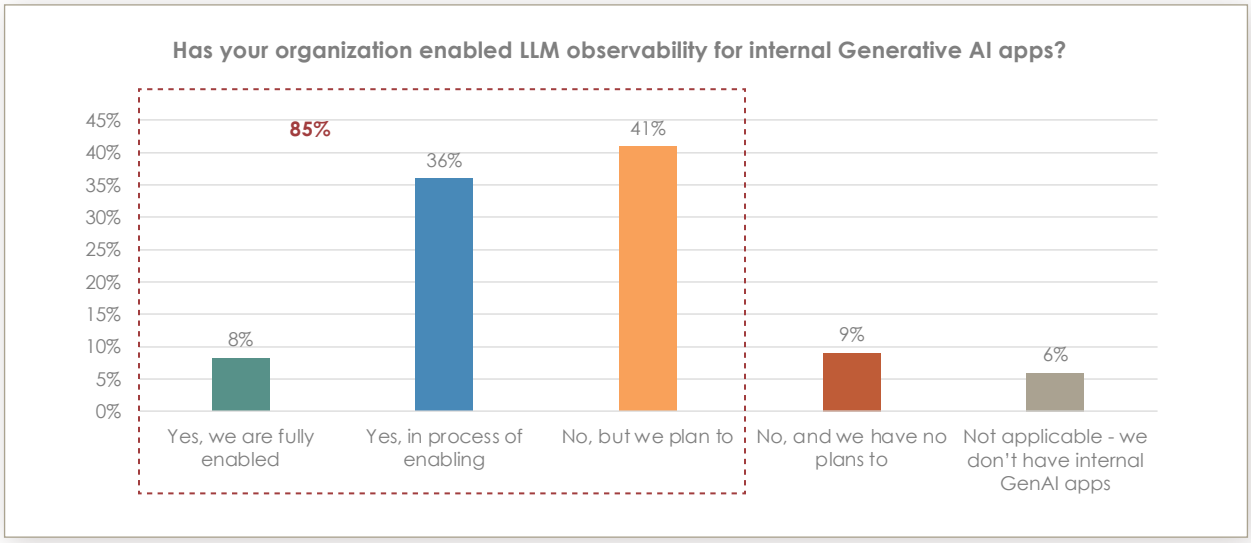
We have established that observability decision makers are generally positive about both the current and potential value of observability, however, concerns persist. These must be addressed to achieve the potential gains. **Almost all (99%) report that their organization does have concerns about AI for observability.** The most frequently reported issue is security (61%) including concerns about cybersecurity risks, data breaches, and data leakage. Worries about hallucinations (53%) were also frequently reported. Other concerns cited include training existing staff (40%), cost (38%), context of enterprise sources (36%), and potential issues with automation such as deleting information (36%). Some participants took the time to write in "other" concerns which included AI companies having access to intellectual property, and lack of trust in models used. Interestingly, only a few reported facing issues with teams that are skeptical about the value of GenAI for observability (24%).



Companies are implementing observability for their internal LLMs, but it is a work in progress

This research was primarily interested in understanding how teams are leveraging GenAI to implement and deliver observability. We also wanted to consider the opposite question: are companies using observability to manage their internally-developed Generative AI solutions? The answer is that they will, but they're still working on it.

Most (85%) expect to enable LLM observability for their internal GenAI apps, but only 8% have already enabled the capabilities. 41% have not even started, although they do have plans to implement. It should be noted that internally developed GenAI apps are ubiquitous, with only 6% reporting that their company will not be developing them.

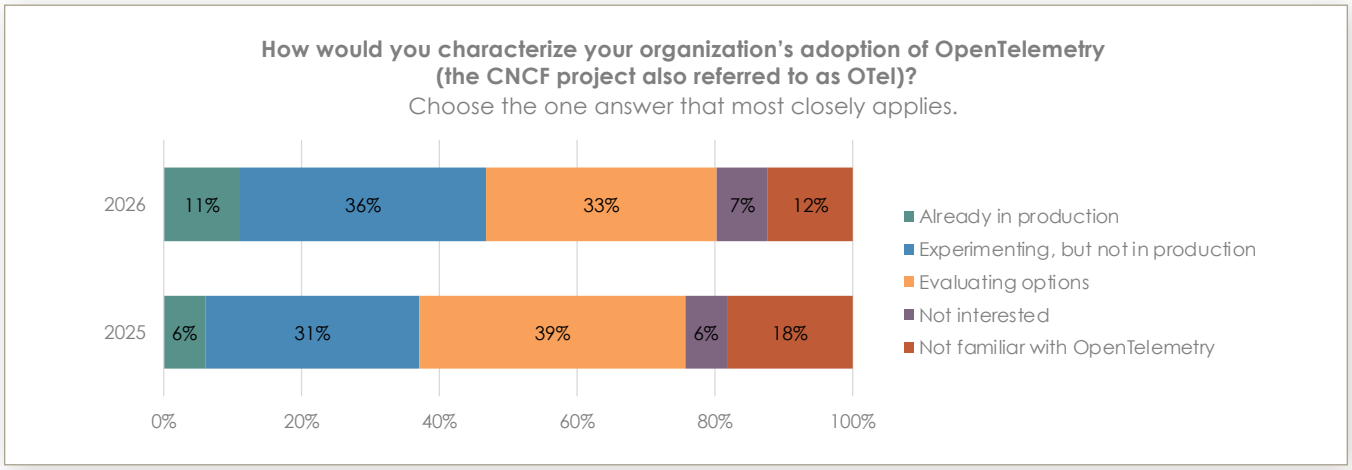


Detailed Findings: OpenTelemetry momentum builds

OpenTelemetry adoption takes a notable step forward in past year

OpenTelemetry, a CNCF project often abbreviated as OTel, is an observability framework and toolkit designed to create and manage telemetry data such as traces, metrics, and logs. OpenTelemetry is tool agnostic and focused on open standards that allow it to be used with any observability solution that is OTel compliant.

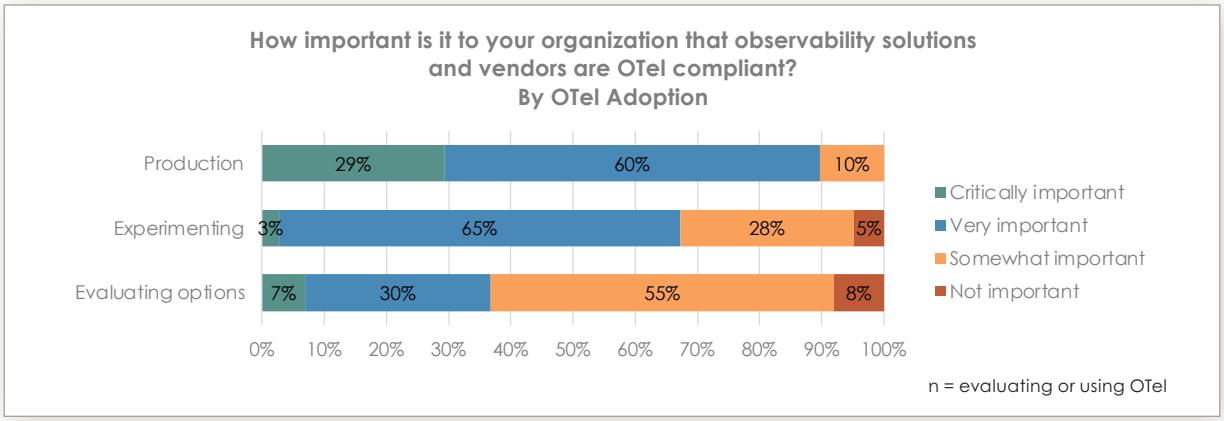
The interest we saw in the 2025 version of this study has seen slow but steady growth. **The number of observability teams who have OTel in production almost doubled, (6% in 2025 to 11% in 2026),** although the number remains small and has significant room to improve. We see that shift in growth applying throughout the adoption cycle, with a clear shift in growth at each stage of adoption, mirrored by a drop in those who are not interested or not aware of OTel.



Vendor compliance becomes increasingly important as OTel projects move into production

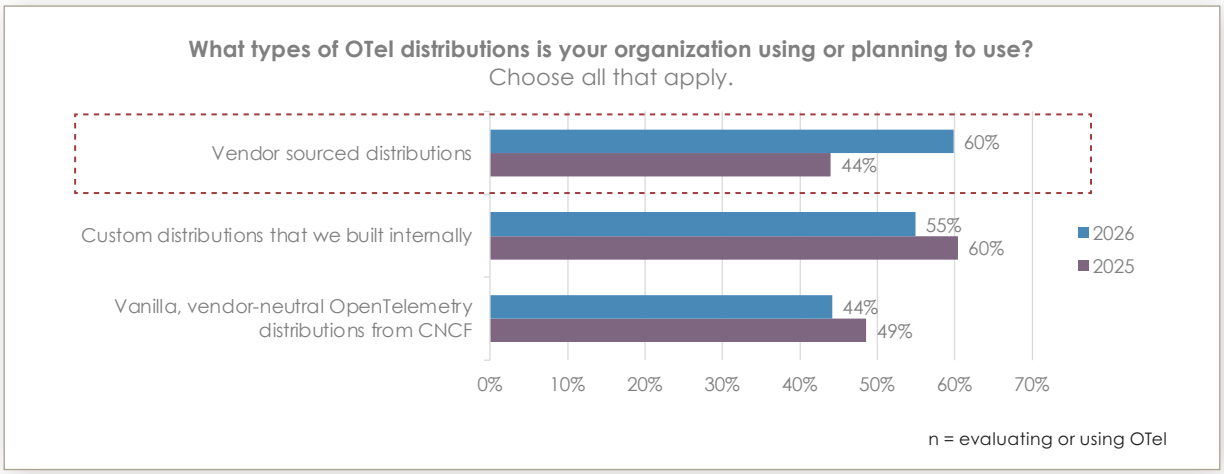
Industry standards like OpenTelemetry often take time to develop and establish themselves. Customer interest increases vendor support which in turn, creates more interest, adoption, and momentum for these standards over time. The data indicates that this industry cycle is currently happening with OTel and will continue in 2026.

As projects move from evaluation, to experimentation, to production the importance of OTel compliance in their observability solutions increases dramatically. **The vast majority (90%) of observability teams with OTel in production say that OTel compliance is critically or very important.** This same number is only 37% for teams that are still in the early stages of evaluating options for OTel adoption.



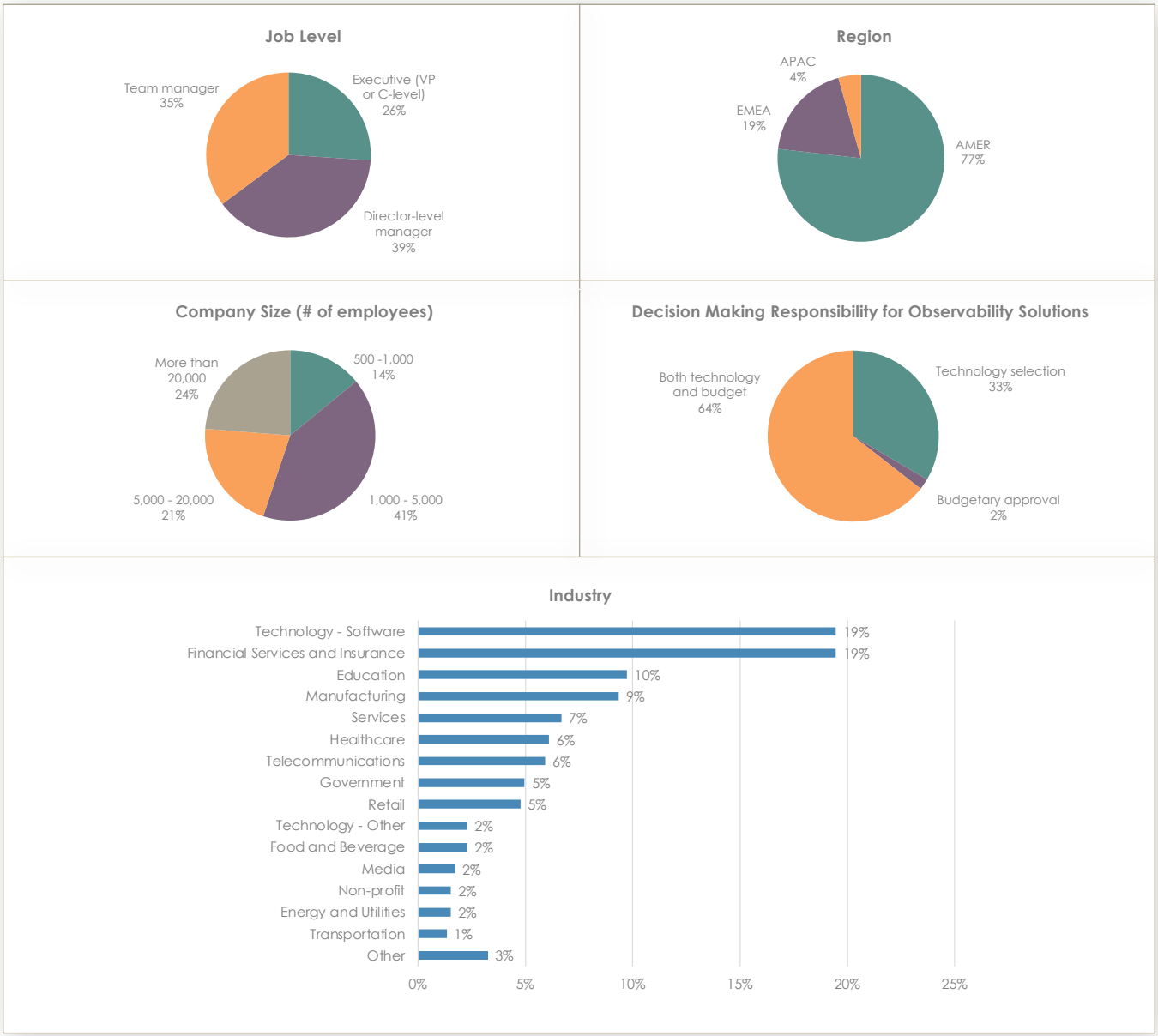
Preference for vendor sourced OTel distributions is increasing

The past year has seen a shift in the types of OTel distributions that observability teams are using or considering using. **There has been a notable increase (60% in 2026 compared to 44% in 2025) in plans for use of vendor sourced distributions.** This has been mirrored by a drop in plans for both custom and vanilla distributions. This may be a reflection of investments in vendor sourced OTel distributions during that same time.



Survey Methodology and Participant Demographics

An online survey was sent to an independent database of enterprise technology managers and executives. A total of 526 qualified IT decision makers completed the survey. All participants had decision making responsibility (technical selection and/or budgetary approval) for observability tools in a managerial role responsible for DevOps, SRE, IT Operations, and/or Engineering at a company with more than 500 employees. Participants included a mix of job levels, company sizes, and industries. Due to rounding, certain graph options may not add up to exactly 100%.



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