

2023 REPORT
OBSERVE & CITE RESEARCH

The State of Observability

 OBSERVE

Table of Contents

What Is the State of Observability?	3
Summary of Findings	4
Adoption Status	5
Observability Maturity	9
Incident Investigation	15
Data Growth	18
Tool Sprawl	24
Open-Source in Observability	30
Market Impact	33



What Is the State of Observability?

Observability has been gaining in popularity and it can be a boon in addressing the challenges that modern businesses are facing. However, achieving observability is not without its challenges.

In 2021 Observe started the State of Observability report to better understand the struggles and benefits IT and software development professionals encounter as they work toward more Observable systems.

Now we're on the third edition of the State of Observability and we've partnered with CITE Research to talk to 250 professionals to understand their observability journey, the challenges they've encountered with tool sprawl, and how effectively they're troubleshooting. We've also looked at how market conditions have or haven't impacted their org and what implications significant ongoing data growth has.



Summary of Findings

Market factors are forcing organizations to do more with less

61% have experienced reduced IT budgets. However, observability is so critical to operations that 81% of organizations are still looking for new tooling in the coming year.

Old tools don't solve new problems

65% say tool sprawl is a significant pain point which increases costs and silos data. Despite the abundance of tools currently only 11% say they have full observability of their environment.

Observability is a data problem, and it's getting worse

51% of organizations expect their data to grow a staggering 75% or more in the next 12 months and few are prepared for that amount of data. 64% of orgs have turned to sampling data to bring down costs, but that leaves gaps in observability.

Observability needs a modern architecture

Organizations have growing complexity from microservices and cloud services, something legacy monitoring wasn't designed for. Observe has a unique approach with a modern, cloud-native, architecture. The result is users get better observability, can keep more data longer, and pay a fraction of the cost of legacy tools.



PART 1

Adoption Status



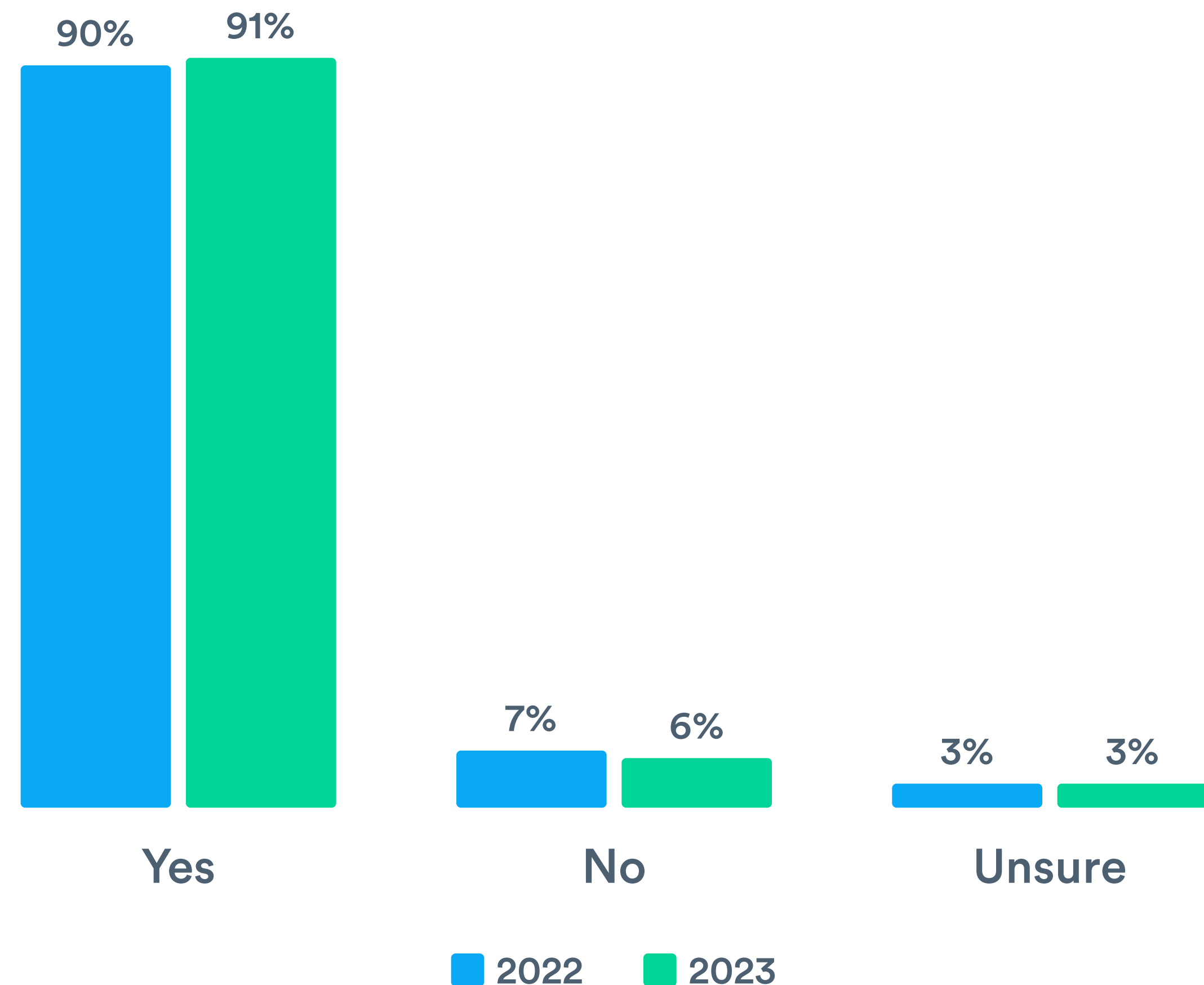
Observability Appears Widespread but Maturity Varies

The majority of organizations claim they are practicing observability. However, only 11% claim to have completely observable environments. (see page 12)

Observability is a journey to be undertaken and many organizations are still in the earlier stages.

Some challenges such as lack of organizational buy-in have diminished, making the journey easier, challenges such as environmental complexity remain. 68% of respondents cited using more than one cloud provider.

Do any teams in your organization practice Observability?



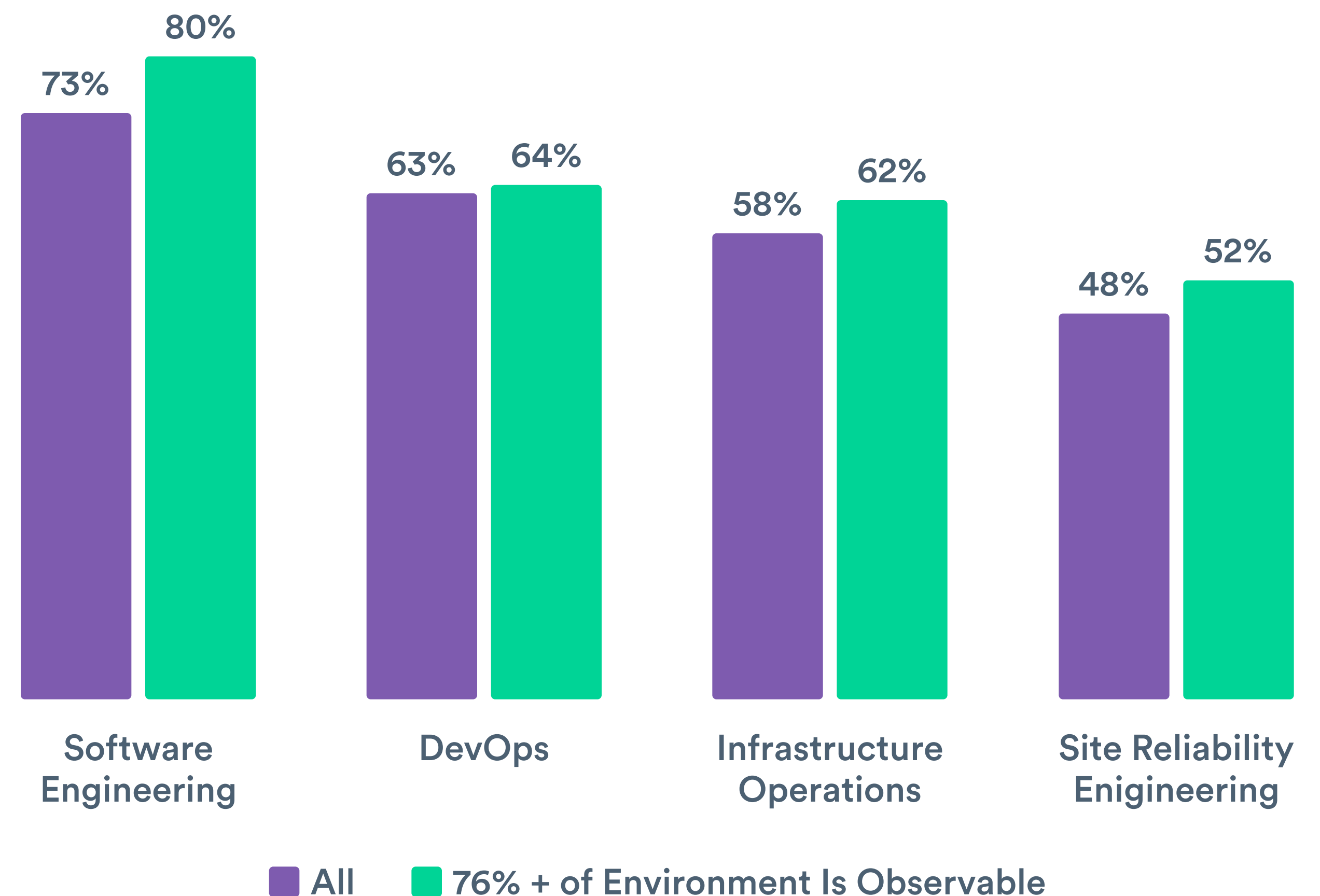
Observability Is a Team Sport

While all manner of roles use observability and monitoring tools, observability as a concept is often tied to Site Reliability Engineering.

However, many organizations still lack dedicated SREs, especially SMBs. Software Engineering and DevOps teams on the other hand are more commonplace.

Organizations reporting higher levels of observability are even more likely to have engineers using observability tools, underscoring the importance of democratizing data.

Which teams in your organization use observability tools?

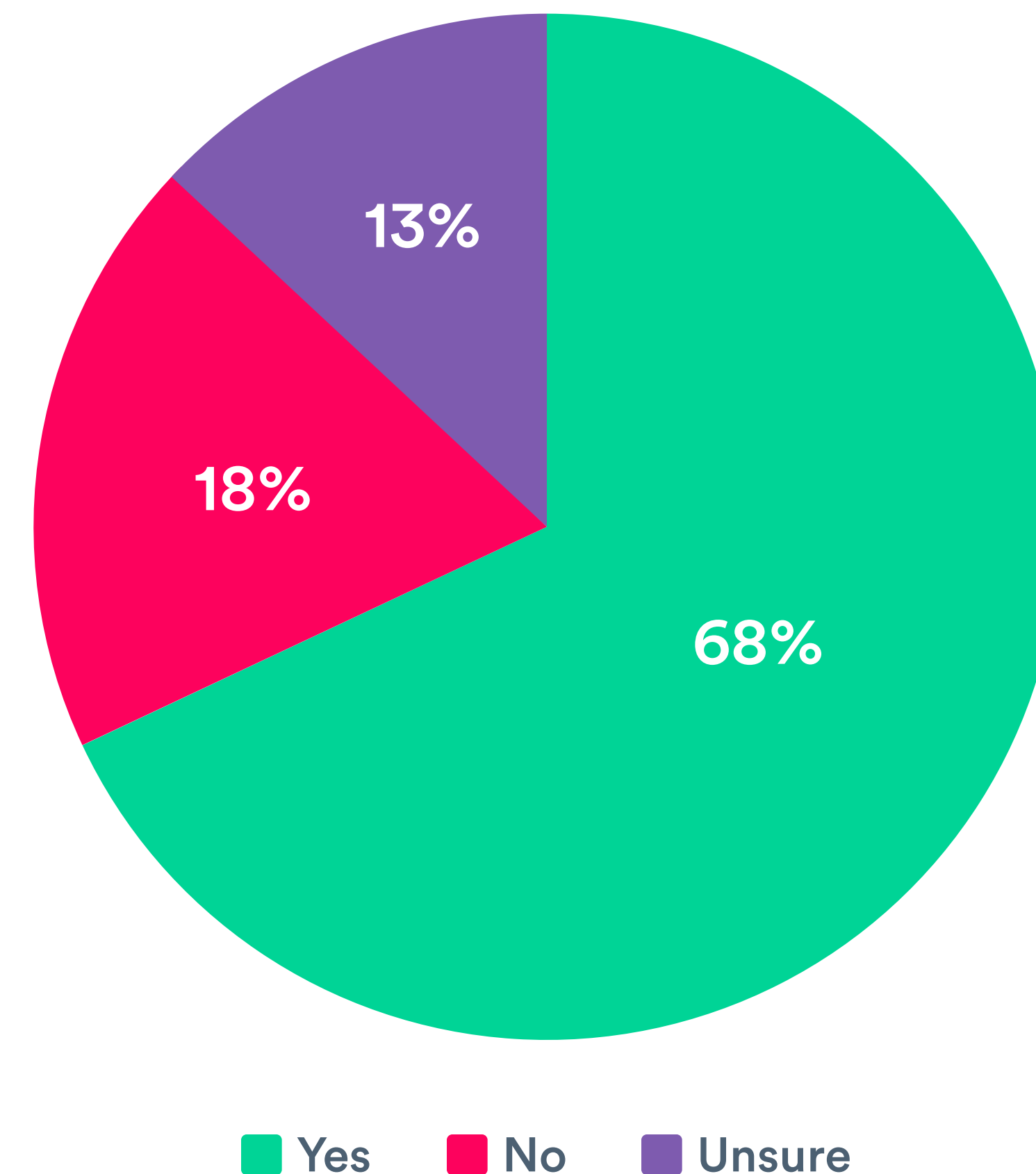


SREs Are In High Demand and Short Supply

Even though 55% of orgs impacted by market conditions have reduced headcounts, the majority of organizations overall are still looking to hire SREs.

Service reliability is more important than ever as more organizations cope with having to maintain the same levels of availability in the face of mounting challenges like budget cuts.

Is your organization planning on hiring SREs within the next 12 months?



PART 2

Observability Maturity



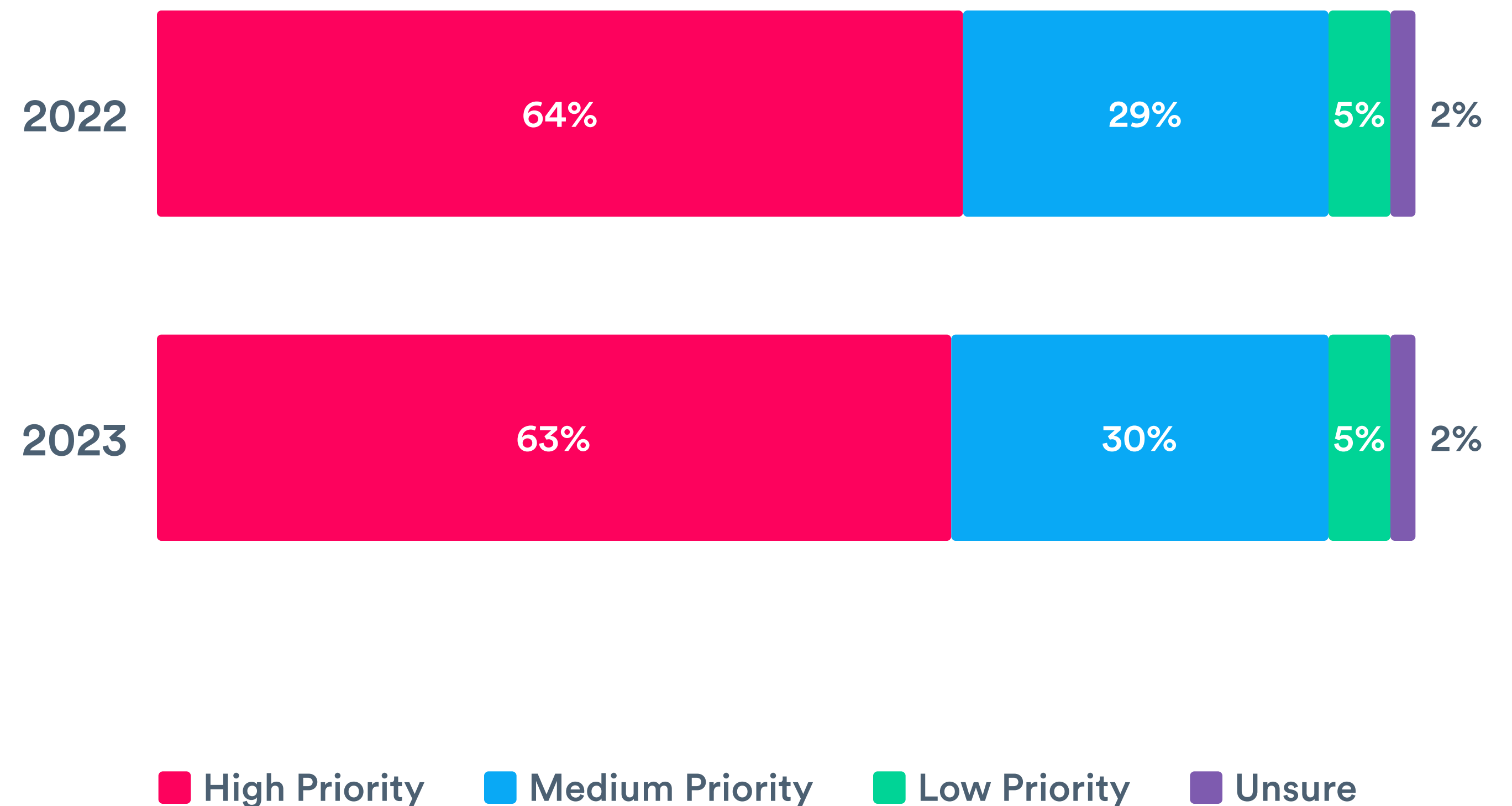
Observability is a Priority Despite Market Headwinds

Despite challenging market conditions observability remains a priority for 93% of organizations, and 81% plan to adopt new tooling in the coming year.

Observability is critical to keeping operations running smoothly and downtime can have serious impacts on a business.

Undertaking an observability initiative requires a time investment, but the fact that many orgs are prioritizing it during current conditions shows how crucial it is to the business.

How much of a priority is Observability for your organization?



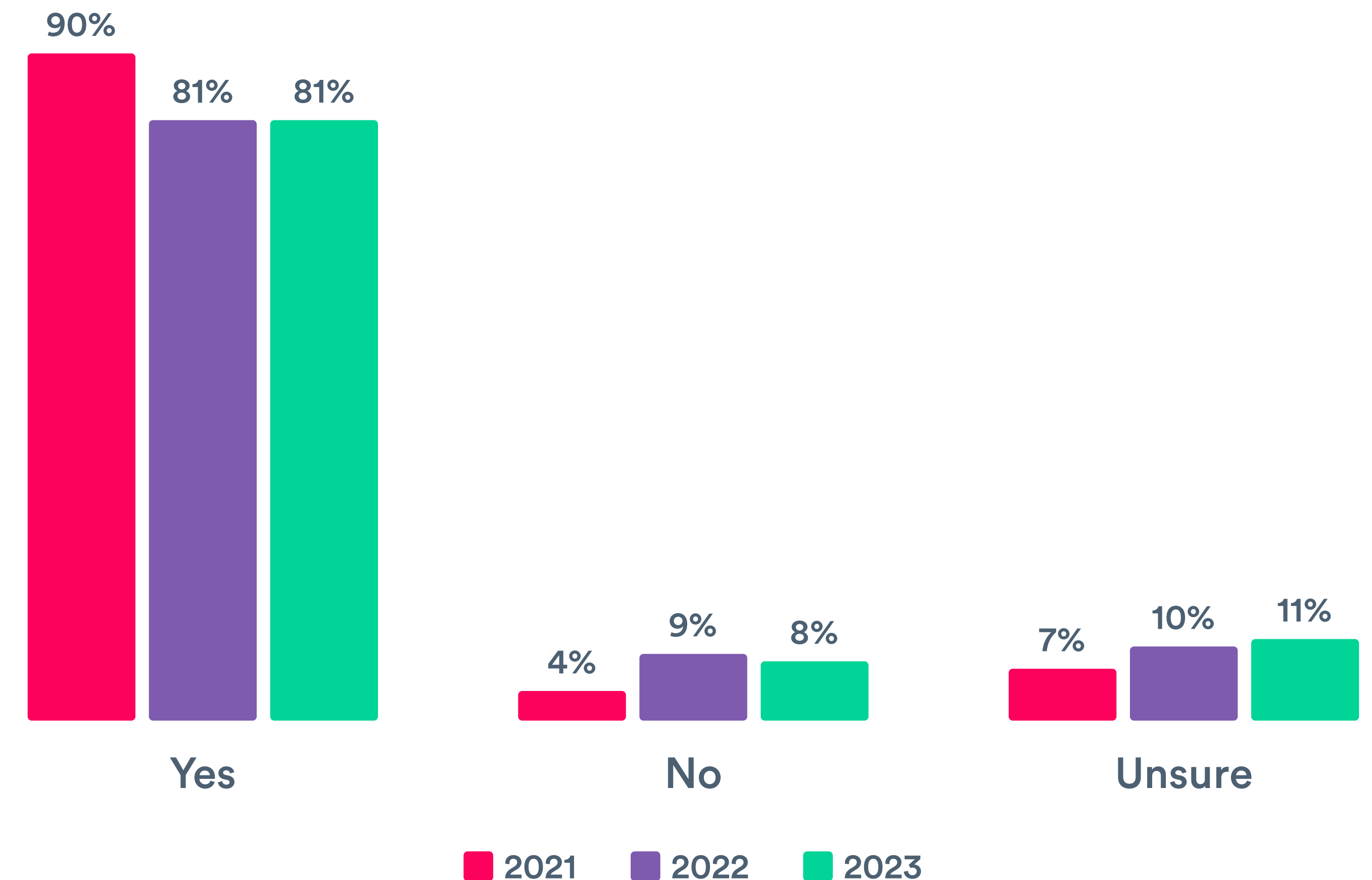
Legacy Tools Fall Short Driving the Search for Alternatives

Even with rampant tool sprawl and reduced IT budgets, many orgs are looking for more effective and more economical tooling.

Organizations expecting more than 50% data growth are even more likely to be adopting new tools as many legacy products are ill-suited for exponential growth.

We can expect new tool adoption will be driven by the need to replace ill-suited legacy tools.

Is your organization considering adopting a new observability tool within the next 12 months?



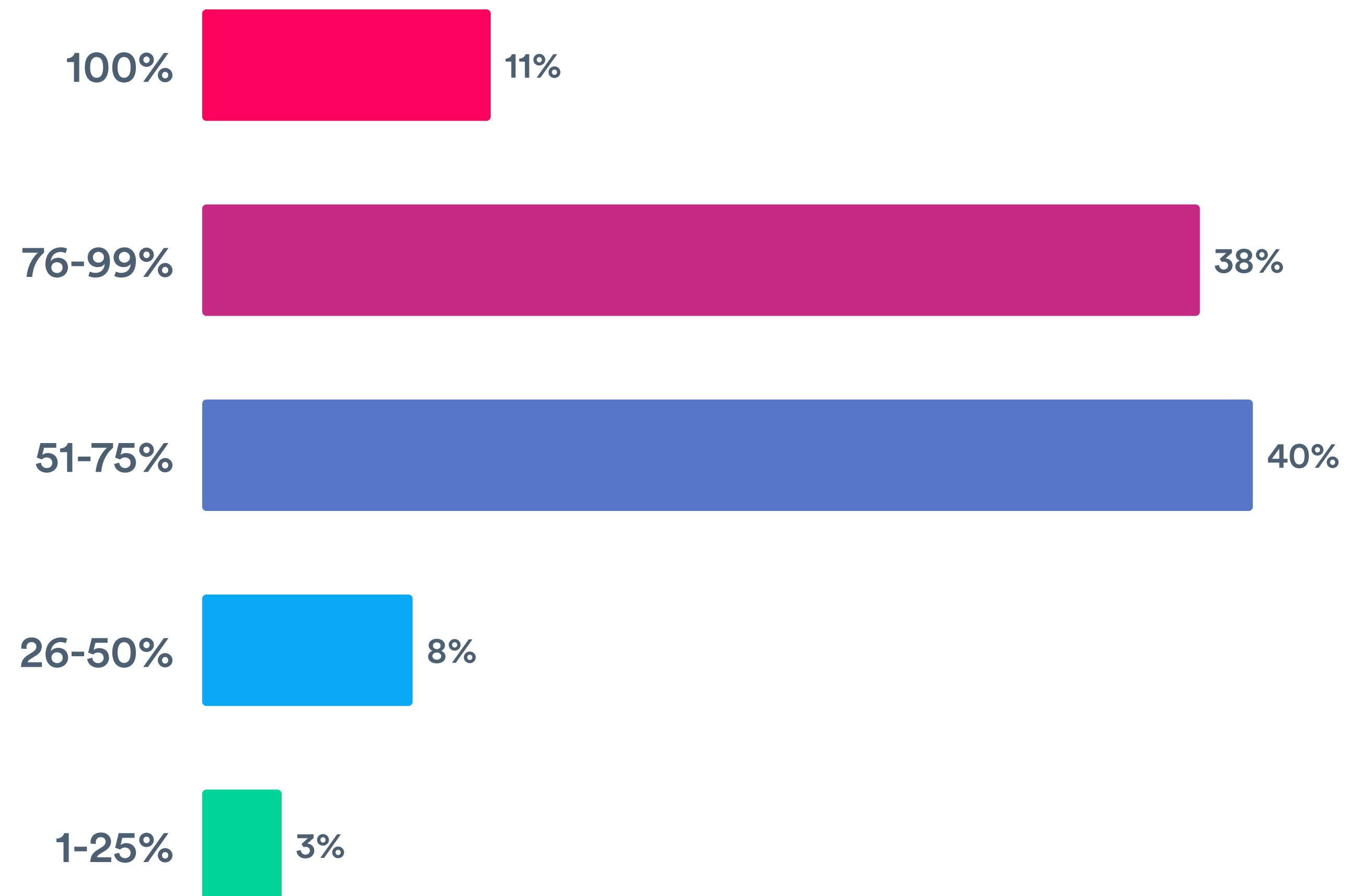
The Majority of Organizations Have Blind Spots

It can be difficult to gauge the extent of observability across an entire organization. You can't always know where your blind spots are.

Nonetheless, 89% of organizations say more than half of their environment is observable. However, only 11% feel they have complete visibility.

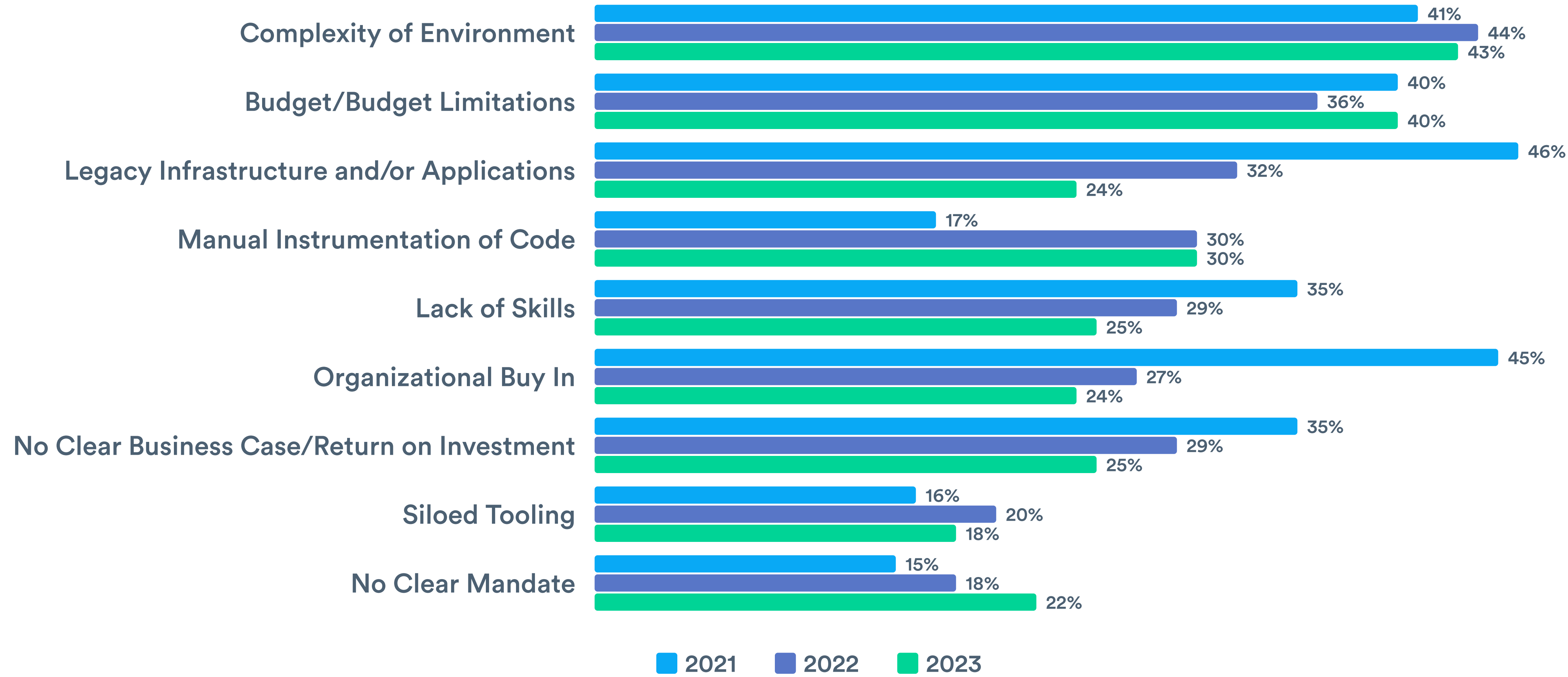
Even if these numbers are optimistic, it means many organizations lack the visibility to deal with a variety of unknown unknowns.

How much of your organization's IT environment would you consider currently observable?



Modern Environments Are Complex Impeding Observability

Which of the following challenges has your organization faced when it comes to Observability?



PART 3

Incident Investigation



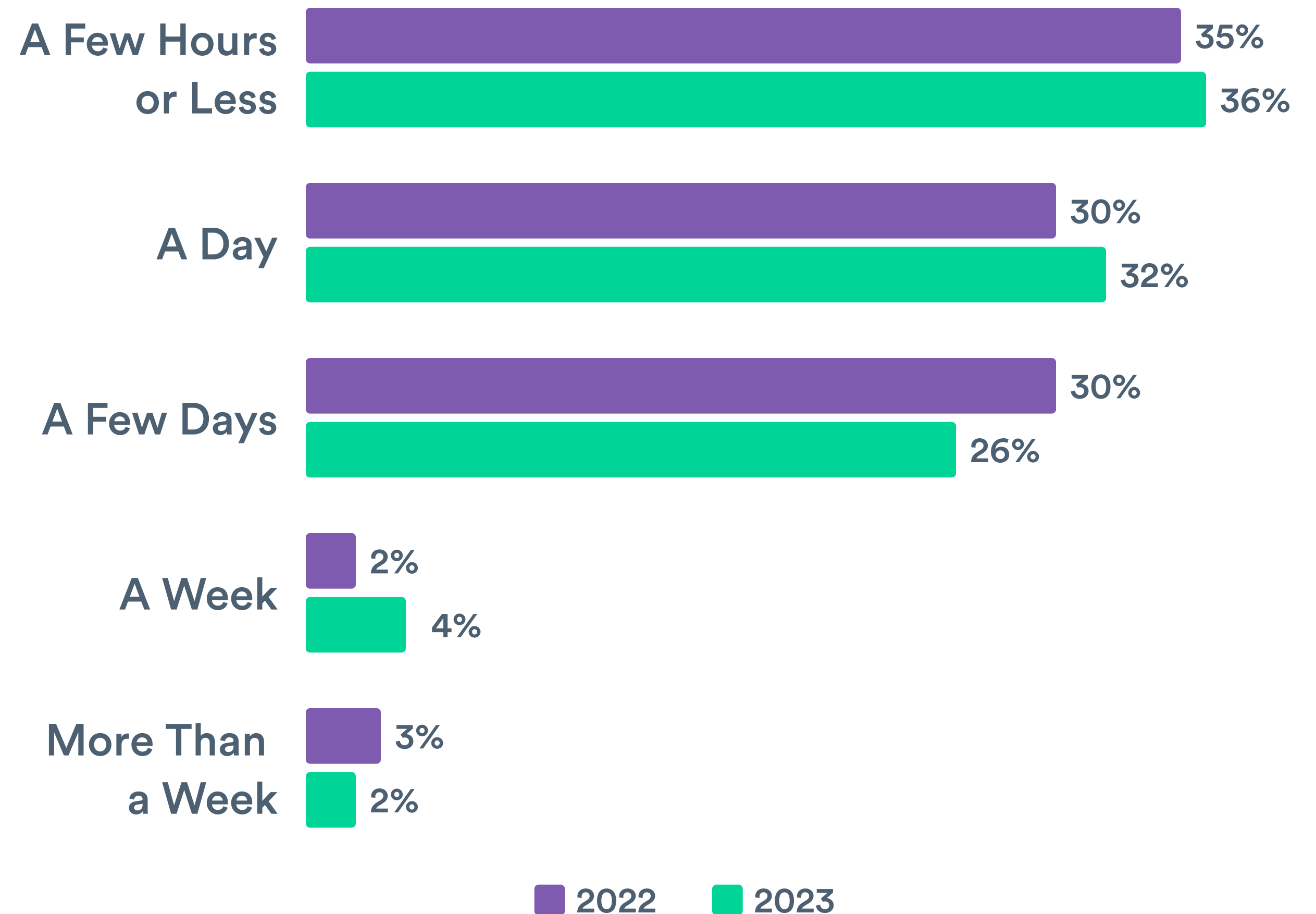
High MTTR Plagues Most Organizations

The average time to investigate an incident remains high despite the number of incidents per month trending downward compared to previous years.

64% of organizations are spending a day or longer on typical investigations.

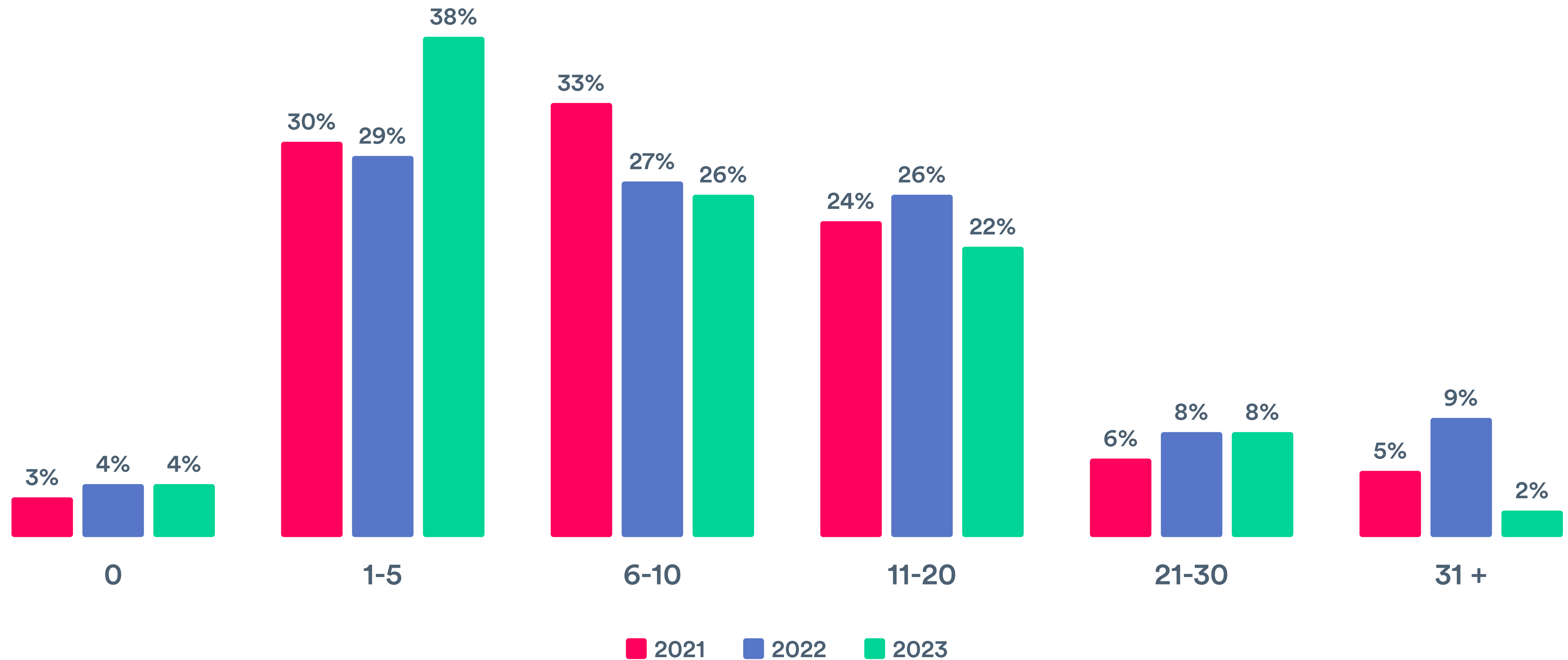
Organizations that say layoffs have impacted their troubleshooting are also more likely to experience longer investigations than those who haven't been impacted.

On average, how long does it take to investigate an issue/incident?



The Frequency of Incidents Sees Some Improvement

On average, how many incidents does your organization have per month?



PART 4

Data Growth



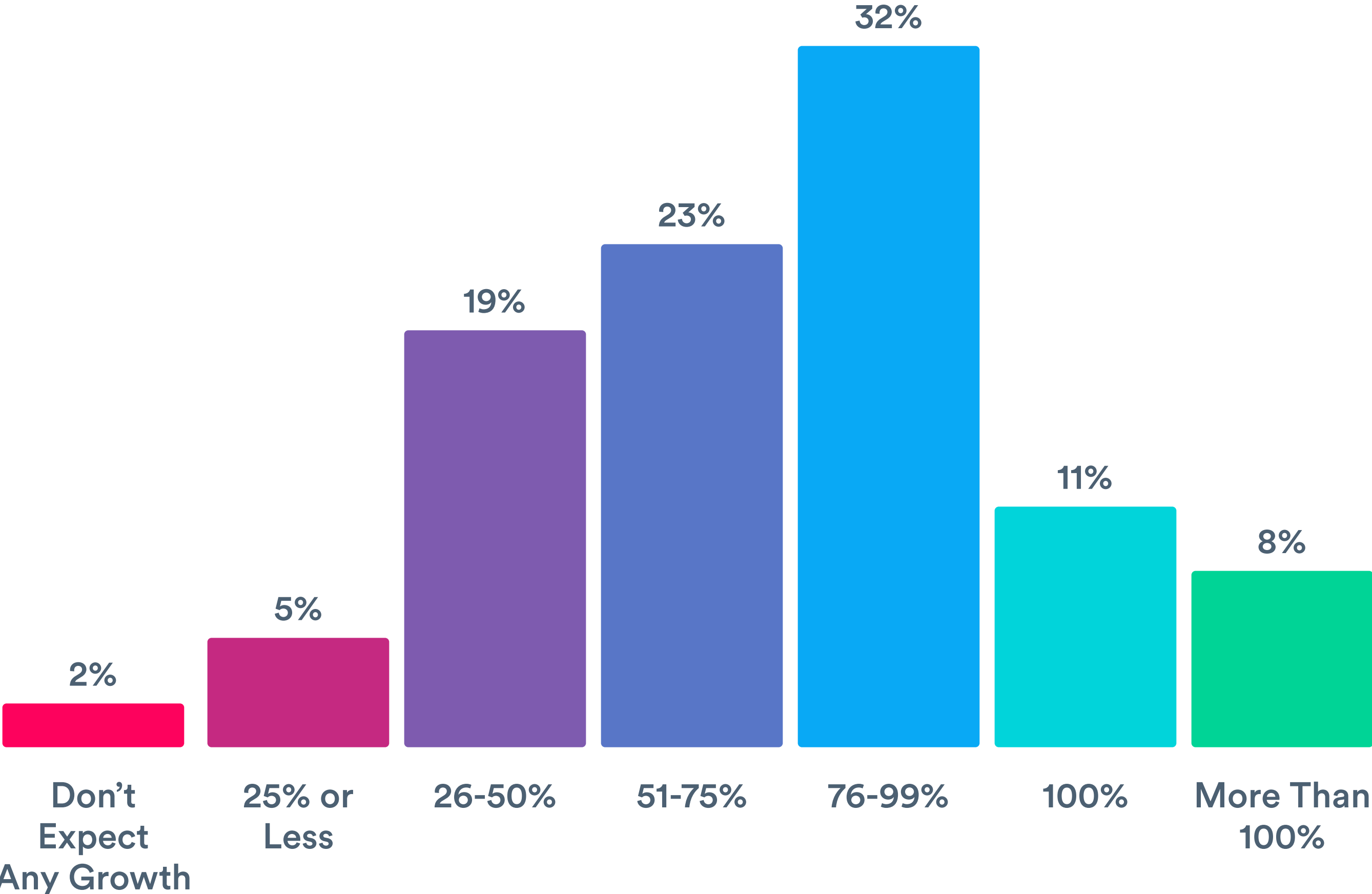
Data Growth Is Much Higher Than Previously Expected

Data growth is on track to be astronomical for most organizations. 51% of organizations are expecting data to grow by 75% or more in the coming year.

That's a risky situation for many organizations considering that the majority are currently sampling data to make their existing observability tools accommodate their current needs.

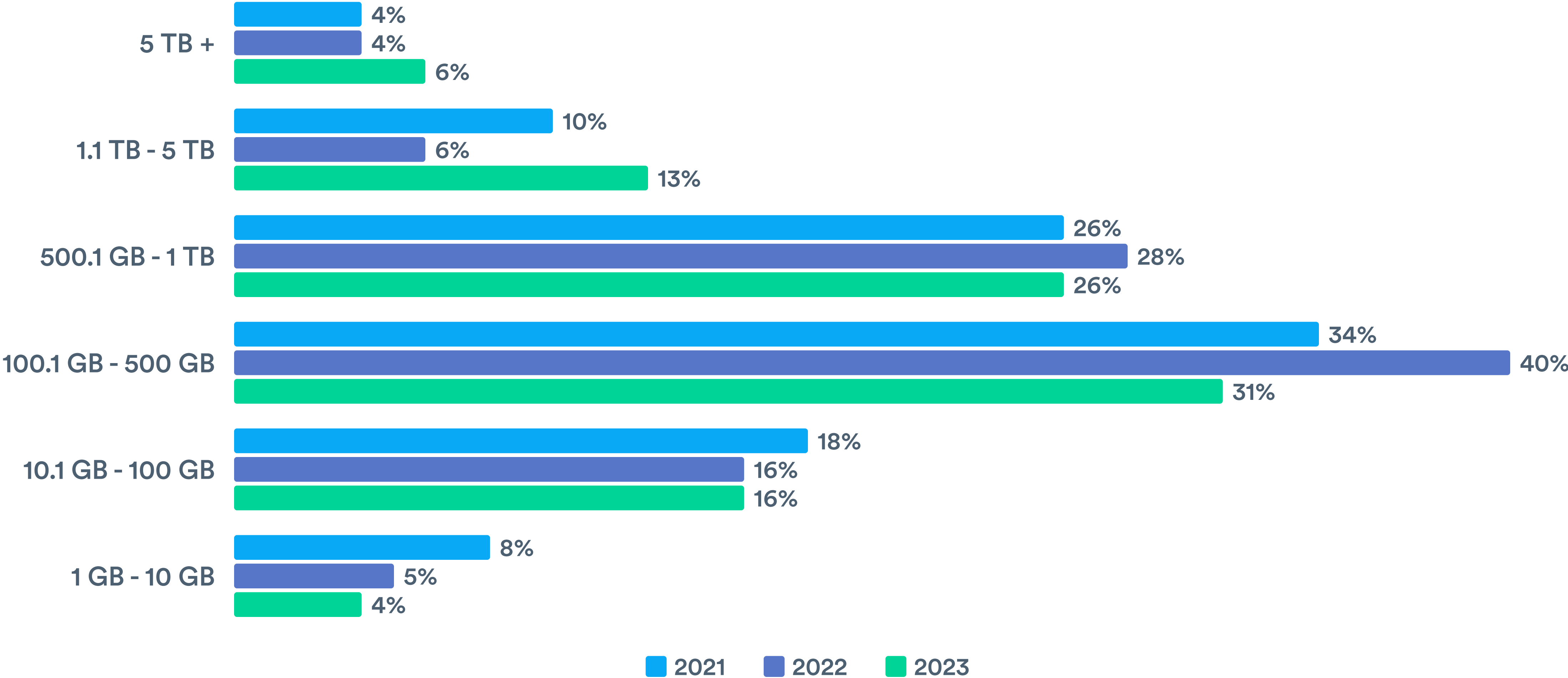
Observability that can scale favorably with future data growth is not a nice to have, its an imperative and something that should be addressed before the situation worsens.

How much do you expect data under management to grow at your organization within the next 12 months?



More Orgs Enter the TB+ Range for Daily Data Ingest

Approximately how much data are you ingesting in your Observability tools per day?



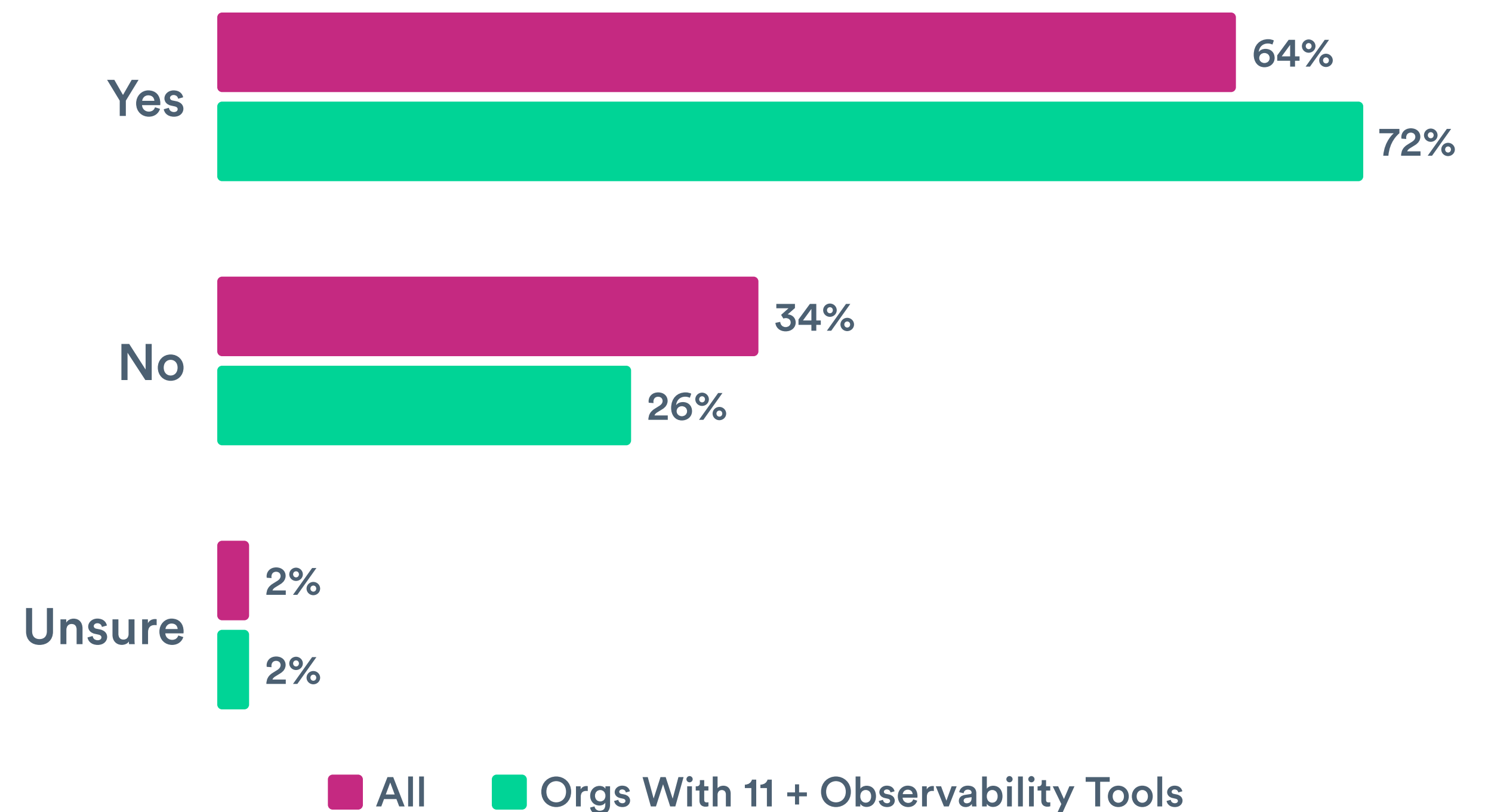
Sampling Data Is Common, Reducing Both Observability and Cost

Organizations with more observability tools in their environment are more likely to be sampling data to reduce the costs associated with ingest-based pricing and index-based systems.

Similarly, many organizations predicting high data growth for the next 12 months are more likely to be sampling data now.

This means observability is being sacrificed to address cost concerns. Sampling is ultimately a stop-gap that may alleviate some economic pain now but won't provide a long-term solution.

In the past 12 months has your organization had to sample/reduce data ingested by your observability and monitoring tools to bring down cost?



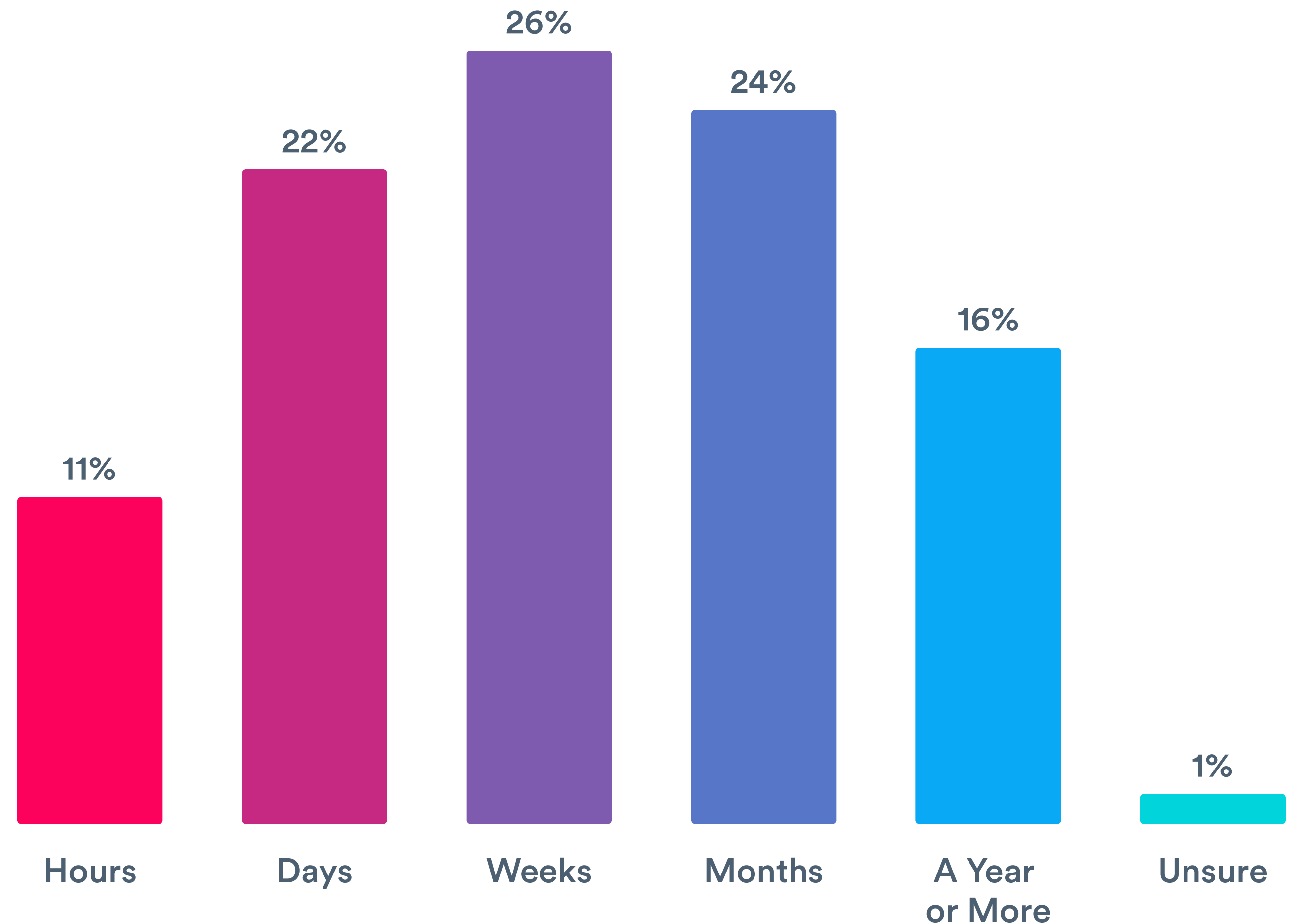
Most Orgs Don't Do Long-Term Data Retention

Some compliance regulations can require a year's worth of data for audits, and security investigations can send users digging into old data.

However, only 16% are keeping logs for a year. 59% are keeping logs for less than a month.

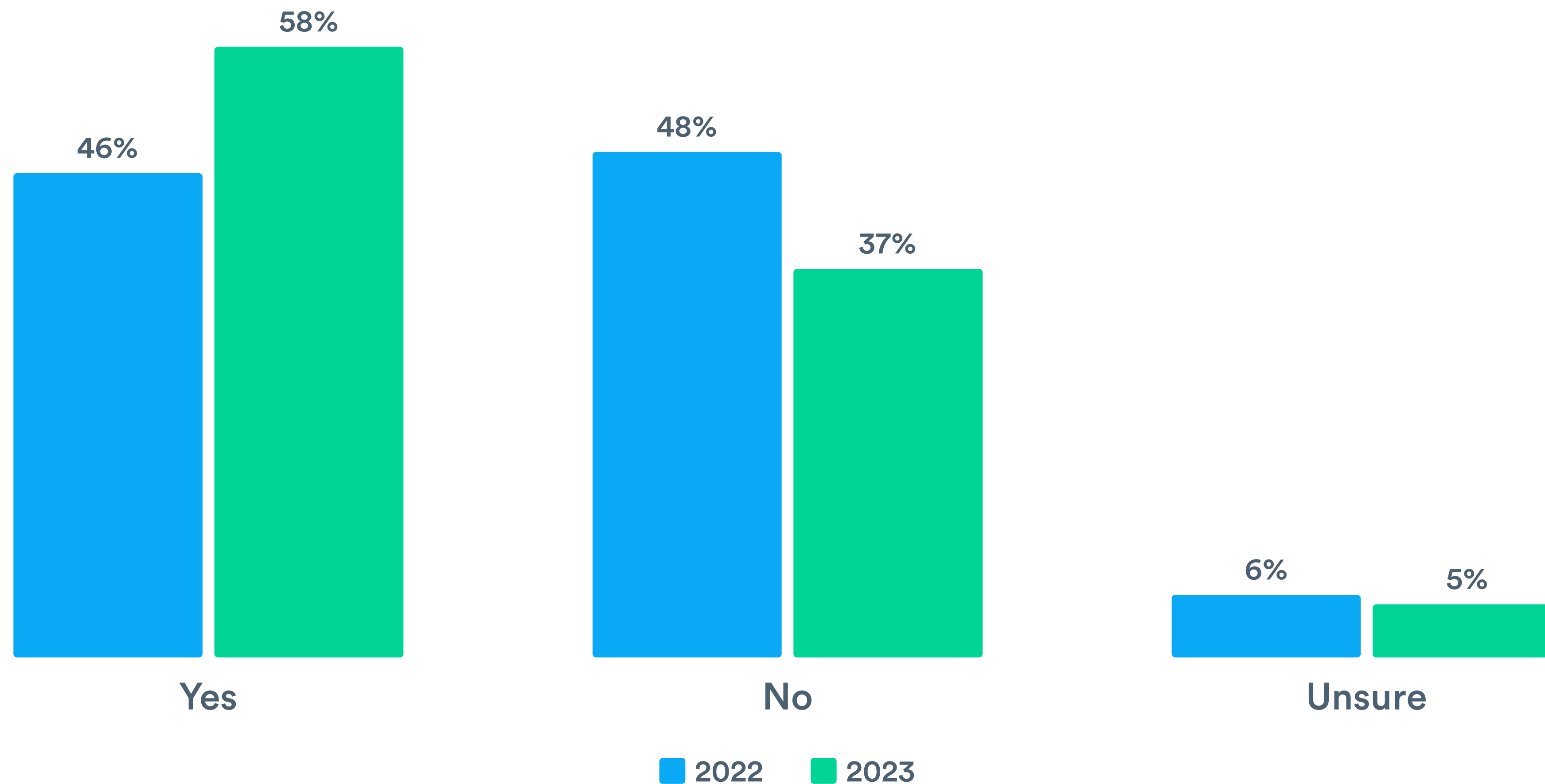
Not all machine data needs to be kept forever, but there is a growing number of orgs citing cost concerns as the sole reason for discarding data. Flexible retention that won't destroy a budget should be a prerequisite for any observability tool.

How long do you typically retain log data for?



Cost Is the Growing Roadblock for Long-Term Retention

In the past year has your organization discarded telemetry data you would have otherwise kept because of cost-related concerns?



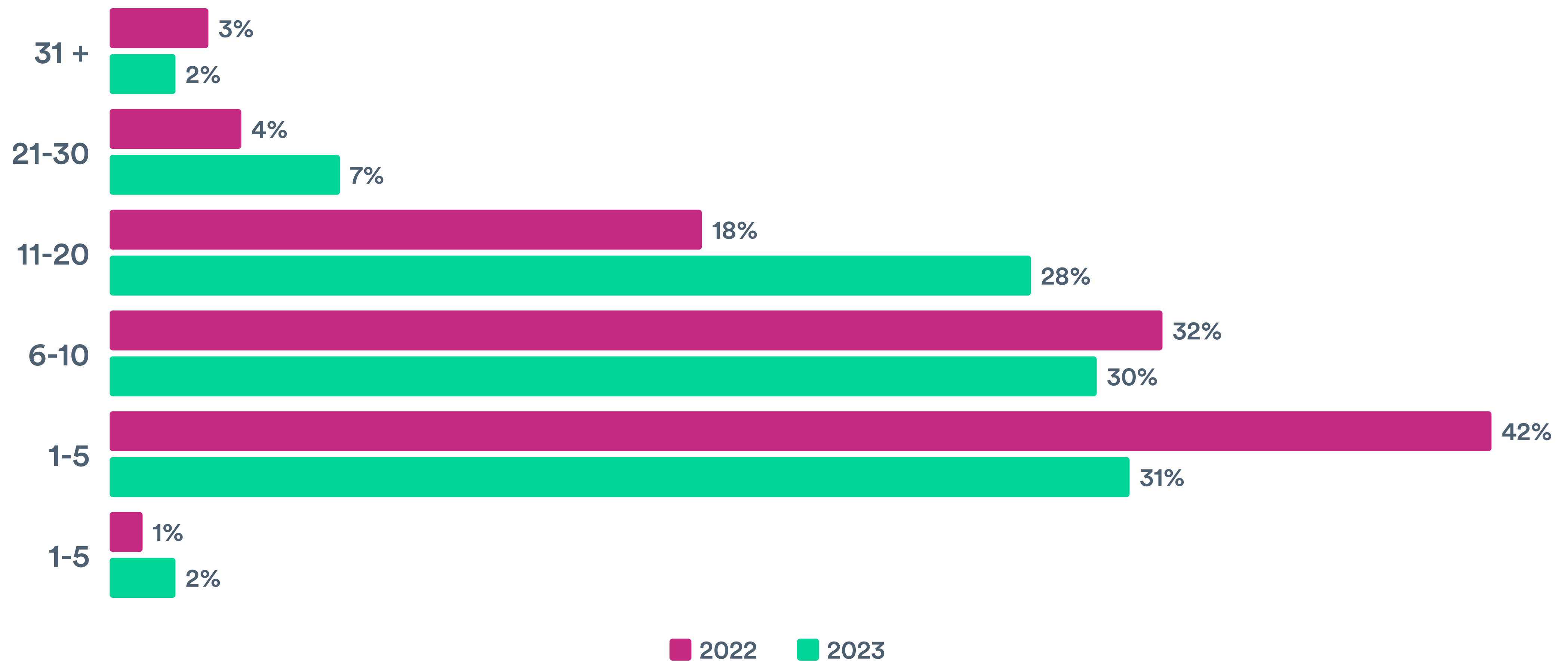
PART 5

Tool Sprawl



Tool Sprawl Has Only Gotten Worse

How many different observability and monitoring tools are in place across your organization?



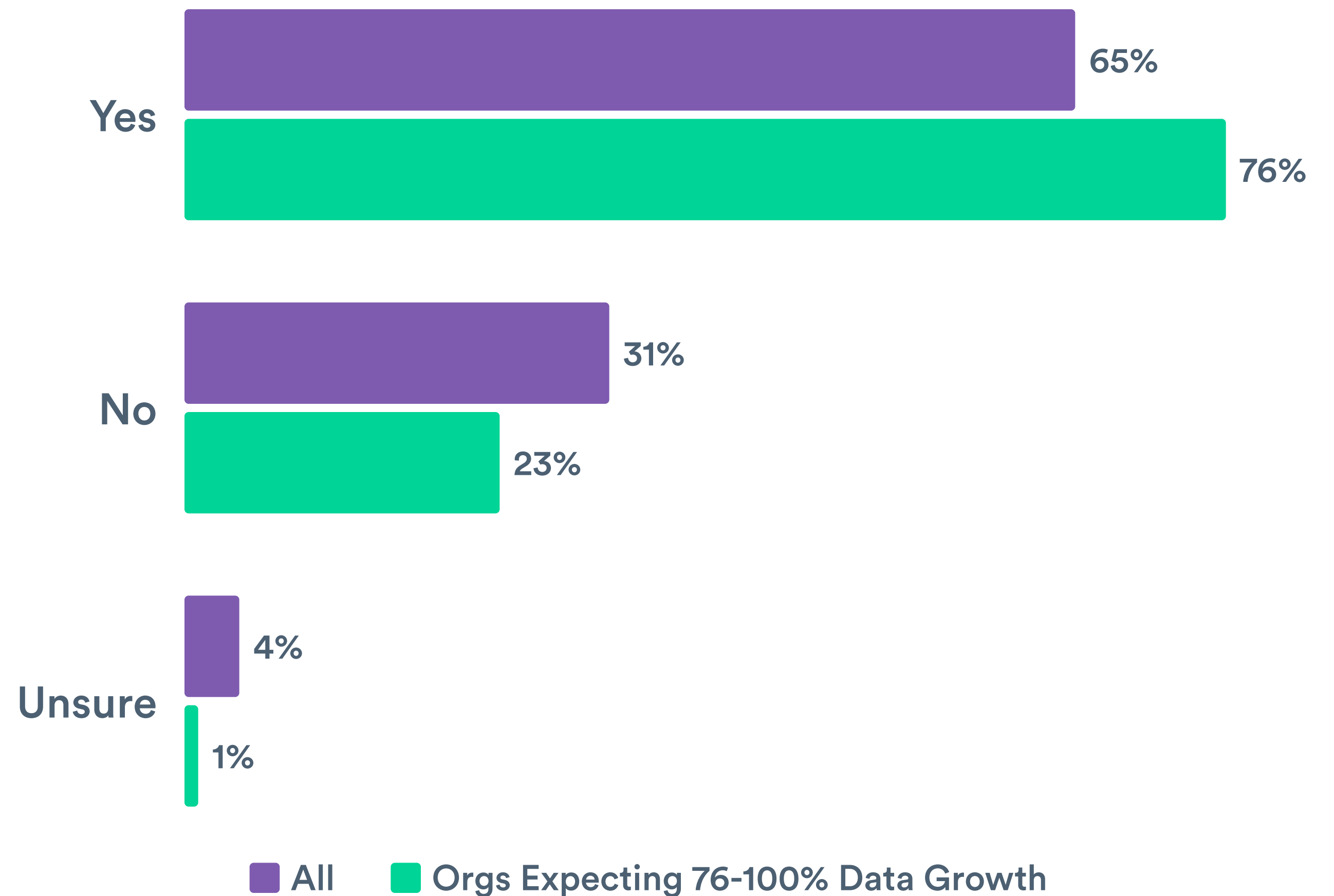
Tool Sprawl Causes Significant Pain for Most Companies

67% of orgs have 6 or more observability and monitoring tools in their environment. Unsurprisingly a similar number(65%) consider tool sprawl a significant pain point.

Increased costs and difficulty correlating data are the leading challenges cause by tool sprawl, but they're followed closely by the added operational complexity and management overhead that it entails.

Tool sprawl is a more pronounced problem for orgs with fast growing data. It can lead to siloed data and additional costs from duplicate data going to various tools.

Is observability tool sprawl a significant pain point in your organization?



Increased Costs and Data Correlation Challenges Are Equally Prevalent for Orgs With Too Many Tools

What challenges have resulted from tool sprawl?



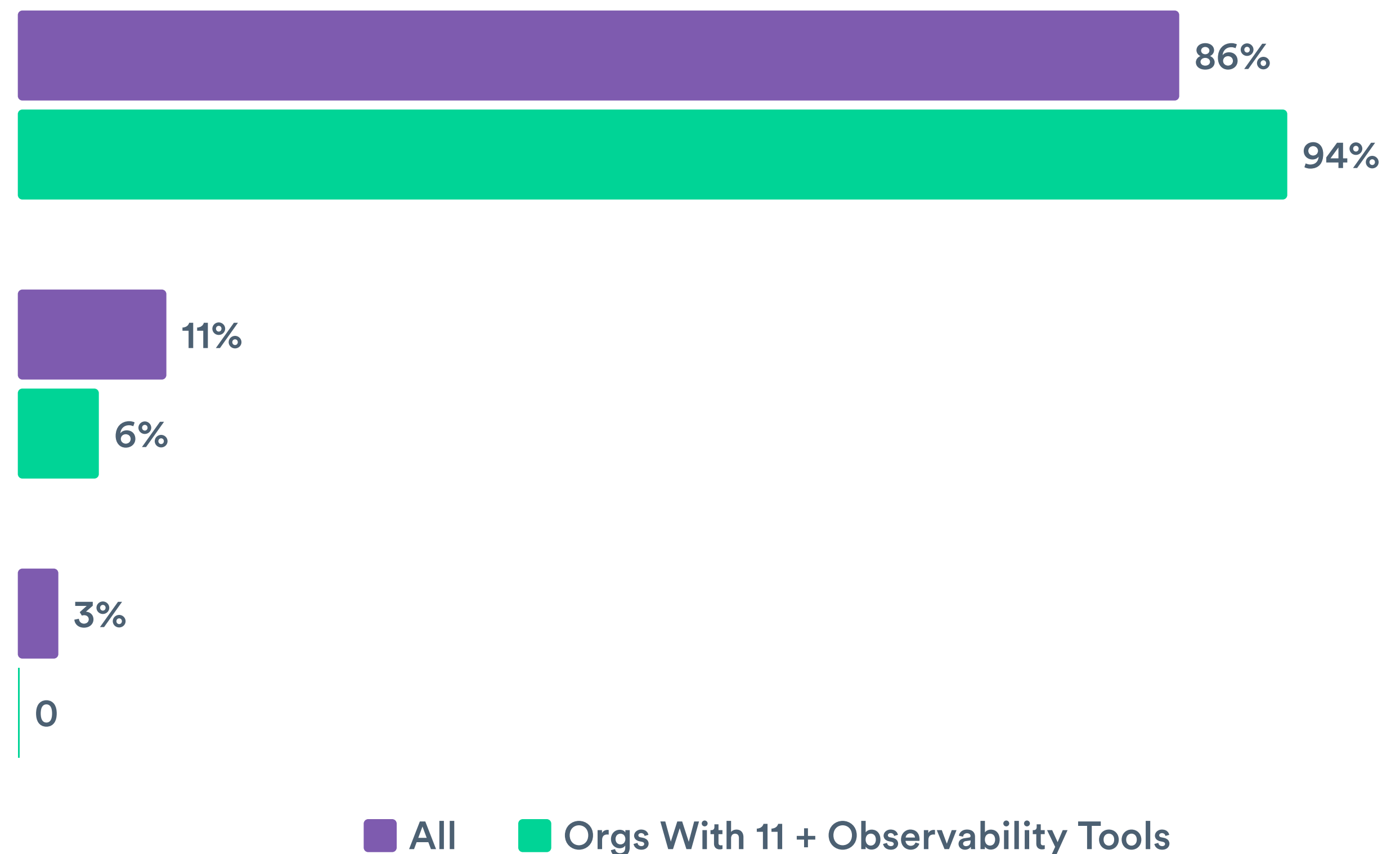
Tool Consolidation Is a Top Priority, Even for Orgs Not Considering Tool Sprawl a Significant Pain Point

The number of organizations prioritizing tool consolidation exceeds the 65% that consider it a significant pain point. This shows just how widespread the issue is.

Tool sprawl aside, many legacy tools fail to live up to current needs. Organizations cite tool complexity and the need for expert knowledge as the main challenges with their current tool.

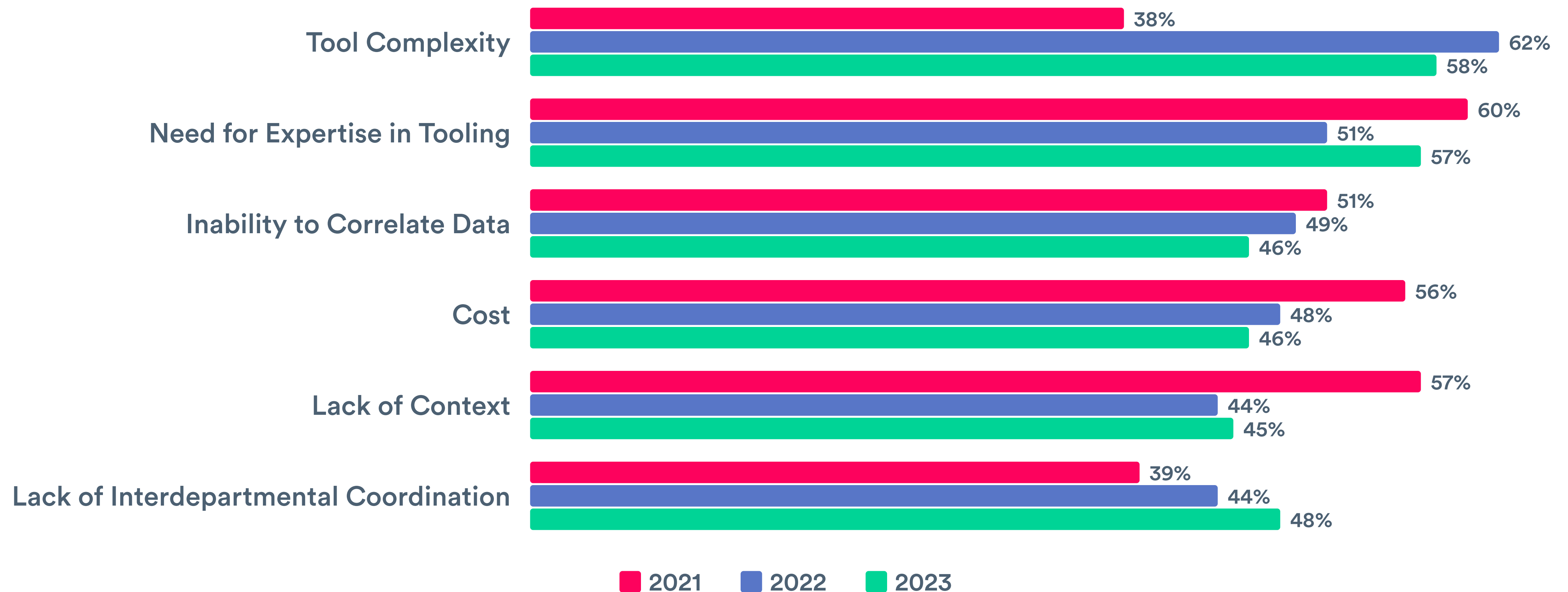
Whether it's the sheer number of tools or their inherent weaknesses, organizations want to cut back on what they have.

Is observability or monitoring tool consolidation a priority in the next 12 months?



Legacy Tools Introduce Complexity, Require Specialized Knowledge

What are your biggest challenges with existing monitoring/troubleshooting tools?
(Please select the top 3 aspects that are most challenging)



PART 6

Open-Source in Observability

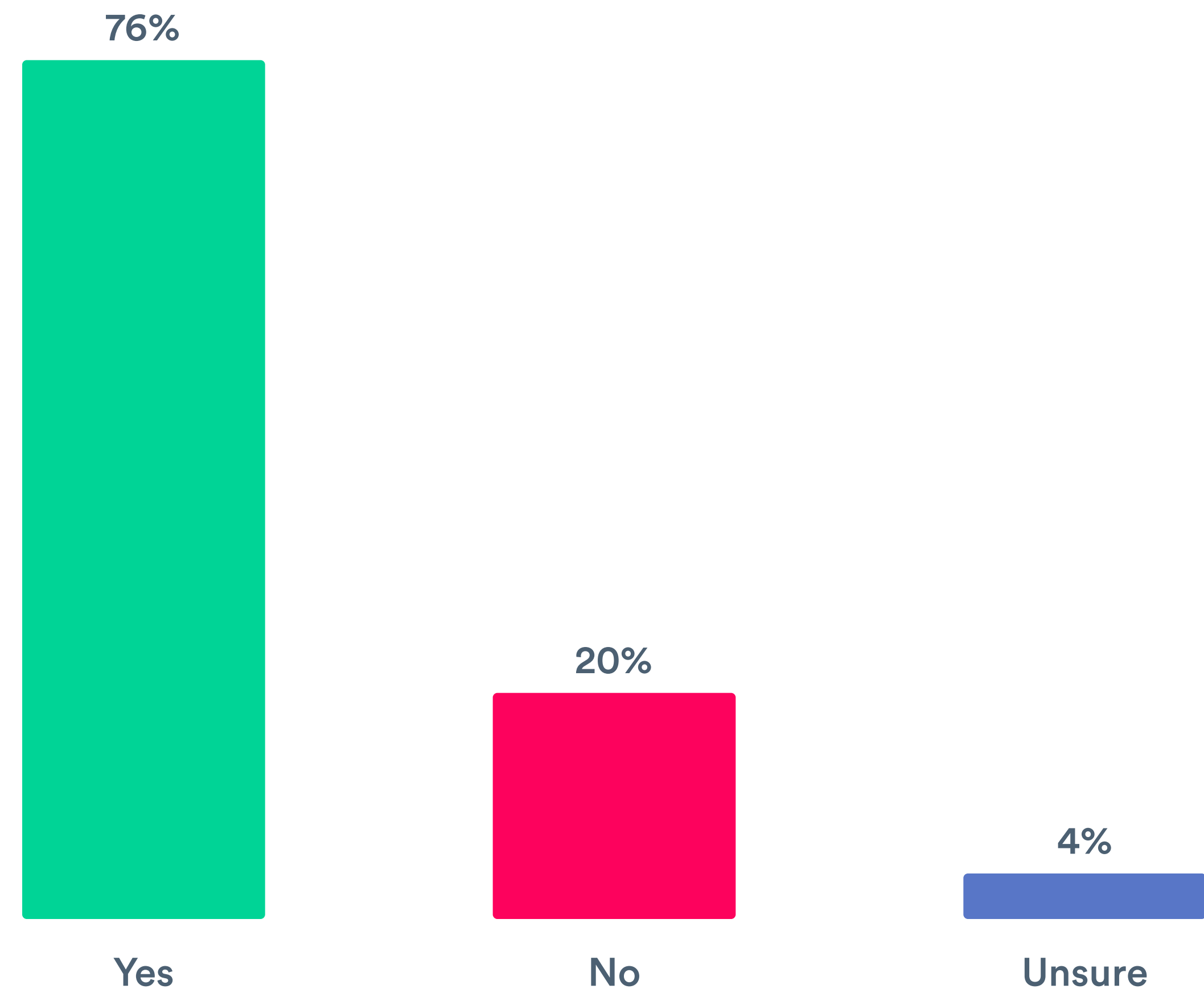


Open-Source Observability Software Is Commonplace

Open-source Software plays an important role in the IT ecosystem and observability is no exception. They can provide part of, or for some orgs, the entirety of their observability stack.

Data forwarders are a common example with 30% of orgs using OpenTelemetry, 26% using Prometheus and 25% using Fluent Bit and Fluentd. Using such data forwarders can be an asset by preventing vendor lock-in through traditional proprietary agents.

Does your organization use open-source software as part of its observability strategy?



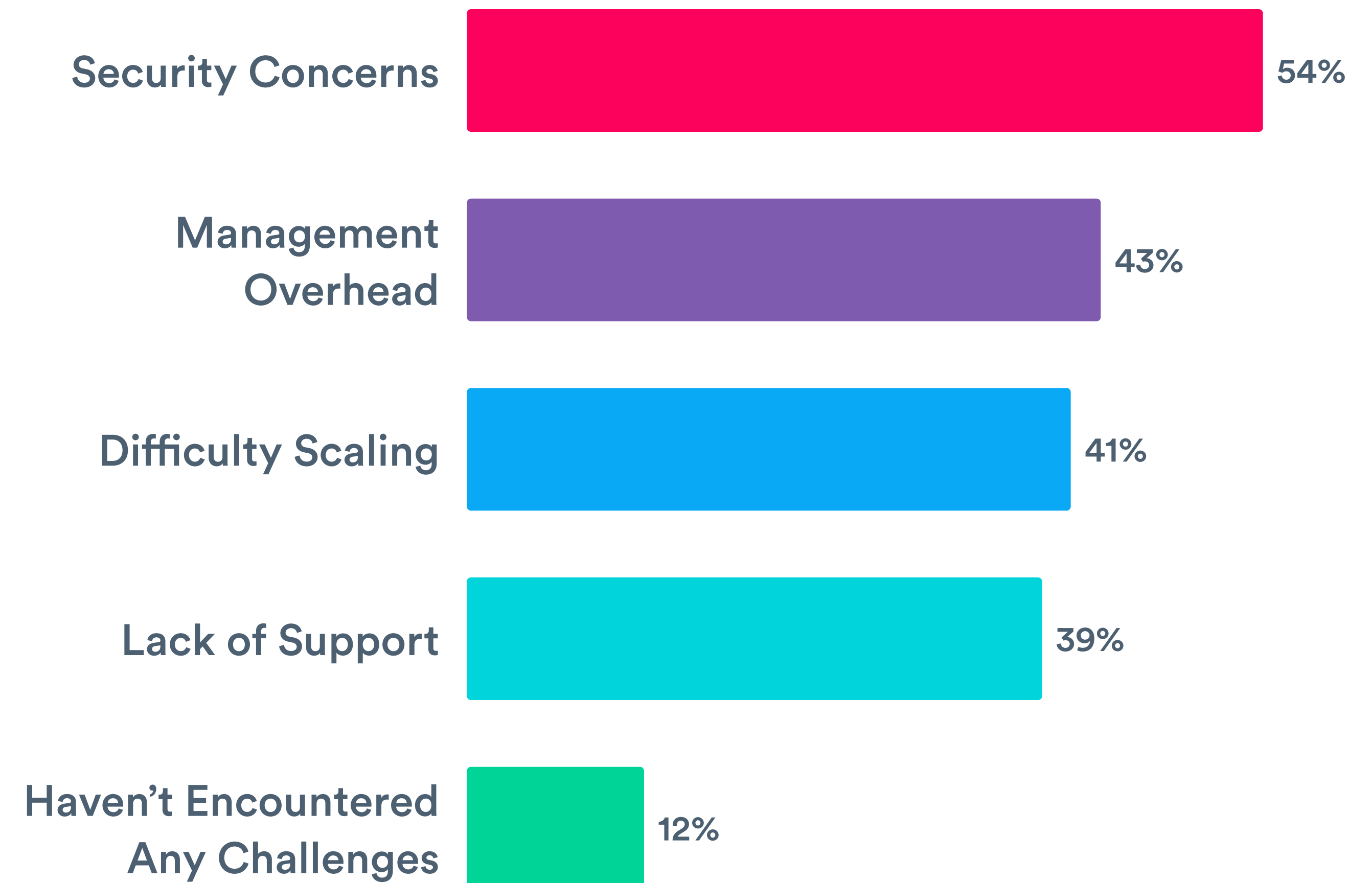
Security Is Top of Mind When Using Open-Source

OSS plays a crucial role but it has its limits and depending on how its used in a deployment it can present challenges.

Security is a paramount concern with any observability software, and OSS is no different.

However, for orgs that rely on OSS for much of or all of their stack the lack of support and management overhead can become insurmountable obstacles that can cap the value some stacks provide. 47% have moved off of an open observability software in the past year.

What challenge(s) has your organization encountered with open-source observability software?



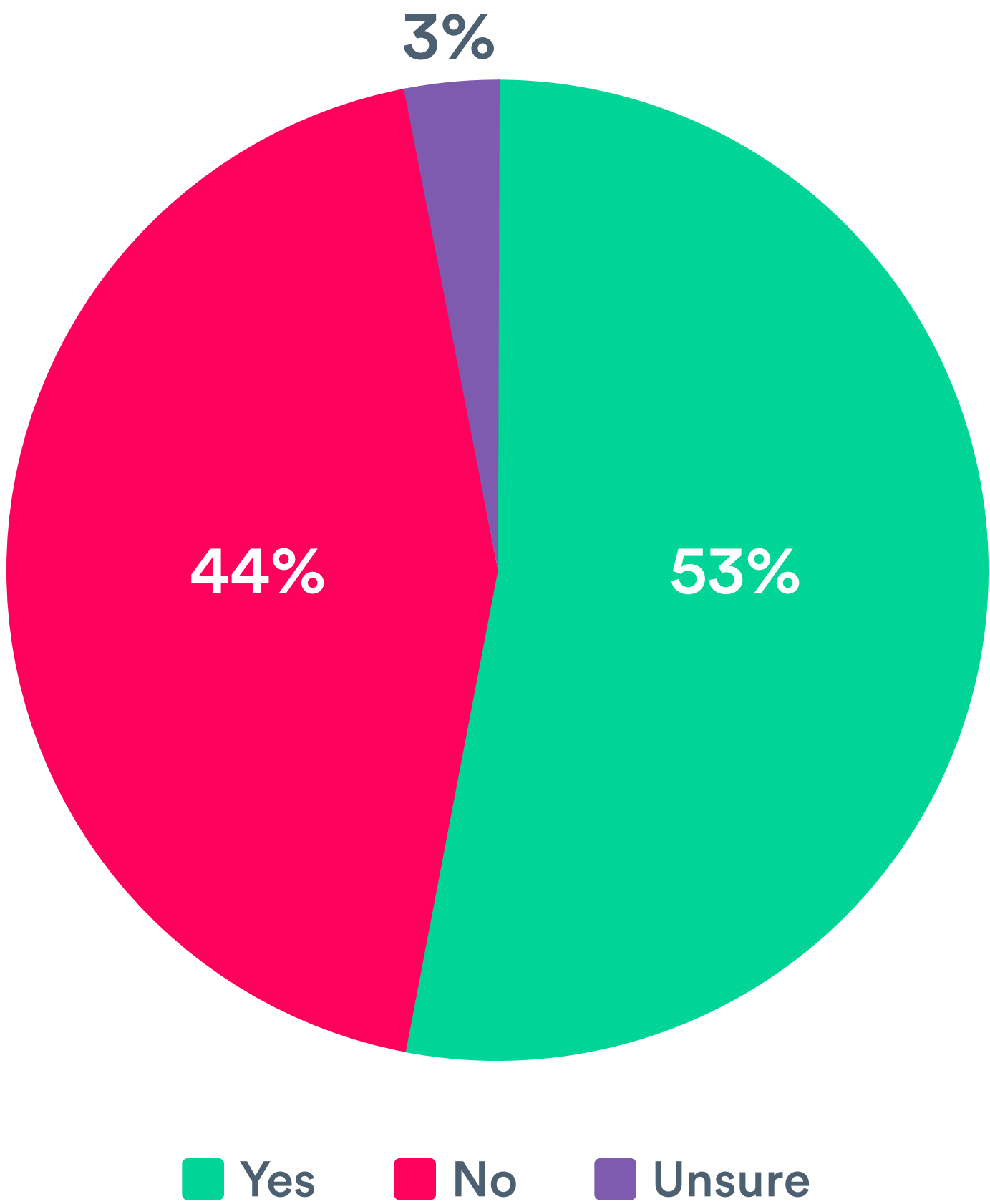
PART 7

Market Impact

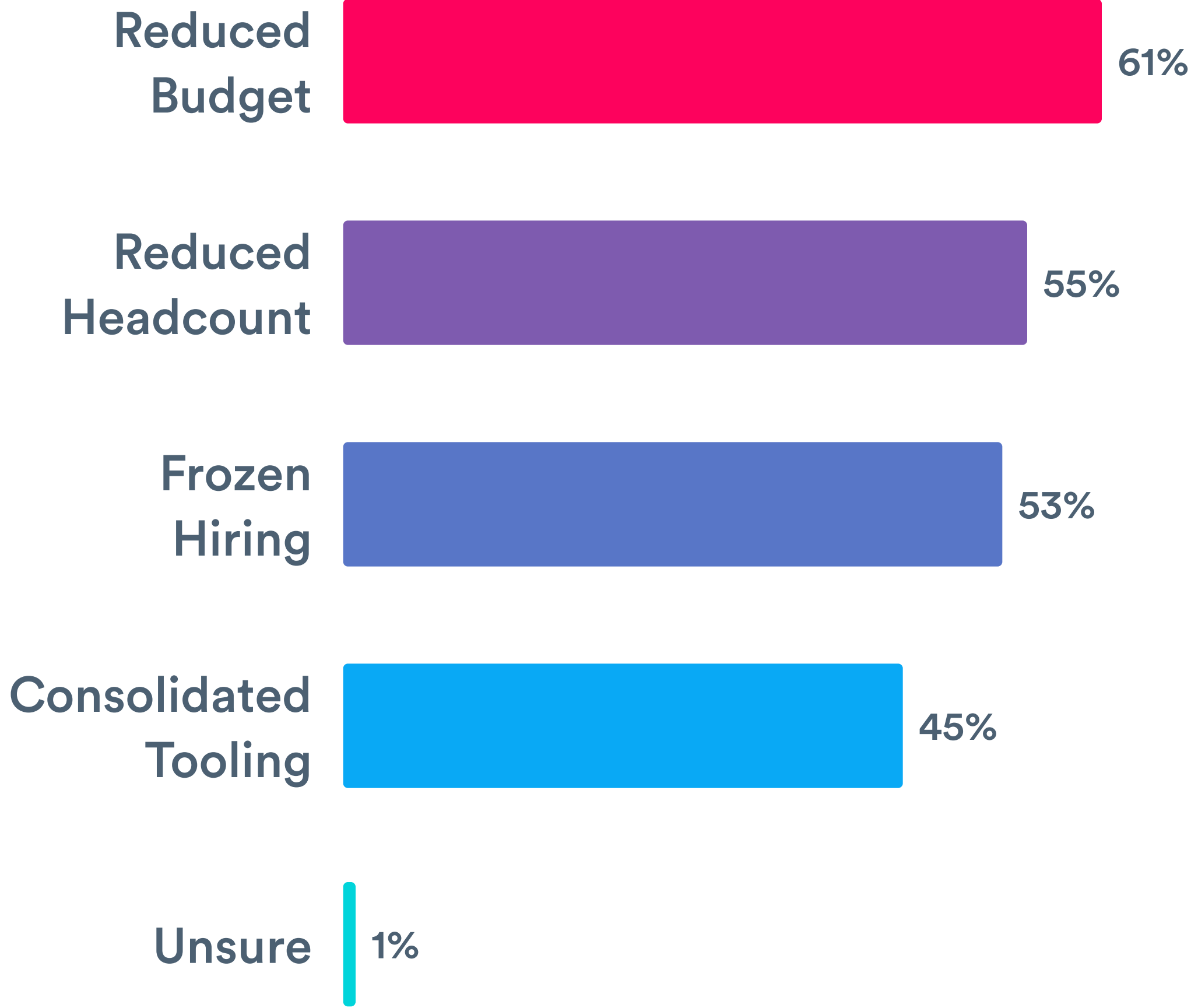


IT Budgets Are Hit Hardest by Market Conditions

Has your IT organization been negatively impacted as a result of unfavorable market conditions?



How has your organization been impacted?



Troubleshooting Can Get Harder for Orgs Hit by Layoffs

Some organizations have escaped the negative impacts of current less than favorable market conditions, but the majority have not.

Reduced budgets are the most common repercussion, but layoffs are also common. Nearly half of organizations hit with layoffs have found it impacted their troubleshooting.

Headcount reductions can be hard hitting because so many observability tooling require expert knowledge to use and doing little to democratize data.

Have layoffs affected your ability to troubleshoot incidents?

