

The Storage Modernization Imperative

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Research Objectives

In an increasingly digital economy, data has emerged as the lifeblood that powers all essential decisions. Additionally, as the potential of AI technologies to drive further transformation continues to emerge, the role of the underlying data infrastructure is increasingly critical. Yet, for many organizations, the IT professionals charged with managing the storage environment continue to grapple with a range of challenges. Whether it's due to managing a data explosion that is set to further expand with the advent of AI, handling growing security and cyber resilience concerns, monitoring data across an increasingly hybrid cloud environment, or trying to solve cost and efficiency issues, the pressure to move to a modern enterprise storage technology footing that can meet the challenges of the modern era is building.

Such evolution is not always easy, particularly in well-established cultures. Organizations need technologies and guidance to navigate these changes. To gain further insights into these trends, Omdia surveyed 449 storage professionals in North America involved with building and managing storage infrastructure technology and processes at their organization.

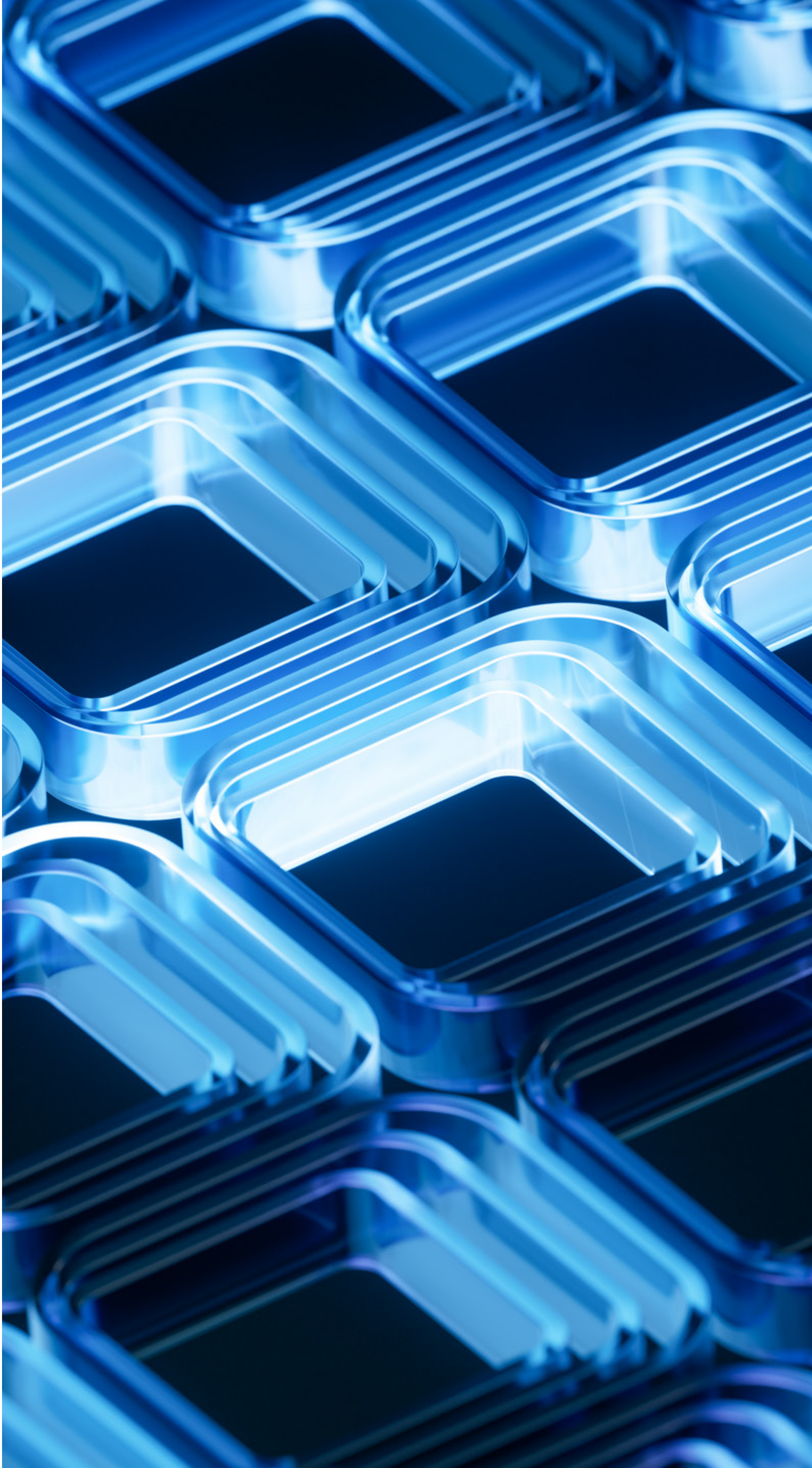
THIS STUDY SOUGHT TO:

Identify the drivers and challenges that prompt organizations to modernize their storage.

Assess organizations' perceptions of new and emerging storage and data infrastructure technologies.

Determine the impact of AI on storage infrastructure initiatives, including data privacy and integration with broader data infrastructure and pipelines.

Monitor the evolution of storage procurement and consumption models.



Key Findings



Data Storage Volumes Continue to Grow

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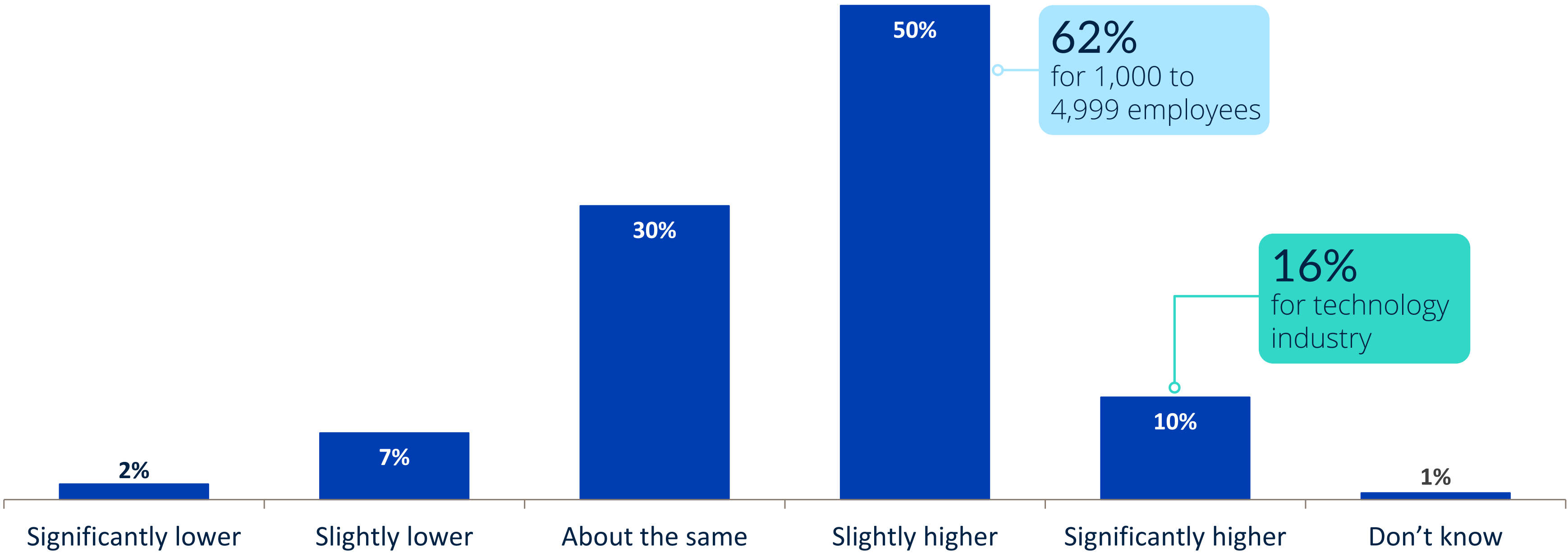


Data Storage Volumes Continue to Grow

The Data Deluge Is Anticipated to Continue or Even Accelerate

With 60% of organizations expecting their data growth rate to accelerate over the next two years, many will be challenged on multiple fronts in terms of cost and managing this growing data mountain efficiently, securely, and compliantly. As a result, many will be placing more emphasis on effective data management strategies.

Data growth rate in 24 months compared with current rate.

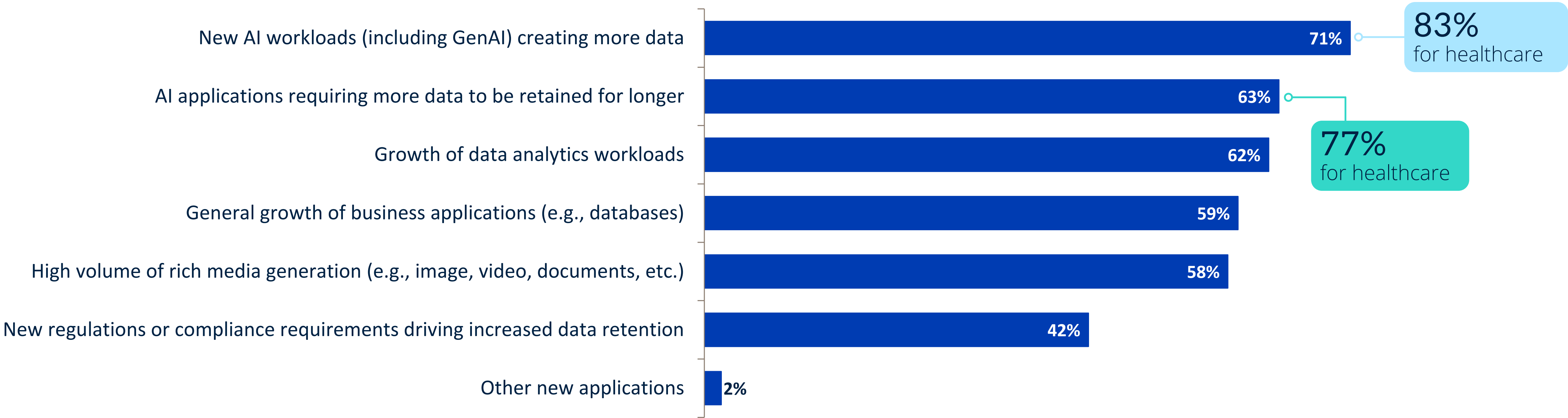


AI Is the Top Driver of Data Growth but Far From the Only Factor

As more organizations move from the experimental phase of AI to production-level deployment at scale, the impacts on data growth are clear not only from a data generation perspective, but also from a retention point of view. These factors are particularly pronounced among healthcare providers.

However, IT leaders should resist the temptation to focus exclusively on AI, with several additional factors, including more traditional analytics and overall business applications, driving data growth over the next two years.

Key drivers of data growth over the next 24 months.





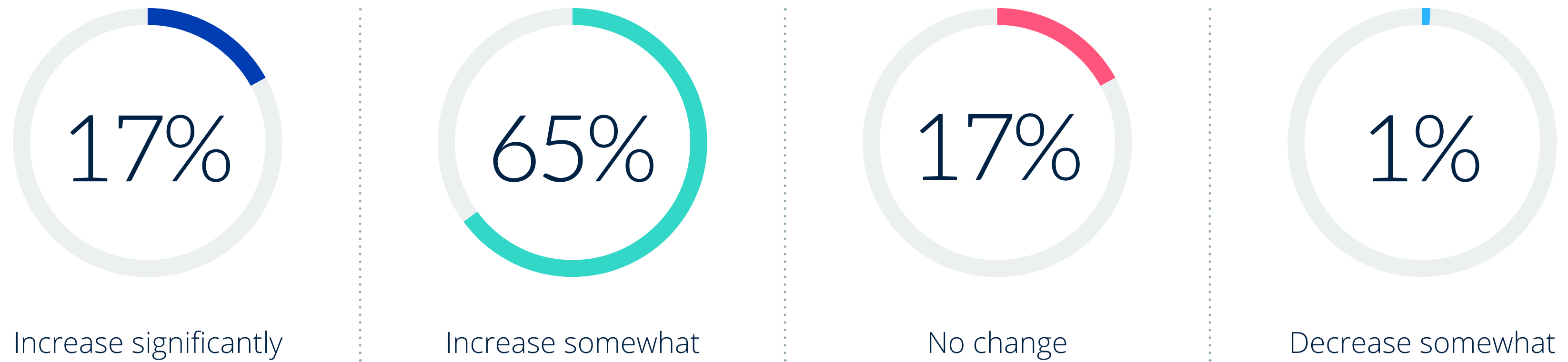
Storage Budgets Increase as Enterprises Continue to Modernize

On-premises Storage Budget Growth Is Anticipated by Most

Given the anticipated increase in data volumes, it's no surprise that most IT decision-makers are expecting to see higher storage budgets in the coming year, with 82% overall expecting increases.

Hotspots for growth are anticipated within the retail and technology segments, where 36% and 25%, respectively, expect significant budget increases. Meanwhile, 77% of manufacturing respondents expect storage budgets to grow somewhat, and 78% of business services respondents have similar expectations.

Budget change for on-premises storage in 2026 compared with 2025.

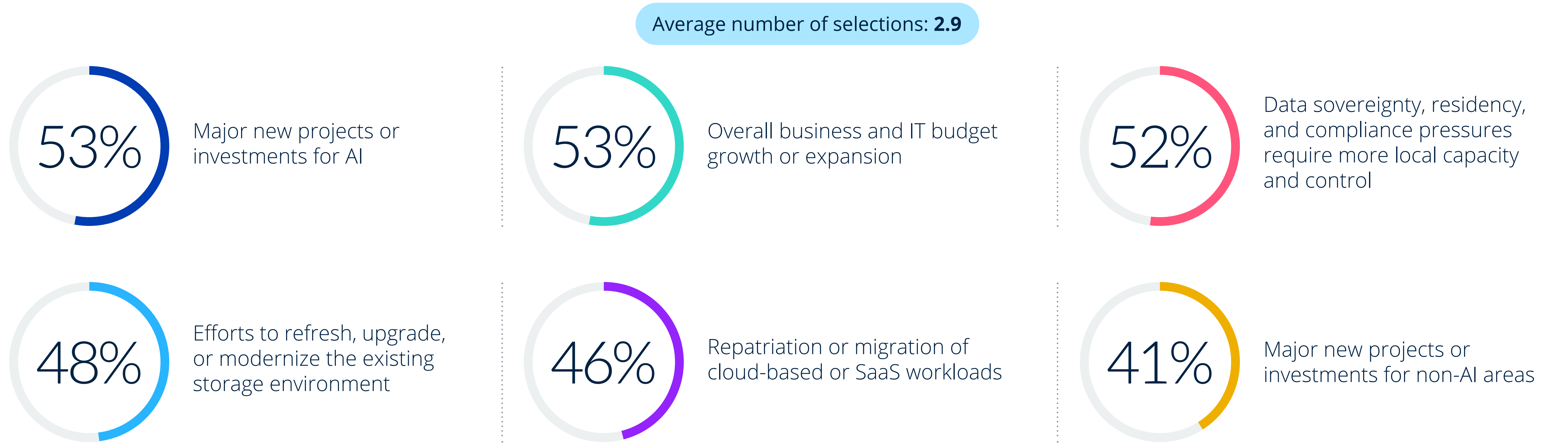


Multiple Factors Drive On-premises Budget Growth, Led by AI

A range of technology and business initiatives are driving on-premises storage growth, with new AI investments and more general business growth or expansion appearing most commonly.

However, data sovereignty and related residency and compliance pressures are prompting many to store data locally, with overall cloud repatriation a strong factor for almost half (and, interestingly, most pronounced for technology businesses, at 66%). This reinforces recent trends around organizations rebalancing storage and data from public clouds to on-premises locations.

Most significant factors driving on-premises storage budget increases.

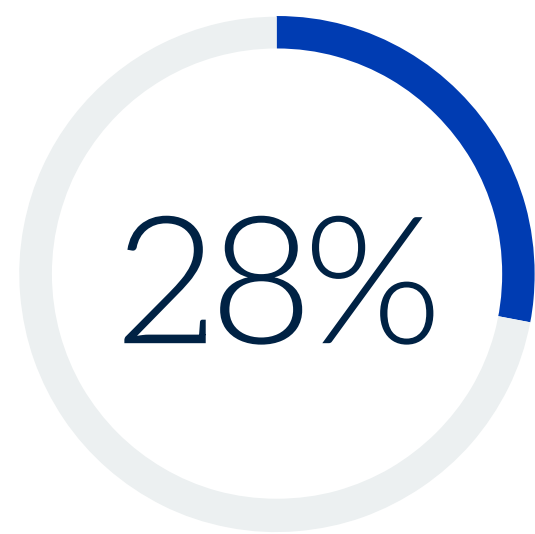


Enterprise Storage Is Typically Managed by More Generalist Teams

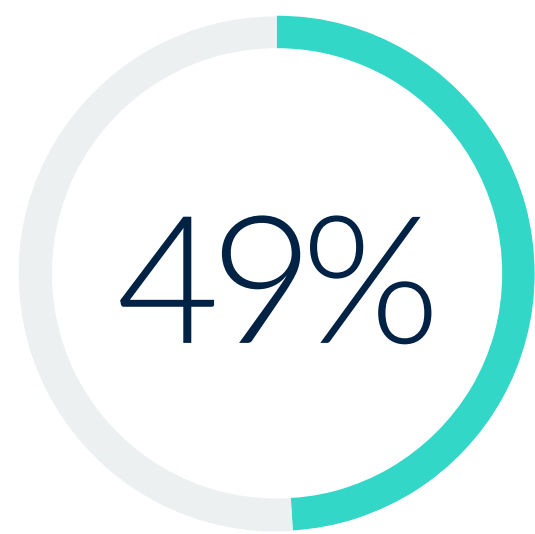
With just over one in five organizations employing dedicated teams to manage their storage environment, most enterprise storage is managed by more generalist teams that have other responsibilities, whether that includes external storage or hyperconverged environments. These ratios are broadly consistent, regardless of company size, highlighting that utilizing IT generalists is the dominant infrastructure approach market-wide.



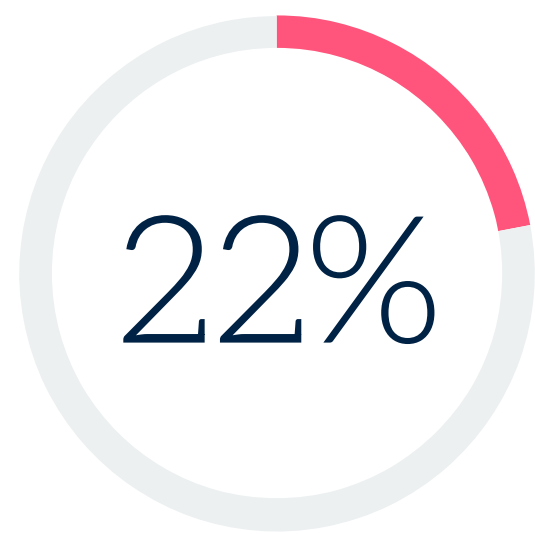
IT organizations’ overall approach to managing on-premises storage infrastructure.



We have a consolidated server and storage environment (e.g., hyperconverged infrastructure) managed by a single infrastructure team



External storage systems are managed by a cross-functional team (e.g., the team also runs the server environment)



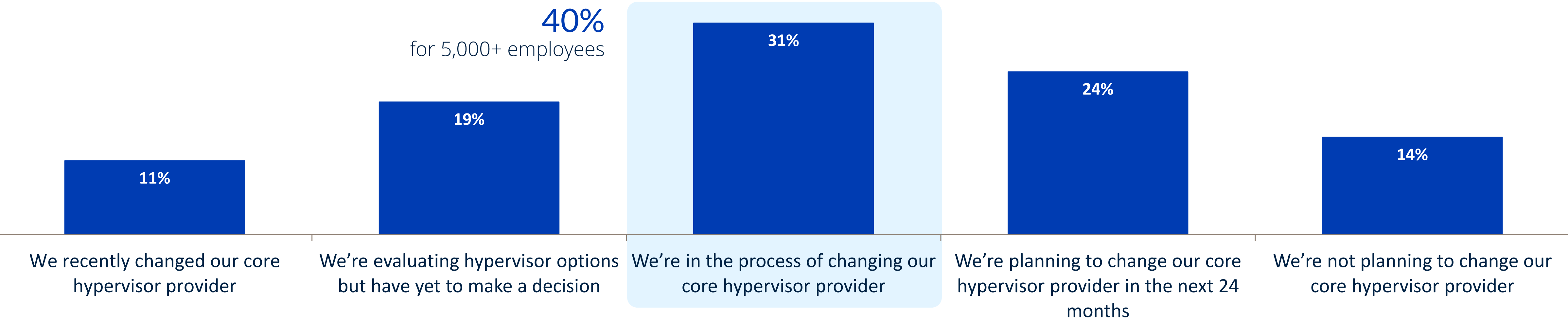
External storage systems are managed by a dedicated storage team



The Vast Majority Are Evaluating Their Hypervisor Strategy

With shifts in the virtualization landscape continuing to make an impact, 85% of organizations have either already changed their hypervisor strategy or are in the evaluation process. These intentions appear most strongly among larger enterprises, with smaller firms having less intention at this time.

Organizations’ core hypervisor strategies.



A woman and a man are in a server room, looking at a screen. The woman is leaning over the man's shoulder, and both are focused on the task. The background shows rows of server racks with glowing lights. The image has a blue tint.

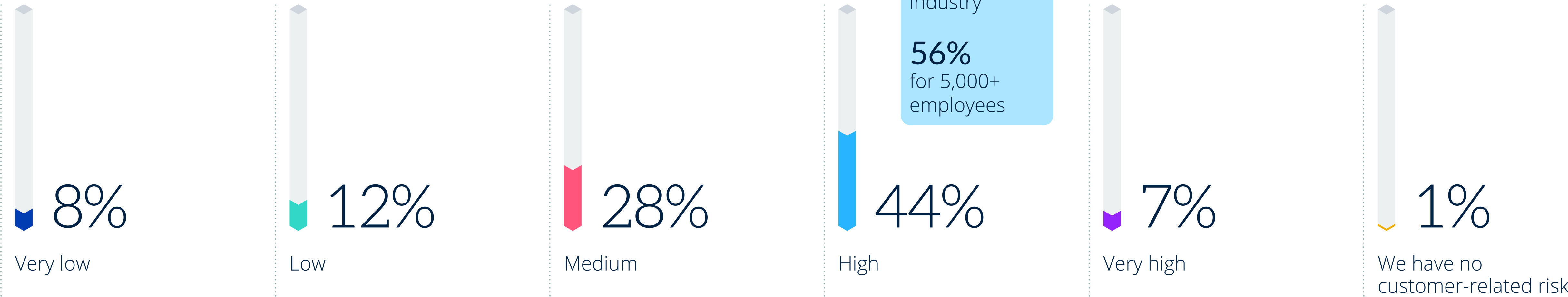
Primary Storage Becomes a Key Focus in Cyber Resilience Strategies

Primary Storage Environments Are Regarded as Highly Vulnerable

With more than half of respondents regarding their on-premises primary storage as highly or very highly vulnerable to a cyberattack, it's clear that many will be looking for solutions to help them protect this critical piece of infrastructure.



Degree of vulnerability to a cyberattack for the primary storage located in organizations' on-premises locations.

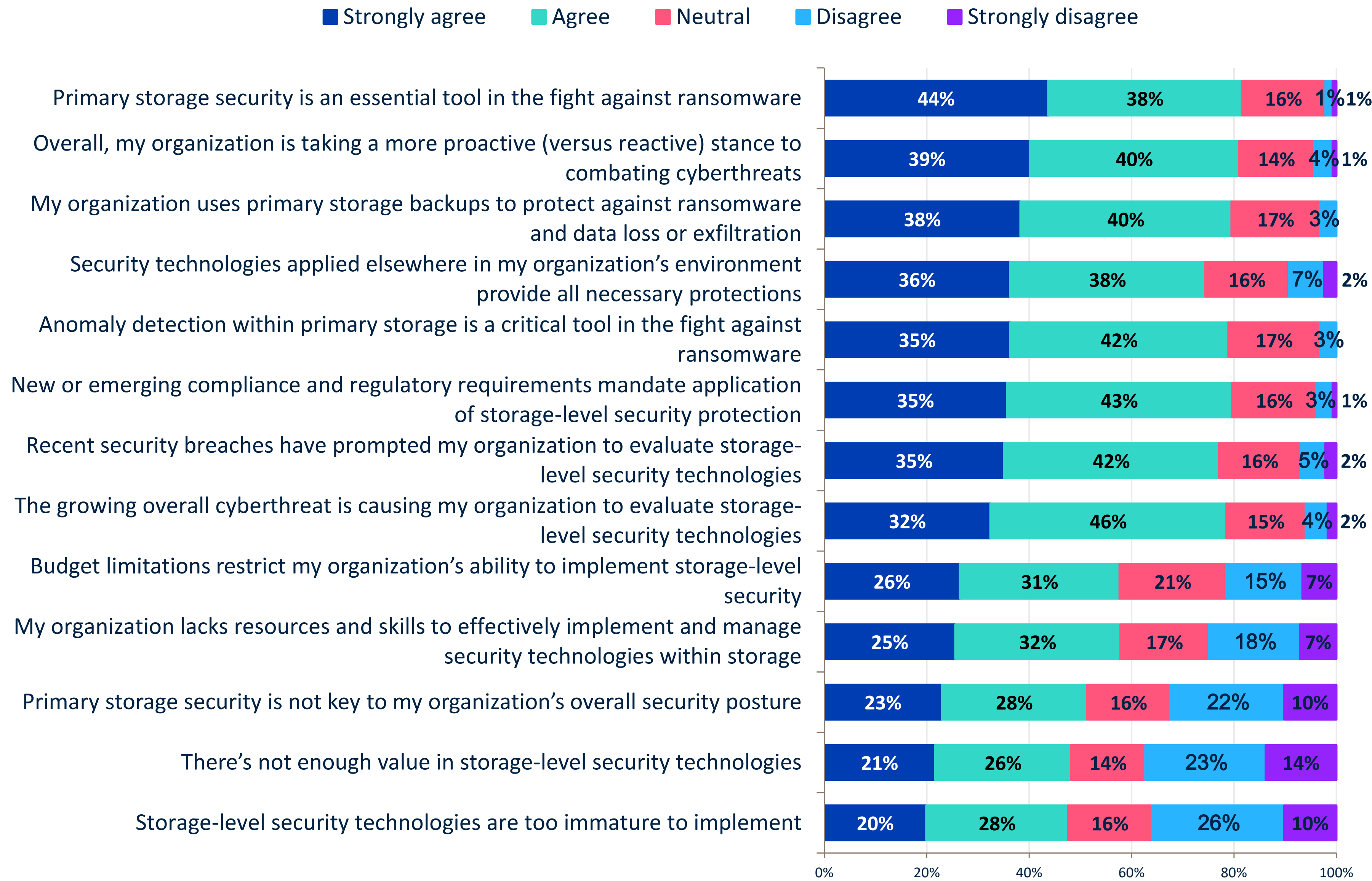


Storage-level Security Is Key to Cyber Resilience, but Challenges Persist

As the threat landscape continues to grow, more organizations are focusing on increased security within primary storage. However, there's less consensus on exactly how to achieve this, with many questioning the value or immaturity of current solutions, along with skill and budget limitations.



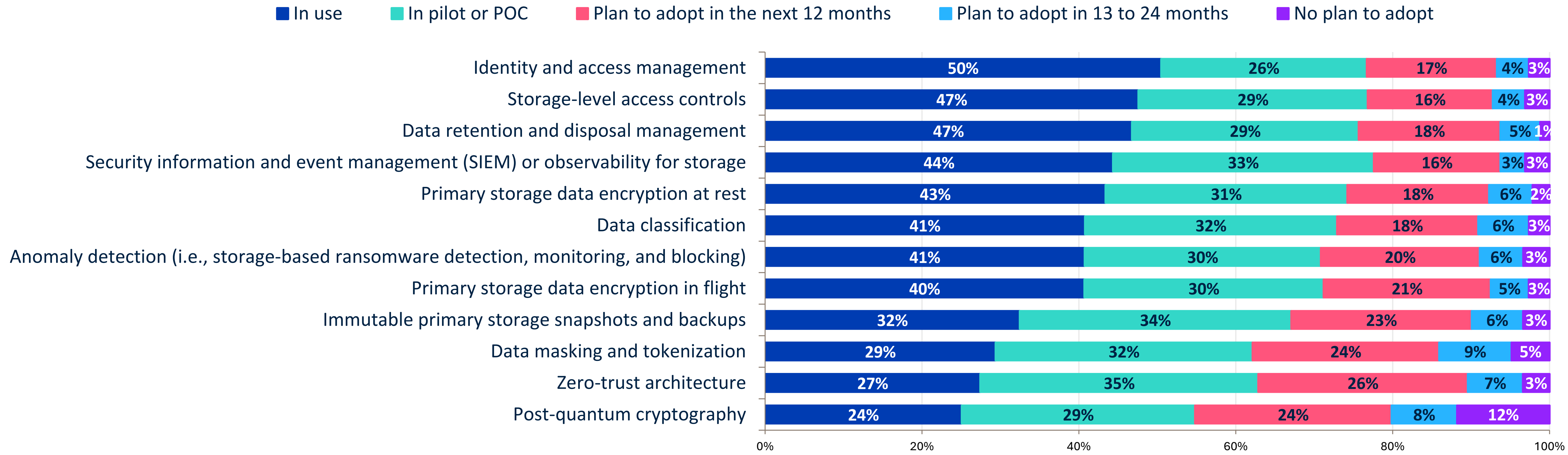
Level of agreement with statements related to storage.



Organizations Take a ‘Defense in Depth’ Approach to Storage Security

Enterprises have a rich array of storage-level security technologies from which to choose, and many utilize multiple approaches to securing storage systems and the data contained therein. Adoption of newer techniques such as post-quantum cryptography is more nascent.

Adoption status of technologies within on-premises primary storage environment.



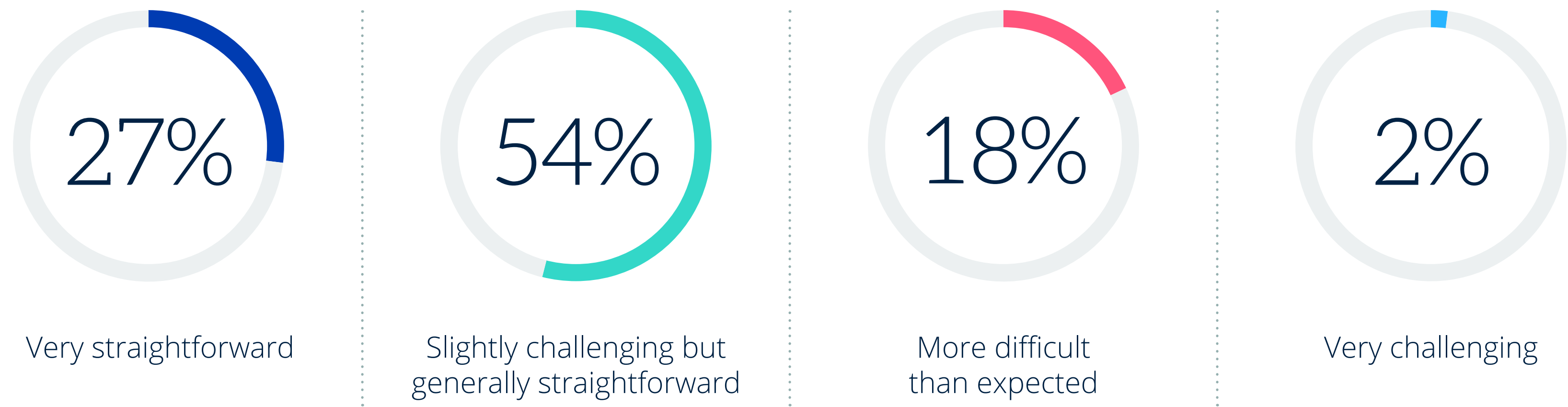


Teams Tackle Storage and Data Challenges as AI Moves Into Production

Experience of Moving AI From Proof of Concept to Production Varies Widely

Overall, a majority have found the experience of moving AI workloads from proof-of-concept conditions to production relatively straightforward. Nonetheless, one in five report moderate or severe difficulties; these are experienced most prominently among organizations with 1,000 to 4,999 employees, as well as those in healthcare and media.

Overall experience of moving AI workloads from proof-of-concept conditions into production environments.

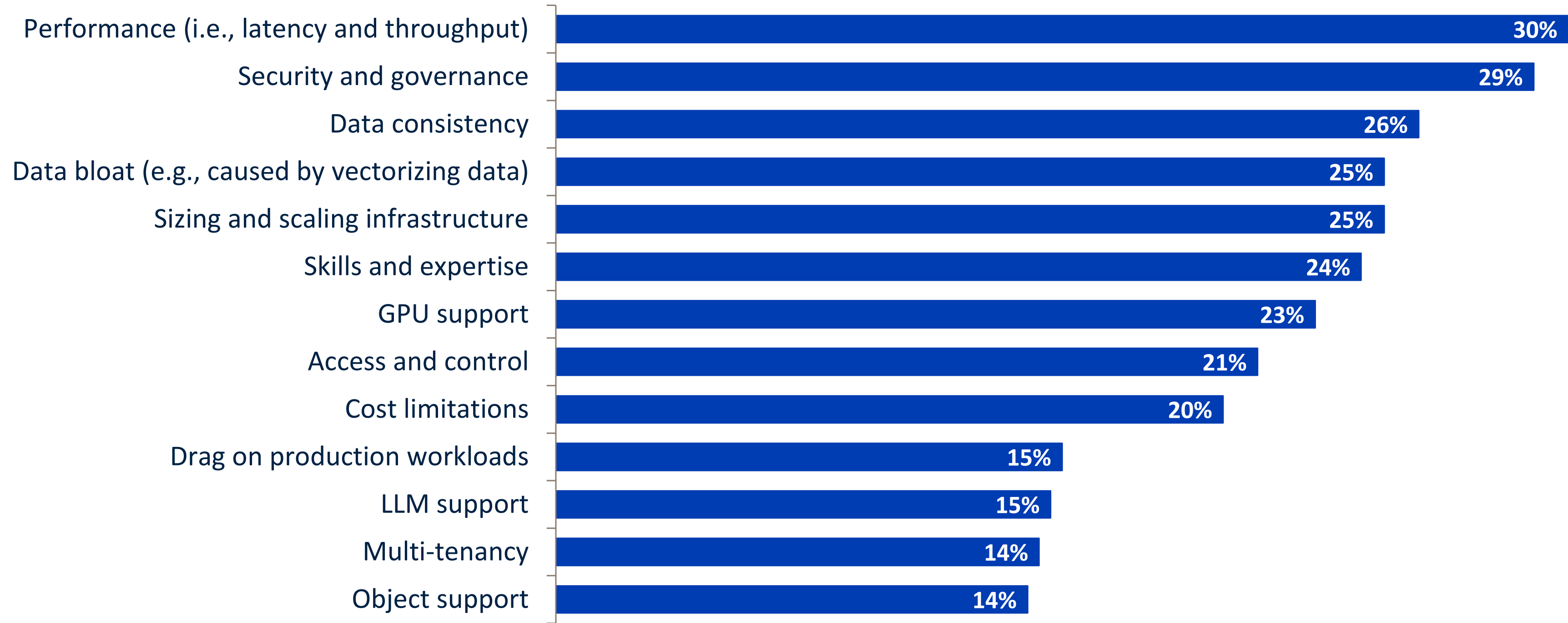


Performance and Security Dominate Storage-related AI Challenges

Organizations moving AI from proof-of-concept conditions to production are encountering numerous storage-related challenges. Performance issues are most often cited, highlighting that, for many, legacy storage environments can struggle to keep pace with the demands of high-performance GPU infrastructure.

However, several additional issues, from security and governance to data consistency and bloat, are also prominent for many, reflecting that running AI at scale remains a complex and challenging operation at the storage level.

Most difficult storage-related challenges faced when moving AI workloads from proof-of-concept conditions into production environments.



Work Remains to Improve Integration Between Layers

Optimizing the data environment overall is emerging as a critical requirement for running AI at scale, especially as workloads move into production and focus more on inference.

However, only a third of respondents describe the integration of their organization’s data management environments with the storage environment as very effective, underscoring that there’s more to do here. Healthcare organizations, in particular, are facing challenges here.

Description of integration of data management technology environment into underlying storage technology infrastructure for AI workloads.





Storage Procurement Models Evolve

Many Organizations Look to Change Their Storage Procurement Method

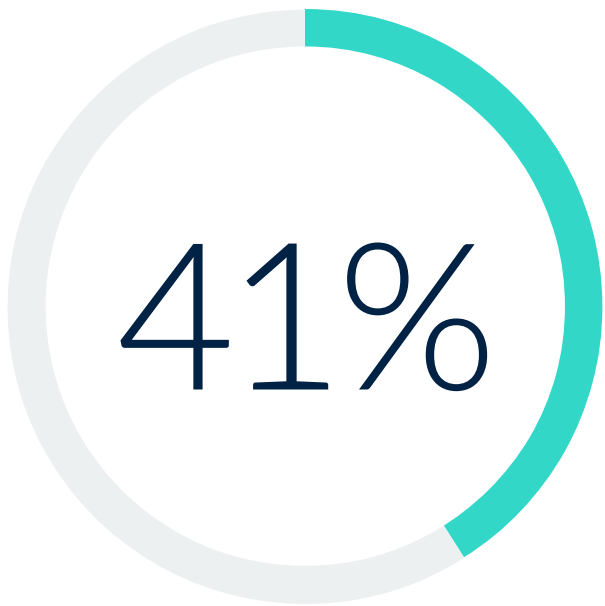
Perhaps highlighting the degree of change taking place in the IT infrastructure market overall is the fact that almost one in ten organizations will use an alternative procurement method for their next storage purchase, with a further 50% considering such a move.

With 70% of small businesses planning to stick with their current approach, this dynamic looks set to play out more among the larger enterprises. Technology decision-makers should take the time to understand their environment’s dynamics in detail and adjust or revise their procurement strategies accordingly.

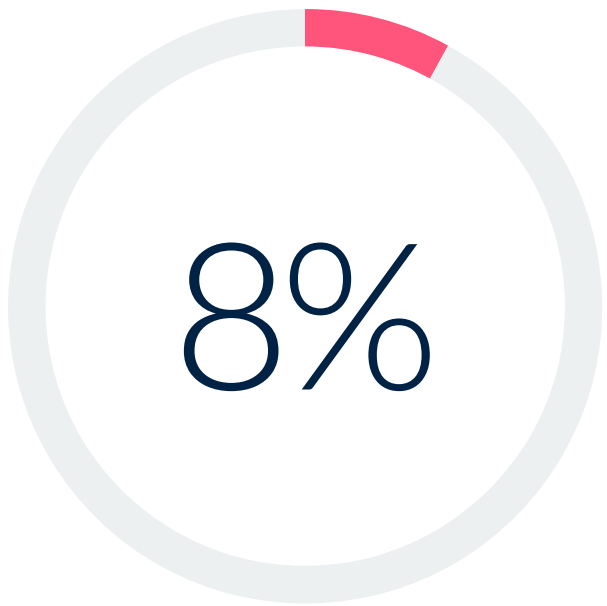
Most likely approach for next on-premises enterprise storage procurement.



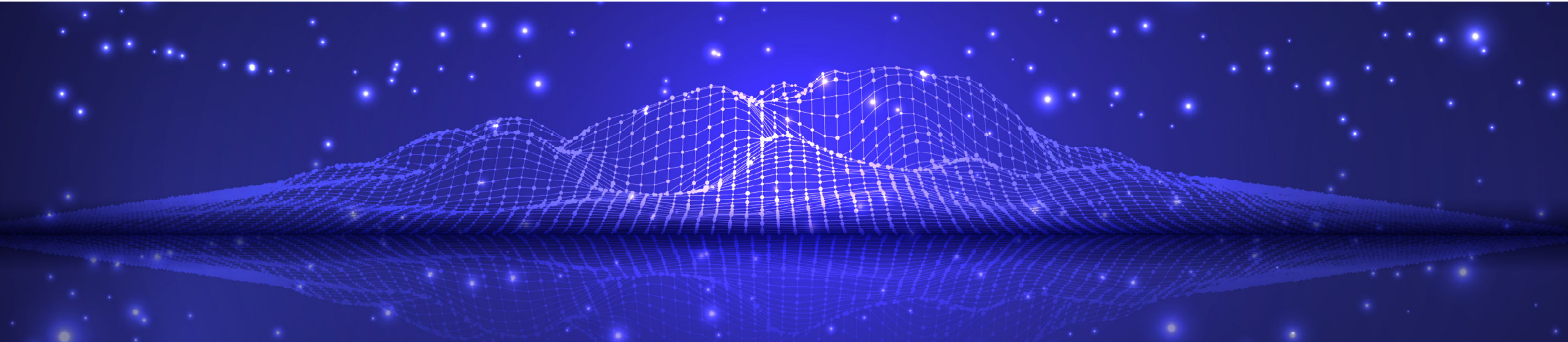
Consider an alternative procurement model (still undecided)

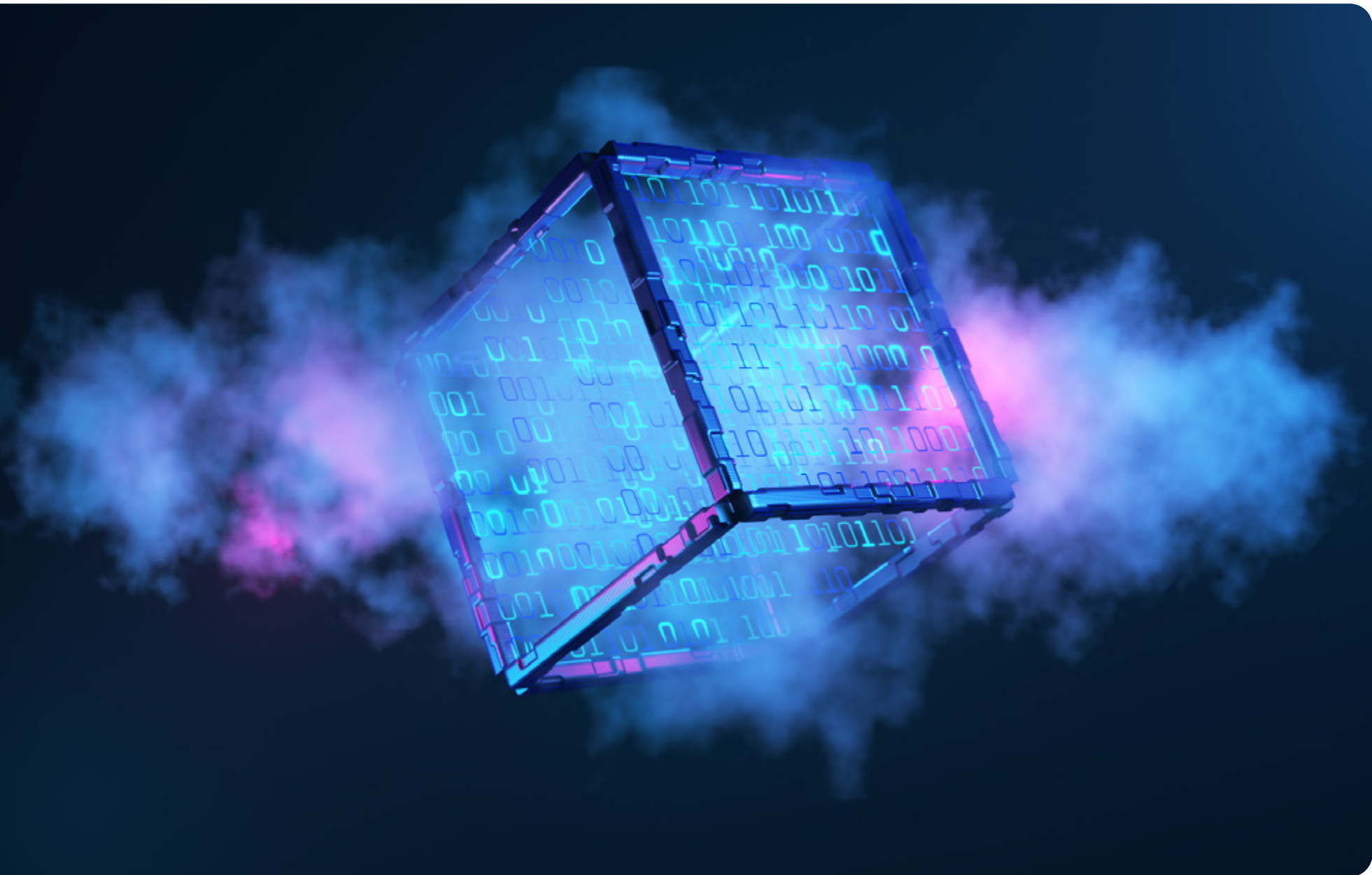


Retain current approach



Use an alternate procurement model

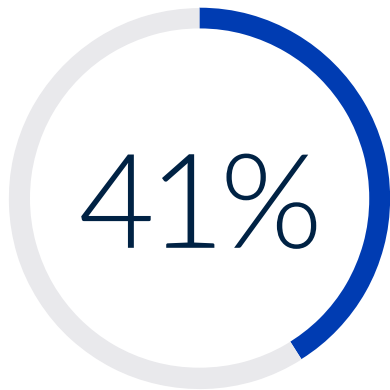




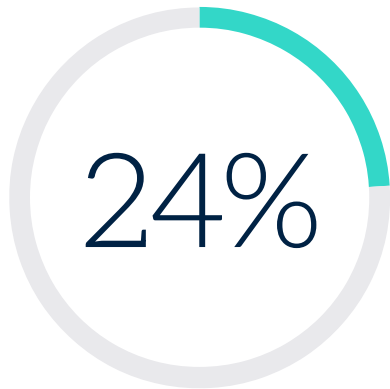
Multiple Alternative Procurement Models Are Under Consideration

Though multiple alternatives are under consideration, organizations are chiefly considering Opex-centric models from third-party providers as part of their next storage purchase. Interest in modern consumption-based models is also cited by close to a quarter of respondents (rising to 31% for those with 1,000 to 4,999 employees), as are Capex-centric models (though interest in the latter increases to 32% for the largest enterprises).

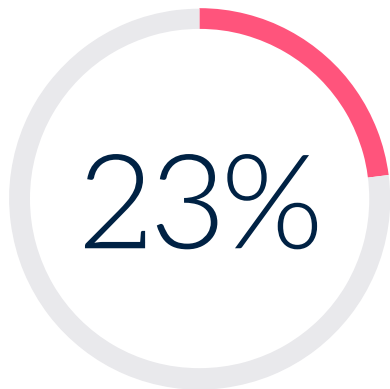
Alternative enterprise storage procurement model most likely to be used or considered.



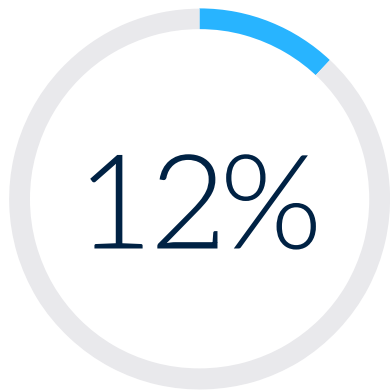
Opex with a managed service from a third-party provider



Capex with outright purchases featuring multi-year depreciation



Opex with an on-premises hardware-as-a-service storage subscription and usage-based billing



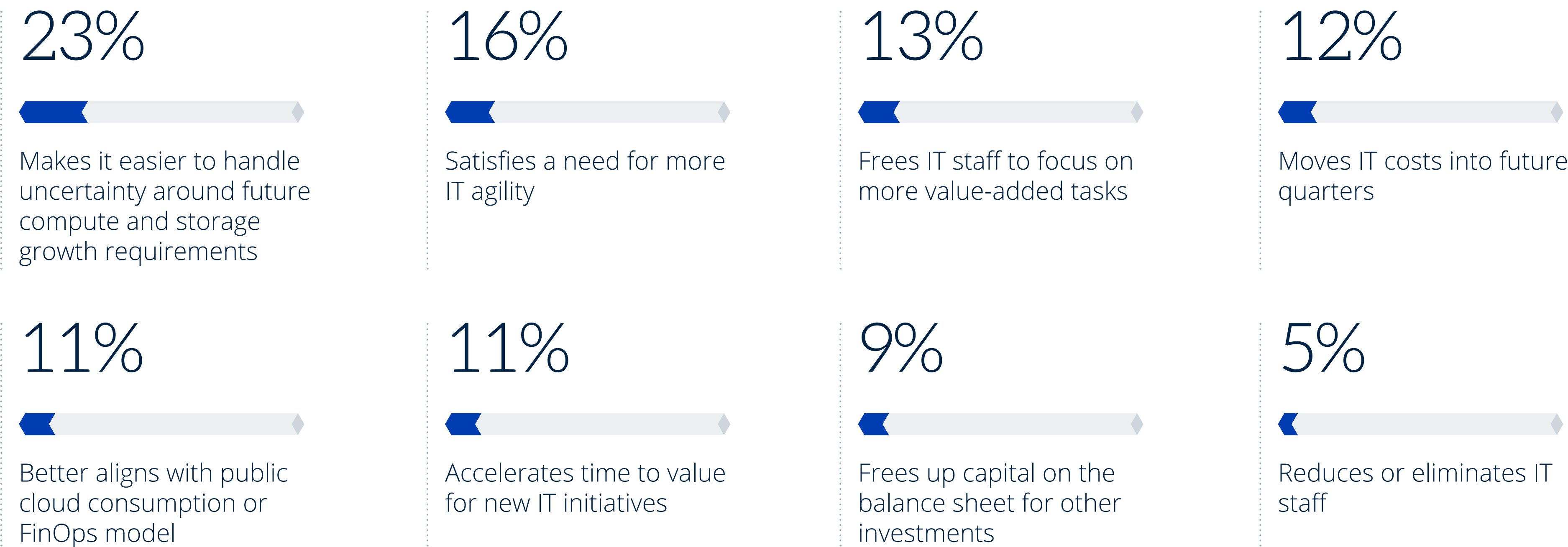
Opex with traditional IT leasing

Dealing With Uncertainty Is the Top Reason for Switching Procurement Model

With initiatives such as AI placing future infrastructure requirements in doubt, organizations are looking for alternative storage procurement models that help them manage this period of uncertainty. This is particularly important for large firms with 1,000 to 4,999 employees.

Meanwhile, the need for greater IT agility is also important for many, especially smaller business (30% of whom selected this option) and technology businesses (20%). Achieving closer alignment with cloud and FinOps models is particularly important for several verticals, including healthcare (17%), manufacturing (17%), and retail (16%). For 25% of financial services respondents, the ability to move costs into future quarters is the top driver.

Most important reason for considering or deciding to change procurement approach for on-premises enterprise storage.



Hitachi Vantara

ABOUT

Hitachi Vantara’s proven track record shows that its enterprise data platforms for mission critical applications are trusted by some of the world’s largest organizations. The demands of critical business applications and AI workloads are pushing data infrastructure to its limits. Hitachi VSP One is a data platform solution built for the AI era delivering fast performance, scale and resilience in a simple, secure and sustainable way. Visit our Hitachi Vantara website to learn more about the data platform solutions to help you address the data challenges of today and prepare for the future.

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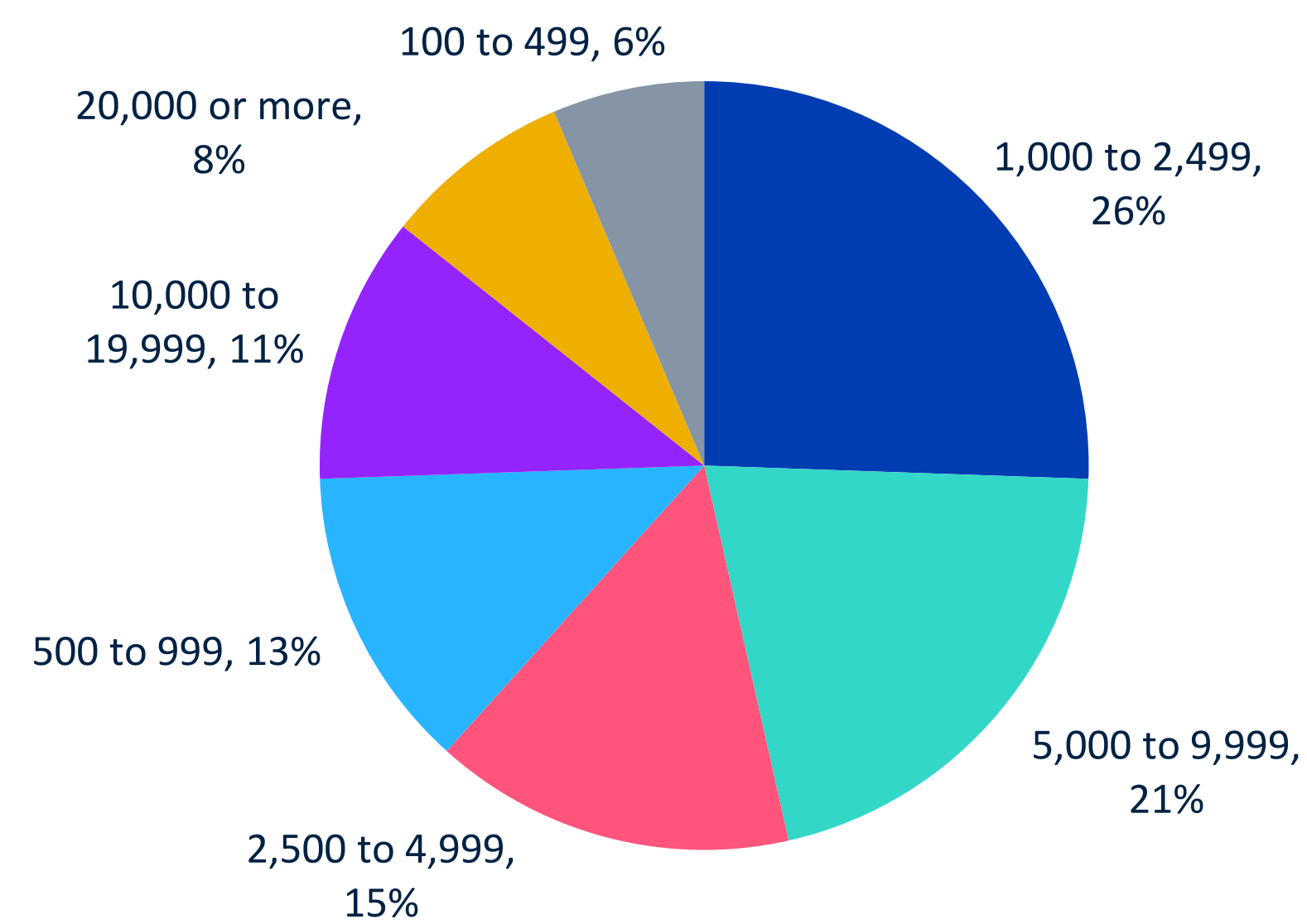


RESEARCH METHODOLOGY AND DEMOGRAPHICS

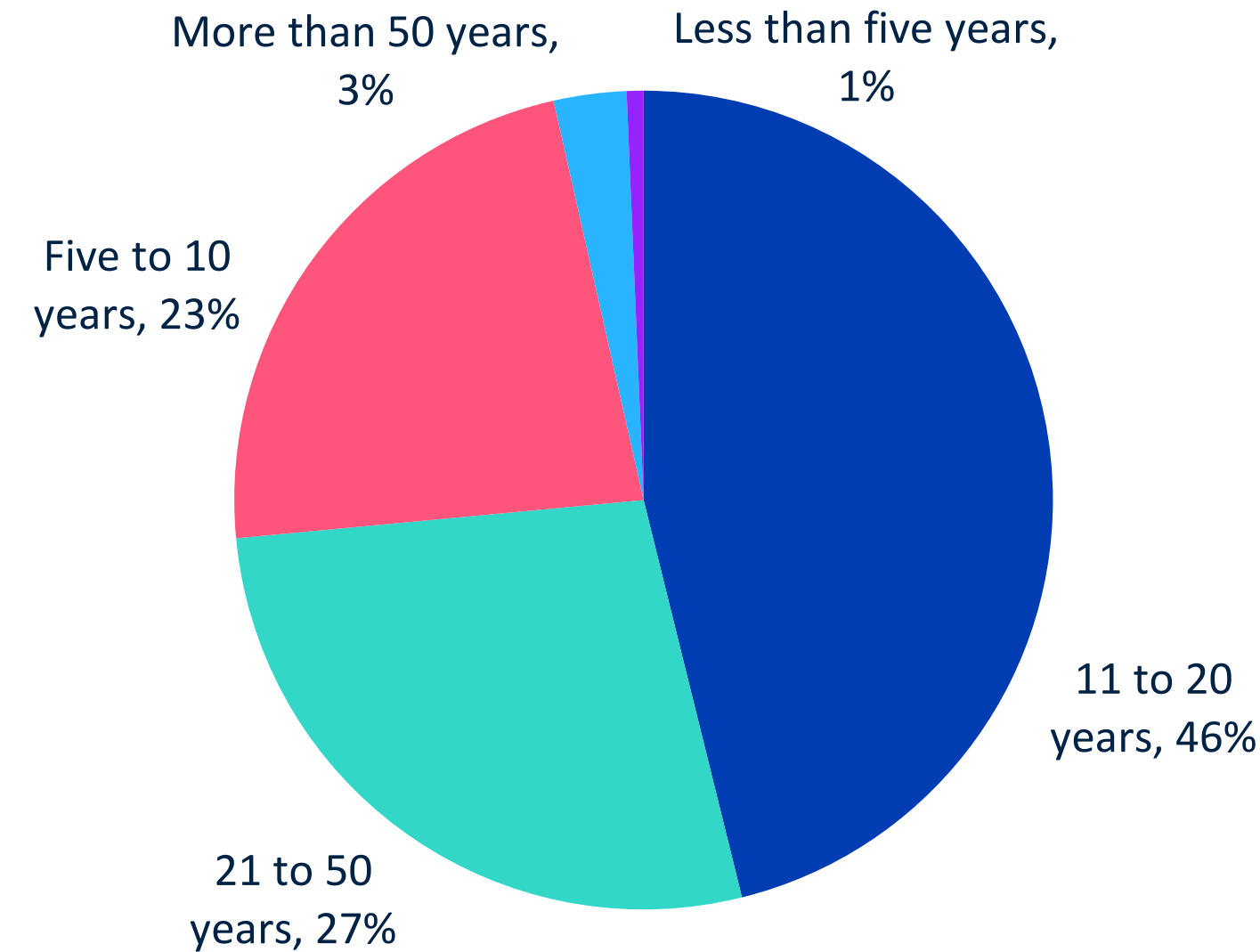
To gather data for this report, Omdia conducted a comprehensive online survey of enterprise storage professionals from private- and public-sector organizations in North America between November 20, 2025 and November 25, 2025. To qualify for this survey, technical and business professionals were required to be involved in the strategy, decision-making, selection, deployment, and management of enterprise storage at their organization. All respondents were provided an incentive to complete the survey in the form of cash awards and/or cash equivalents.

After filtering out unqualified respondents, removing duplicate responses, and screening the remaining completed responses (on several criteria) for data integrity, we were left with a final total sample of 449 of technical and business stakeholders.

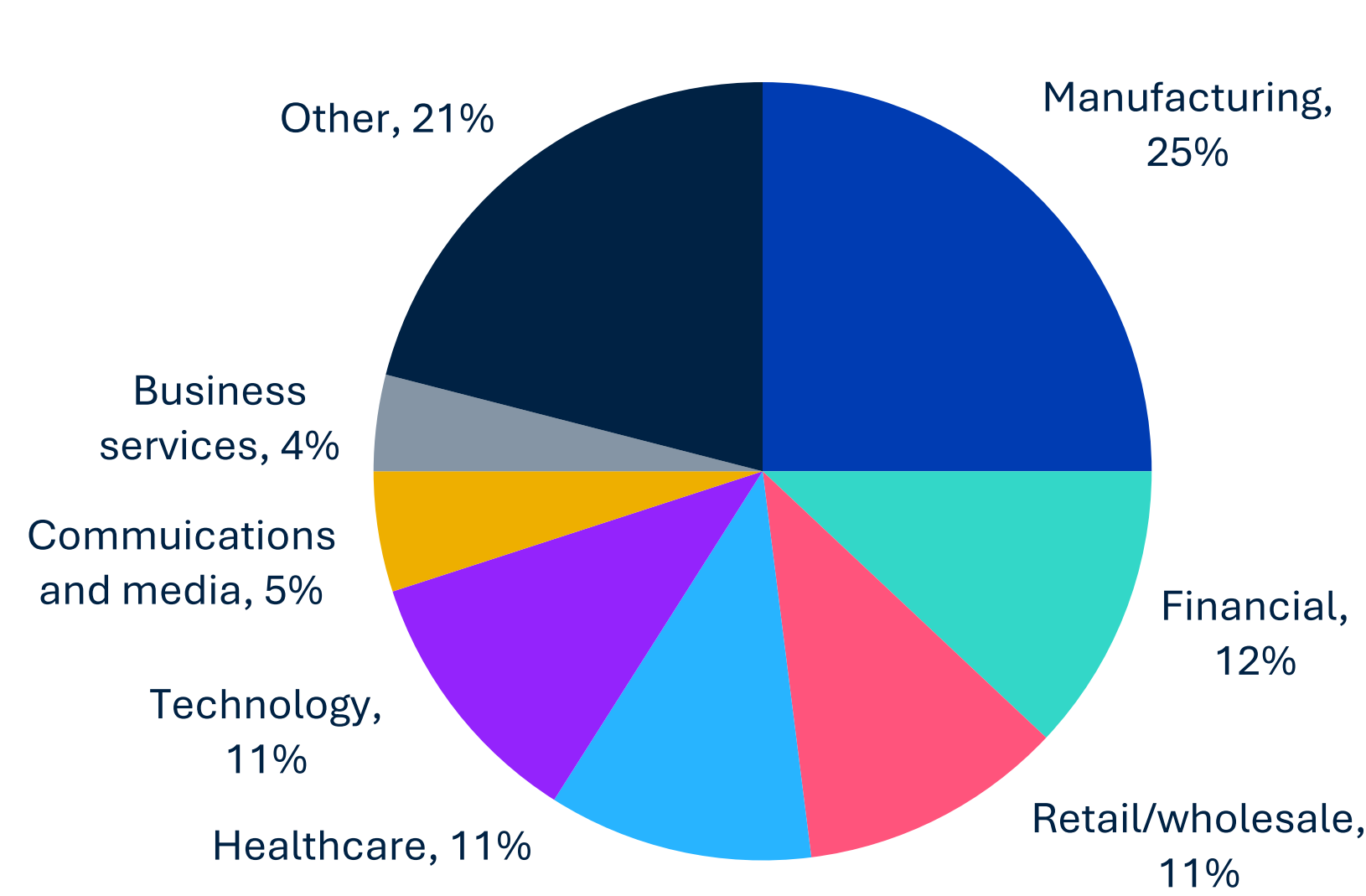
Respondents’ organizations by number of employees.



Respondents’ organizations by years in operation.



Respondents’ organizations by industry.



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